

Ambuehl, Sandro; Bernheim, Bert Douglas; Fan, Tony Q.; Freitas-Groff, Zach

**Working Paper**

## Interventionist preferences and the welfare state: The case of in-kind aid

Working Paper, No. 471

**Provided in Cooperation with:**

Department of Economics, University of Zurich

*Suggested Citation:* Ambuehl, Sandro; Bernheim, Bert Douglas; Fan, Tony Q.; Freitas-Groff, Zach (2025) : Interventionist preferences and the welfare state: The case of in-kind aid, Working Paper, No. 471, University of Zurich, Department of Economics, Zurich, <https://doi.org/10.5167/uzh-278410>

This Version is available at:

<https://hdl.handle.net/10419/322291>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



**University of  
Zurich**<sup>UZH</sup>

University of Zurich  
Department of Economics

Working Paper Series

ISSN 1664-7041 (print)  
ISSN 1664-705X (online)

---

Working Paper No. 471

# **Interventionist Preferences and the Welfare State: The Case of In-Kind Aid**

Sandro Ambuehl, B. Douglas Bernheim, Tony Q. Fan and Zach Freitas-Groff

June 2025

---

# Interventionist Preferences and the Welfare State:

## The Case of In-Kind Aid

Sandro Ambuehl, B. Douglas Bernheim, Tony Q. Fan, Zach Freitas-Groff\*

April 6, 2025

### Abstract

Why is in-kind aid a prominent feature of welfare systems? We present a lab-in-the-field experiment involving members of the general U.S. population and SNAP recipients. After documenting a widespread desire to limit recipients' choices, we quantify the relative importance of (i) welfarist motives, (ii) utility or disutility derived from curtailing another's autonomy, and (iii) absolutist attitudes concerning the appropriate form of aid. Choices primarily reflect the two non-welfarist motives. Because people systematically misperceive recipient preferences, their interventions are more restrictive than they intend. Interventionist preferences and non-welfarist motives are more pronounced among the political right, particularly when recipients are black. [100 words]

---

\*Ambuehl: University of Zurich, Department of Economics, Blüemlisalpstrasse 10, 8006 Zürich, Switzerland, sandro.ambuehl@econ.uzh.ch. Bernheim: Stanford University, Department of Economics, 579 Jane Stanford Way, Stanford, CA, 94305, USA, bernheim@stanford.edu, Fan: The University of Alabama, Department of Economics, Finance, and Legal Studies, The Culverhouse College of Business, 361 Stadium Dr, Tuscaloosa, AL, 35487, qfan5@ua.edu, Freitas-Groff: University of Texas at Austin and Longview Philanthropy, zachary.freitasgroff@austin.utexas.edu. We are especially grateful to Mandy Murphy Carroll, a health educator at Stanford University School of Medicine (Prevention Research Center) for her generous help with the nutritional assessment of the food baskets, and to Andia Kozmai, Jonas Schwarze, and Eva Küpper for excellent research assistance. We thank Alexander Cappelen, Charlie Rafkin, Itai Sher, Colin Sullivan, Dmitry Taubinsky, and participants at the Advances With Field Experiments conference, the Amsterdam ACBC workshop, the Bay Area Behavioral and Experimental Economics Workshop, the Workshop on Paternalism at the Max Planck Institute Berlin, the Workshop on Morals and the Limits of Markets at the Berlin Social Science Center, the CESifo Area Conference in Behavioral, the Decision Making For Others Conference in Portsmouth, the Southern Economic Association Annual Meeting, the Stanford Institute for Theoretical Economics, as well as seminar audiences at the University of Innsbruck, UC Louvain, Lund University, the Montpellier Business School, the Swiss Virtual Behavioral and Experimental Economics Research Seminar, and the Normative Economics and Economic Policy Seminar for helpful comments and suggestions. Ambuehl and Bernheim gratefully acknowledge funding from the Alfred P. Sloan Foundation (grant number G-2017-9017). Ambuehl also gratefully acknowledges funding from the Swiss National Science Foundation Starting Grant #211222.

# 1 Introduction

In-kind aid is a prominent feature of welfare systems throughout the world (Currie and Gahvari, 2008). Under standard rationality assumptions, this phenomenon is puzzling because cash transfers would raise recipients’ welfare more effectively. Potential explanations for this puzzle fall into two categories according to whether the motives for intervention are direct or indirect. As we use these terms, *direct* motives concern the opportunities and consumption of the individual who receives the aid. In-kind aid may serve either direct *welfarist* objectives, such as increasing the well-being of recipients whose own choices are considered fallible, or direct *non-welfarist* objectives, such as exercising control over the recipient. In contrast, *indirect* motives concern effects on people who are not aid recipients. For example, providing aid in-kind may be a way to support the agricultural sector (Daniels and Trebilcock, 2004; Fisher, 2019), or to improve targeting by establishing an *ordeal mechanism* (Nichols and Zeckhauser, 1982).

This paper disentangles the key direct motives for providing aid in kind and quantifies their empirical relevance. This focus is consistent with Currie and Gahvari’s (2008) assessment that “paternalism and interdependent preferences are leading overall explanations for the existence of in-kind transfer programs” (p.333). The identification of interventionist motives matters for two reasons. First, from a positive perspective, it clarifies the nature of political constraints on the provision of aid. The set of politically feasible policies differs depending on whether people believe the proper purpose of aid is to improve recipients’ well-being, control those underserving of autonomy, or comply with some inflexible deontological principle. Second, from a normative perspective, democratic principles imply that policy ought to reflect citizens’ preferences.<sup>1</sup>

Our investigation involves a lab-in-the-field experiment with two distinct groups of participants, members of the general U.S. population and participants in the U.S. Supplemental Nutritional Assistance Program (SNAP).<sup>2</sup> The former serve as *Choice Architects* (henceforth CAs) who make decisions affecting the opportunities and consumption of the latter. A key advantage of the experimental approach is that it allows us to remove indirect motives that might otherwise affect decisions concerning the form of aid.

Our experiment addresses three main sets of questions. The first set concerns the structure of the preferences that govern decisions to intervene. Specifically, how important are welfarist motives relative to non-welfarist motives such as respect for autonomy, a desire for control, and philosophical views about the appropriate roles of aid? To what extent do decision-makers’ attitudes about what is good for recipients diverge from recipients’ revealed preferences? Do specific objectives such as promoting a healthy diet or discouraging the consumption of “sin” goods play important roles? The second set of questions concerns the possibility that interventions are misguided, in the sense that they

---

<sup>1</sup>Formally, Eden and Piacquadio (2024) characterize conditions that tightly restrict the extent to which a Paretian social welfare function can deviate from citizens’ attitudes to inequality.

<sup>2</sup>The SNAP program provided benefits to 41.9 million U.S. individuals (12.5% of the population) in 2023 (Pew Research Center, 2021).



reflect false beliefs about recipients. Are these beliefs systematically biased, and in what ways? How would interventions differ if these misconceptions were corrected? The third set of questions concerns heterogeneity in the intensity and nature of interventionist preferences. How do the propensity to intervene and the motives for doing so vary with characteristics such as political orientation and the race or gender of the recipient? Indirectly, our analysis also speaks to two prominent hypotheses concerning direct motives for in-kind aid. The first, *ward paternalism* (Caplan, 2020), posits that welfare policy reflects the views and preferences of those who provide aid rather than those of the recipients.<sup>3</sup> The second, *specific egalitarianism* (Tobin, 1970; Harberger, 1984), holds that society is less tolerant of inequality within certain domains such as dietary health than in others (such as luxury goods).

In our experiment, SNAP recipients receive six monthly deliveries of either groceries or gift cards. Recipients who receive gift cards select from among a wide variety of vendors. These options enable them to purchase a broad range of products including “sin” goods (alcohol, tobacco, and lottery tickets) but excluding groceries. Each CA (“she”) makes two types of decisions, *intervention decisions* and *surrogate decisions*. In an intervention decision, the CA chooses between imposing food deliveries and letting the recipient (“he”) select either food deliveries or \$ $p$  in gift cards. In surrogate decisions, the CA chooses between food deliveries and gift cards on the recipient’s behalf; she cannot leave the choice to him. The two types of decisions are distinct because the available gift cards are not usable for purchasing groceries. Among the CAs whose intervention decisions vary with the value of the gift cards, nearly all restrict the recipient if the value of the cards is low, but not when it is high. We can therefore define the CA’s *enforcement price* as the value of  $p$  that leaves them indifferent about intervening. The enforcement price is a convenient measure of the CA’s inclination to restrict: A higher value indicates a greater propensity to intervene. Similarly, we define the *surrogate reservation price* as the value of  $p$  that leaves the CA indifferent in a surrogate decision. To gauge the CAs’ respect for the recipient’s preferences, we elicit surrogate reservation prices before and after the CA learns that the recipient’s reservation price is either above or below a threshold. To determine whether intervention decisions are potentially misguided, we elicit the CA’s beliefs about the distribution of recipients’ reservation prices prior to receiving this information.

Our experiment lets us study direct motives for in-kind aid because a large majority of CAs (about 80%) indeed impose food deliveries when the value of gift cards ( $p$ ) is sufficiently low, even though our design removes indirect motives for in-kind assistance. Moreover, we show that interventions do not reflect malevolence, and that CAs think their choices are consequential. Either they believe in a ‘flypaper’ effect or they do not consider crowd-out of spending on groceries when making their decisions.

---

<sup>3</sup>“Under Ward Paternalism, anyone who doesn’t want to be nudged can simply decline to become dependent on the government. You can spend your own money your own way, no questions asked. If, however, you ask taxpayers for help, the help comes with strings attached to encourage you to get your life in order. He who pays the piper, calls the tune—and why shouldn’t the tune be, ‘Get your life in order’?” (Caplan, 2020)

We address the first main set of questions—concerning the structure of interventionist preferences—through both reduced-form and structural analysis. Our reduced-form analysis first studies the degree to which CAs’ choices reflect their beliefs about recipients’ desires. We find that surrogate reservation prices respond strongly to information about the recipient’s reservation price. This pattern suggests a high degree of deference to recipient preferences. It limits the role that welfarist motives can play in intervention decisions because these rely on CAs disagreeing with recipients about the welfare-maximizing consumption bundles.

Next, we ask whether CAs intervene to promote behavior they consider good (specifically, healthy nutrition) or discourage behavior they consider bad (specifically, consumption of sin goods). We analyze the first possibility using experimental variation in the contents of the food baskets—specifically, whether the CA’s decisions concern a healthy food basket (the nutritional composition of which adheres to the recommendations of the American Heart Association) or a representative one (the nutritional composition of which reflects the typical macronutrient intake of SNAP recipients). Despite believing that the healthy basket will increase the healthiness of the recipient’s diet while the representative basket will not, CAs behave almost identically in the two treatments. We therefore conclude that the promotion of good behavior is not an important objective. We analyze the second possibility using experimental variation in the provision of truthful information concerning recipients’ spending patterns—specifically, whether the information suggests the consumption of sin goods is high or low. This informational manipulation alters CAs’ beliefs about respondents’ spending patterns as intended, and we observe substantially higher enforcement prices when the information suggests recipients consume larger quantities of sin goods. We therefore conclude that CAs seek to discourage ostensibly bad behavior.

Our structural analysis provides deeper insights into the nature of interventionist preferences. The model we formulate and estimate features three main components. The first captures welfarist concerns. It encompasses the CA’s beliefs about the recipient’s likely choices, as well as the CA’s evaluation of the recipient’s welfare given the chosen options. The second component, which we call the *subjection motive*, captures the utility or disutility the CA derives from restricting the recipient’s options. It includes aversion to restricting others’ autonomy as well as satisfaction from controlling others, dictating outcomes to those considered undeserving of discretion, or conforming to applicable social norms. The third component captures absolutist attitudes such as a deontological belief that the legitimate purposes of aid are limited.

According to our estimates of the structural model, the subjection motive is the most important driver of intervention decisions. CAs exhibit considerable aversion to granting the recipient autonomy even if they believe that doing so would increase the recipient’s welfare. When we “turn off” the subjection motive, the implied frequency with which CAs limit recipients’ choices to food baskets falls by nearly half, from 52.1% to 28.7%, for decisions in which the value of the gift cards equals the cost of the food basket. Welfarist and absolutist motives for interventions have comparatively modest

effects: Turning those motives off individually reduces the frequency of interventions to 44.8% and 43.9%, respectively.

Our conclusions concerning the relative strengths of the subjection and welfarist motives follow from some simple fact patterns. CAs’ deference to the recipient’s preferences in surrogate choices implies that, when acting on the basis of welfarist motives, they largely seek to provide recipients with the options they believe recipients prefer. However, CAs are also uncertain about recipients’ preferences. In an intervention decision, a CA can confidently satisfy those preferences only by affording the recipient discretion. Consequently, if CAs were motivated only by welfarist considerations, their enforcement prices would be significantly below their surrogate reservation prices. Yet the data contradict that implication. Indeed, the two prices coincide for 40% of CAs. This behavior implies that some other consideration, such as a strong aversion to granting the recipient autonomy, offsets the welfarist motive. In fact, our structural estimates imply that CAs are willing to sacrifice up to roughly 10% of the value they believe the average recipient derives from the transfer in order to avoid granting them autonomy.

Our structural estimates also imply that roughly 15% of CAs are absolutists. This estimate accounts for the high fraction of CAs who impose food deliveries even for the highest gift card values we consider. Making the consumption of sin goods more salient strengthens both the absolutist and welfarist motives. Taken together, our findings concerning interventionist preferences are consistent with the hypothesis of ward paternalism and inconsistent with specific egalitarianism.

Concerning the second main set of questions—whether interventions are misguided—we find that CAs overestimate recipients’ willingness to pay for food by more than 50%, and consequently understate the frequency with which their chosen interventions remove recipients’ preferred options. For example, when the value of the gift cards roughly equals the cost of the food basket, the CAs’ interventions are more than twice as restrictive as they believe. According to our structural model, correcting CAs’ beliefs would reduce the fraction of CAs who do not grant the recipient the autonomy in that scenario from 52.1% to 29.2%. Thus, interventions are often misguided according to the CA’s own objectives.

Our investigation of the third main set of questions—concerning the roles of the CAs’ and recipients’ characteristics—has several parts. First, we examine the effects of the CA’s political orientation. Depending on whether conservatism is associated with libertarianism or absolutism, one might expect conservatives to intervene with either higher or lower frequency than liberals. In our experiment, they intervene with substantially higher frequencies. According to our structural model, liberals and conservatives have similar welfarist motives, but conservatives derive greater satisfaction from foreclosing recipients’ options and are more likely to exhibit absolutist attitudes.

Next, we investigate the relationship between CAs’ in-experiment choices and their views about SNAP policy. We find that this relationship is extremely strong. We also estimate our structural model separately for CAs who prefer tighter SNAP restrictions and for those who prefer looser restrictions.

Nearly all the preference parameters differ across these subsamples in the expected direction. These results corroborate the external validity of our analysis.

Finally, we investigate relationships between intervention decisions and demographic characteristics. The most interesting patterns that emerge from this analysis concern race. We find suggestive evidence that CAs are more inclined to restrict choice sets for black recipients than for white recipients. Moreover, the effects of the recipient’s race are mostly attributable to conservatives. Structural estimates attribute these effects to all three classes of motives. We find null effects for other demographic characteristics, including gender and the presence of a child, although our structural estimates indicate that the absence of a significant difference between the propensity to intervene for childless male and female recipients masks offsetting effects of different motives.

Our paper directly contributes to the literature on in-kind aid reviewed in [Currie and Gahvari \(2008\)](#). Existing empirical evidence from surveys ([Campbell and Gaddis, 2017](#); [Liscow and Pershing, 2022](#)) and laboratory experiments involving charitable giving ([Helms et al., 2012](#); [Jones, 2017](#); [Gangadharan et al., 2018](#); [Jacobsson et al., 2007](#); [Batista et al., 2015](#)) establishes that people are more inclined to be generous when they can impose in-kind restrictions. In contrast to our paper, these studies do not investigate the various motives we consider or quantify their relative importance. Our study also extends the literature by examining how these motives vary with subjects’ political attitudes and recipients’ demographic characteristics, and by investigating whether erroneous beliefs about recipients’ preferences cause misguided interventions.<sup>4</sup>

An experimental literature on paternalism ([Uhl, 2011](#); [Krawczyk and Wozny, 2017](#); [Ambuehl et al., 2021](#); [Bartling et al., 2023](#)) examines motives for interventions, but does so in stylized contexts with convenience samples, drawing choice architects from the same pool as those affected by their interventions. Our paper differs from this literature in several ways. First, we are concerned with a policy setting that inherently involves a status difference between those who receive an allotment from the state and those who fund that allotment through the tax system. Critically, our subjects are members of these policy-relevant groups. Second, we examine policy-relevant options—food deliveries and unrestricted cash equivalents—rather than the types of stylized, low-stakes options typically used in laboratory and online experiments.<sup>5</sup> Third, our focus on in-kind aid leads us to consider different motives than those studied in the experimental literature on paternalism. However, other strands of experimental work touch on these motives. The subjection motive we document – an aversion to granting recipients autonomy – is related to [Pikulina and Tergiman \(2020\)](#)’s finding that, in a stylized laboratory experiment, a substantial fraction of subjects have a positive willingness to pay to exert power over others even though they receive no direct benefit. In contrast, [Caspi et al. \(2024\)](#) find that people have a positive willingness to pay to provide tenants facing eviction with a choice between

---

<sup>4</sup>In a different context, [Hickman \(2024\)](#) finds that Kenyans in extreme poverty overestimate peers’ proclivity to spend resources on alcohol and cigarettes. In contrast to our study, correcting these beliefs does not substantially affect subjects’ willingness to impose paternalistic restrictions on others.

<sup>5</sup>While the SNAP program does not ship groceries to individuals, the first Trump administration considered replacing a portion of SNAP benefits with deliveries of food baskets ([Bjerga, 2018](#)).

a cash transfer and legal counsel rather than the cash transfer alone even if they believe the tenant will most likely select the cash transfer. Significantly, their experiment differs from ours in that their subjects have no ability to impose the “merit good” (legal counsel in their context, food in ours). In addition, taxpayers’ attitudes toward renters and welfare recipients may differ considerably.

Most broadly, our paper contributes to a literature on positive welfare economics that characterizes the objective functions people deploy when acting as social planners (e.g. [Ambuehl et al., 2021, 2025](#); [Ambuehl and Bernheim, 2022](#); [Andreoni et al., 2020](#); [Bernheim et al., 2024](#)). Like the current paper, this literature serves the dual goals of clarifying the nature of political constraints on policy-making and informing normative evaluations of those policies.

The remainder of this paper proceeds as follows. Section 2 details the design of our experiment. Section 3 describes our data. Section 4 documents some basic patterns for CAs’ interventions and surrogate choices. Section 5 describes the structural model and presents estimates. Section 6 shows that CAs’ interventions are misguided, even according to their own objectives, because their beliefs about recipient preferences are mistaken. Section 7 investigates how the propensity to intervene varies with the CA’s political orientation and views about the SNAP program, as well as the CA’s and recipient’s demographic characteristics. Section 8 concludes.

## 2 Experimental design

This section sets forth our experimental design. We first introduce the goods SNAP participants may receive. Then we explain the main decision tasks, describe our treatments, and provide implementation details.

**Goods** Our experiment features two types of goods: monthly food deliveries and monthly gift card deliveries, each for half a year. There are two types of food baskets: a *Healthy Food Basket* and a *Representative Food Basket*. For each CA, all decisions concern the same type of food basket, and we do not mention the existence of the other type. As shown in Panels A and B of Figure 1, each basket consists entirely of SNAP-eligible items. The Healthy Food Basket adheres to the nutritional guidelines of the American Heart Association ([Lloyd-Jones et al., 2010](#)) and meets the minimal recommended macronutrient intake over a 14-day period. It includes fresh fruits and vegetables as well as many shelf-stable items such as frozen spinach and canned tomato sauce. The Representative Food Basket matches the distribution of nutrients and food groups for representative SNAP participants according to [Zhang et al. \(2018\)](#).<sup>6</sup> Appendix A.1 presents details. We inform CAs that one monthly delivery costs \$55 to \$75 depending on the recipient’s location. Considering that the average monthly SNAP benefit is \$211 for women and \$263 for men ([U.S. Department of Agriculture, 2021](#)), the stakes are meaningful.

---

<sup>6</sup>A health educator at the Stanford University’s School of Medicine (Prevention Research Center) reviewed the content of the food baskets and confirmed that they conformed with our objectives.

Figure 1: Food baskets

A. Healthy basket



B. Representative basket



C. Gift card selection



**Notes:** Displays of available food baskets and gift cards as shown to the recipients. In addition to these photos, subjects also view a list of all items in the food basket, along with pictures of each item (see Appendix D.1). All items in the baskets, including the sugar-sweetened beverages, are SNAP-eligible.

Gift cards serve as near-cash equivalents in the sense that recipients can use them to purchase a wide variety of products, excluding groceries.<sup>7</sup> Each recipient selects as many gift cards as they like from the options shown in Panel C of Figure 1, specifying a dollar amount for each subject to an overall limit, which ranges as high as \$130. Crucially, the options include gas station gift cards that recipients can use to purchase alcoholic beverages, tobacco, and lottery tickets (subject to mild restrictions in some of the states we selected; see Appendix A.2).

Each recipient receives either food baskets every month or gift cards every month; switching back and forth is not an option. However, a recipient receiving gift cards can change the mix of cards at any time and at short notice.

**Decisions** We randomly assign each CA to a single SNAP participant, 95% of whom are hypothetical and 5% of whom are real.<sup>8</sup> All of the CAs’ decisions pertain to the person with whom they are matched. At the start of the experiment, CAs read descriptions of their assigned recipients and view pixelated photos of their faces, as shown in Figure 2. While they do not know whether the recipient is real or hypothetical, they learn that the odds of being matched with a real SNAP participant are 1 in 20. They also know that we will carry out one of their decisions, selected at random, if that person is real. Hence, as long as they are not entirely indifferent toward recipients, they have incentives to reveal their preferences.

Because most members of the general population have limited familiarity with the SNAP program and its participants, we inform CAs that the average monthly SNAP transfer is \$263 for men and \$211 for women (U.S. Department of Agriculture, 2021). We also advise them that ‘it is extremely difficult to eat enough, let alone to eat healthily from the food stamp money alone.’

The core of the experiment involves two types of decisions, *intervention decisions* and *surrogate decisions*. In an intervention decision, the CA chooses between two options: (i) impose food deliveries on the recipient, or (ii) leave the choice between food deliveries and gift card deliveries to the recipient. CAs make eight such decisions, one for each value of  $p \in \mathcal{P} = \{0, 25, 45, 60, 70, 85, 105, 130\}$ , where  $p$  denotes the total gift card budget. Panel A of Figure 3 shows a screenshot of an intervention decision. The lowest value of  $p$  for which the CA leaves the choice to the recipient (the *enforcement price*) reflects the CA’s attitudes toward intervention. In a surrogate choice decision, the CA chooses between food and gift card deliveries for the recipient. Critically, leaving the choice to the recipient is not an option. CAs also make eight of these decisions, one for each value  $p \in \mathcal{P}$ . Panel B of Figure 3 shows a screenshot of a surrogate decision. The lowest value of  $p$  for which the CA selects food deliveries is her *surrogate reservation price*.

We also elicit CAs’ beliefs about the distribution of recipients’ reservation prices for the food basket using the balls-in-bins method (Delavande et al., 2011). Specifically, the CA sorts 10 tags into

<sup>7</sup>There are minor exceptions to this principle. Specifically, recipients can use gas station gift cards to buy a limited range of grocery products, usually at substantially elevated prices.

<sup>8</sup>Appendix A.4 details the survey we ran with SNAP recipients.

**Figure 2:** Information about the SNAP recipient, as displayed to CAs (examples)



**Notes:** Background colors are drawn randomly for each CA.

8 bins, each of which corresponds to a range of reservation prices.<sup>9</sup> We incentivize truthful responses by deploying the probabilistic quadratic scoring rule.

Even CAs who are inclined to intervene may take information about the recipient’s preferences into consideration. To investigate this possibility, each CA who has completed the intervention decisions, surrogate decisions, and belief elicitation learns whether their assigned recipient’s reservation price for food deliveries is higher or lower than \$70 in monthly gift card deliveries. Armed with this partial information, CAs complete a second round of surrogate decisions, and we elicit their updated beliefs about the distribution of recipients’ reservation prices.




**Treatments** Treatment variation allows us to learn about the nature of preferences for interventions. One important question is whether CAs intervene to encourage good behavior. To investigate this possibility, we compare the restrictiveness of interventions across CAs whose decisions involve the healthy food basket and CAs whose decisions involve the representative food basket. Another important question is whether CAs intervene to discourage bad behavior. To investigate this possibility, we randomly assign each CA to one of two *Information Treatments*. These treatments induce different beliefs about recipients’ spending behavior. One advises CAs that alcohol consumption is common among SNAP recipients and that gas station gift cards can be used to purchase alcoholic beverages, tobacco, and lottery tickets. The other advises CAs that alcohol consumption among

<sup>9</sup>The labels of seven bins have the following form: ‘[name]’s valuation is between  $p_1$  and  $p_2$ ’ where  $p_1$  and  $p_2$  are a pair of adjacent values from  $\mathcal{P}$ . The eighth bin has the following label: ‘[name]’s valuation is more than \$130.’



**Figure 3:** Main decisions

### A. Enforcement decision

<p><b>Welfare recipient gets the Healthy Food Box monthly (no choice)</b></p>  <p>Morgan will receive the food box.</p>	OR	<p><b>Welfare recipient chooses between Healthy Food Box monthly and monthly gift cards</b></p> <div style="display: flex; align-items: center;">  <span style="margin: 0 10px;">or</span>  </div> <p>Morgan will choose between the monthly food box delivery and the monthly gift cards.</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Please decide on each line whether Morgan can choose between the monthly food box and the monthly gift cards, or must receive the monthly food box.

If the gift card allowance is **\$130** each month:

**Choice:** Morgan chooses between the monthly food box OR \$130 in gift cards each month

☐ **Recommend food box**
☐ **Recommend gift cards**

**Food box (no choice):** Morgan will get the monthly food box

If the gift card allowance is **\$105** each month:

**Choice:** Morgan chooses between monthly food box OR \$105 in gift cards each month

☐ **Recommend food box**
☐ **Recommend gift cards**

**Food box (no choice):** Morgan will get the monthly food box



If the gift card allowance is **\$85** each month:

**Choice:** Morgan chooses between monthly food box OR \$85 in gift cards each month

☐ **Recommend food box**
☐ **Recommend gift cards**

**Food box (no choice):** Morgan will get the monthly food box

### B. Surrogate choice decision

<p><b>Welfare recipient gets monthly food box</b></p>  <p>Morgan will get the food box each month</p>	OR	<p><b>Welfare recipient gets monthly gift cards</b></p>  <p>Morgan will select the gift cards she will get each month.</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Please decide on each line whether Morgan will receive the monthly food box or the monthly gift cards.

If the gift card allowance is **\$130** each month:

**Gift cards:** Morgan selects gift cards worth \$130 for each month (no food box, no groceries)

☐

**Food box:** Morgan will get the food box each month.

☐

If the gift card allowance is **\$105** each month:

**Gift cards:** Morgan selects gift cards worth \$105 for each month (no food box, no groceries)

☐

**Food box:** Morgan will get the food box each month.

☐

If the gift card allowance is **\$85** each month:

**Gift cards:** Morgan selects gift cards worth \$85 for each month (no food box, no groceries)

☐

**Food box:** Morgan will get the food box each month.

☐

If the gift card allowance is **\$70** each month:

**Gift cards:** Morgan selects gift cards worth \$70 for each month (no food box, no groceries)

☐

**Food box:** Morgan will get the food box each month.

☐

**Notes:** The decision lists include additional lines. CAs make a decision for each gift card value in {0, 25, 45, 60, 70, 85, 105, 130}. If the CA clicks a button to recommend the food deliveries or to recommend the gift cards, the recipient’s choice interface displays the message “A previous study participant recommends that you choose the monthly [food box / gift cards]!”

SNAP recipients is no more common than among the U.S. general population, and that recipients spend half as much on alcohol as the typical American adult. This treatment does not highlight the potential uses of gas station gift cards. Critically, both treatments present truthful information about SNAP recipients; they manipulate beliefs by making different information salient.

We also seek to determine the effects of the recipients’ demographic characteristics, which we vary for the hypothetical recipients, on the restrictiveness of interventions. We unobtrusively convey the recipients’ race (black or white) through pixelated mugshots (see Figure 2). Our descriptions of the recipients list gender (male or female), age (20-29 or 50-69), type of residential area (rural, suburban, or urban area), and state of residence (either southern, including Kentucky, Mississippi, and West Virginia, or northeastern, including Connecticut, Massachusetts, and Rhode Island). We

vary whether young women have children and describe all other recipients as childless. To reduce the potential range and complexity of considerations influencing CAs’ choices, we categorize all recipients, including mothers, as single using the phrase “no partner present.”<sup>10</sup>

**Additional elicitations** To examine mechanisms and secondary hypotheses, we conduct additional elicitations. CAs indicate how they would expect a recipient to allocate \$100 in gift cards across vendor categories. They also report the percentages of gas station gift cards they think recipients will spend on, respectively, gas, tobacco products, alcoholic beverages, lottery tickets, and other items. The first elicitation is incentivized; the second is not.<sup>11</sup>

A potential concern is that CAs think in-kind deliveries simply free up cash without affecting recipients’ overall spending patterns. We therefore elicit CAs’ beliefs concerning the effects of food deliveries and gift card deliveries on grocery expenses. In-kind deliveries may also leave food consumption unchanged if they go to waste. Consequently, we also ask CAs to report the percentage of food they believe will spoil.

For the purpose of assessing external validity, we ask CAs several questions about their attitudes toward the SNAP program. We also elicit CAs’ demographic characteristics, welfare program participation status, and political preferences, among other attributes. See Appendix A.3 for the details of all supplemental elicitations.

To determine whether CAs impose restrictions out of a desire to harm recipients, we allow them, at the end of the experiment, to reduce the number of monthly shipments. They also choose how to split \$50 between their assigned recipient and a random U.S. taxpayer.

**Quality safeguards.** The survey immediately terminates early in the instructions if CAs fail to click a box next to the text “Please click this box to confirm that you are following these instructions.” CAs must pass two comprehension checks to complete the survey. One concerns the implications of their intervention decisions; the other pertains to the meaning of information regarding the recipient’s reservation price (whether it is below or above \$70). We nudge respondents towards providing responses to multiple price lists that exhibit at most one switching point in the case of surrogate choices or two in the case of intervention decisions. When a response exhibits additional switching points,

---

<sup>10</sup>Focusing on race, gender, marital status, and the presence of children (none versus one two-year-old or younger), our profiles match 23.6% of all SNAP recipients and 34.4% of those who report their race either as only black or only white. Among individuals aged 20-29, the corresponding figures are 34.2% and 49.8%. Among those aged 50-69, they are 37.7% and 49.3%. We obtain these numbers from the 2021 1-year American Community Survey Public Use Microdata Sample (PUMS) (U.S. Census Bureau, 2021) using the PUMS person weights. Those data include SNAP status, household type, gender, number of children, and race. The data only report whether a recipient has a child below 6 years of age, not whether the child is two years old or younger.

<sup>11</sup>In cases where the first elicitation determines the CA’s payment, we penalize her based on the distance between her prediction and the average allocation for ten other recipients. Our measure of distance is the total dollar amount that we must reassign across categories to align her prediction with that average. The penalty is \$0.05 per dollar. We do not incentivize the second elicitation because we do not have an appropriate benchmark.

the CA receives a message that calls their attention to this pattern.<sup>12</sup> They are then free to modify or confirm their original responses.

### 3 Data

Our study involves  $n = 1,997$  U.S. residents who participated as CAs. We recruited these participants through prolific.com in January and February 2024, targeting a sample that matches the population distribution with respect to gender, age, and political orientation. The median subject completed the study in 35 minutes. Our geographic coverage extends to all 50 US states and the District of Columbia. Separately, for recipients, we enlisted a sample of 270 US residents who were enrolled in the SNAP program around the time of the experiment.<sup>13</sup> Appendix B.1 shows the demographic composition of each sample. Appendix A.4 details information about our pilot samples and preregistration (<https://www.socialscienceregistry.org/trials/9144>).

Throughout, we use survey weights to ensure that our results are representative of the general U.S. population with respect to certain observable characteristics. For the CA sample, we define 81 categories corresponding to all possible combinations of political preference (Republican, Democrat, or neither),<sup>14</sup> race (white, black, other), age (18-39, 40-59, 60 or older), and gender (male, female, other). We then weight each category to match their frequencies in the 2022 General Social Survey (Davern et al., 2021), a nationally representative benchmark.<sup>15</sup> For the SNAP recipient sample, we define 27 categories corresponding to all possible combinations of gender (male, female), age (18-39, 40-59, 60 or older), and race (white, black, other). We then weight each category to match the person weights for SNAP participants in the 2021 one-year American Community Survey Public Use Microdata Sample (PUMS) (U.S. Census Bureau, 2021). We winsorize the weights for both samples at the first and 99th percentiles.

Following convention (e.g. Harrison et al., 2005), our reduced-form analysis uses interval midpoints for values elicited through multiple price lists and excludes observations with non-monotonic responses. In contrast, our structural methods accommodate interval-censored data and attribute non-monotonic responses to the model’s stochastic elements. Overall, 3.9% of CAs exhibit more than one switching point in at least one decision. For unconditional and conditional surrogate decisions, these figures are

<sup>12</sup>For intervention decisions, in cases where responses exhibit a single switching point, they may switch in either direction without triggering the message.

<sup>13</sup>We retained InnovateMR, a market research company, to recruit a somewhat larger sample. We then excluded individuals who did not provide photos of sufficient quality.

<sup>14</sup>The Democrat category includes individuals who describe themselves as ‘strong democrat’, ‘not very strong democrat,’ and ‘independent, leaning democrat.’ Similarly, the Republican category includes those who describe themselves as ‘strong republican’, ‘not very strong republican,’ and ‘independent, leaning republican.’ The residual category includes those who describe themselves as ‘independent, as far from democrats as from republicans,’ as well as those selecting ‘other.’

<sup>15</sup>We employ broad categories to ensure that weighting does not dilute statistical power (Miratrix et al., 2018). A small number of individuals (14) fall into categories for which there are no matching observations in the 2021 General Social Survey. We assign each such observation the smallest weight across all other observations.

0.7% and 0.5%, respectively; for intervention decisions, the figure is 3.5%, and in those cases there are typically more than two switches.

We randomized whether prices in multiple decision lists appear in ascending or descending order, whether we elicit beliefs about reservation prices before or after intervention and surrogate decisions, and whether we elicit beliefs about the recipients’ allocations of gift cards at the beginning or end of the experiment. In all reduced-form regressions, we include three indicators to capture order effects, one for each dimension of randomization. Only the first (whether prices appear in ascending or descending order) has statistically significant effects on CAs’ behavior. See Appendix B.2 for details.

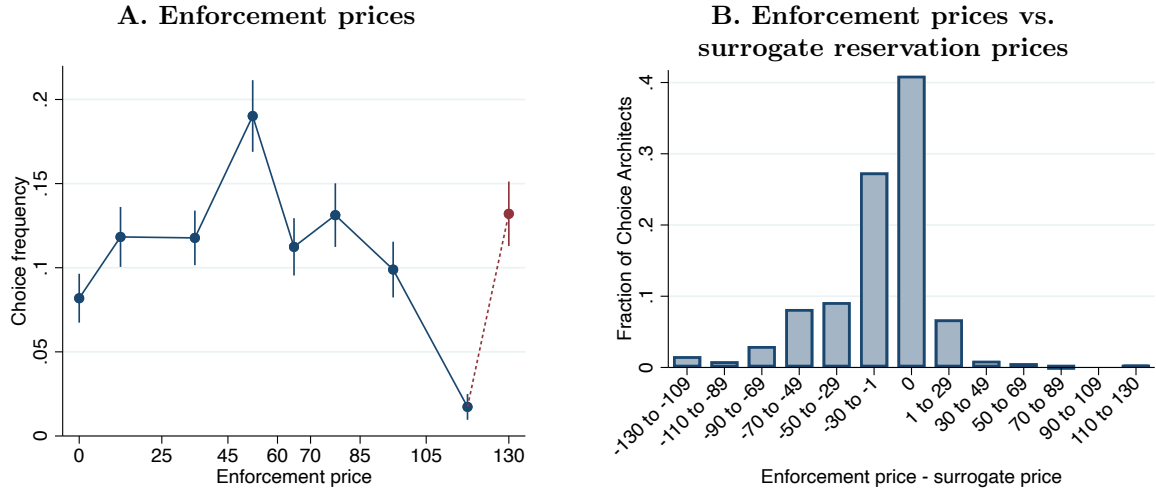
## 4 Patterns of interventions

In this section, we address a series of basic factual questions concerning interventions: First, how readily do people intervene in SNAP recipients’ choices? Second, do interventions simply reflect malevolence or spite toward the recipient? Third, do those who intervene believe that providing aid in-kind is consequential? Fourth, among those who intervene, is there also a degree of respect for the recipient’s preferences or autonomy? Fifth, do people intervene to enforce ostensibly good behavior? Sixth, do they intervene to discourage ostensibly bad behavior?

**How readily do people intervene in SNAP recipients’ choices?** We begin by studying a simple measure of the willingness to intervene: the enforcement price. When considering this measure, it is important to remember that our experimental setting removes certain motives for interventions discussed in the applicable literature. Most notably, restrictions cannot serve as ordeal mechanisms that improve the targeting of benefits, nor do they meaningfully support the agricultural sector. When a CA intervenes, the effects are limited to the CA and their matched recipient.

Panel A of Figure 4 shows the frequency of each possible enforcement price pooled across all treatments. Three patterns stand out. First, a small but significant fraction of CAs (roughly 8%) are non-interventionist in the sense that they never restrict recipients. This pattern is consistent with a libertarian outlook. Another 12% impose food deliveries only when the gift cards have no value. Second, most CAs restrict their recipients when the value of the gift cards is sufficiently low but not when it is sufficiently high. Specifically, enforcement prices for nearly 70% of CAs fall between \$25 and \$130. Third, a small but significant fraction of CAs (roughly 13%) restrict the recipient even when the gift cards have the highest value we consider (\$130, which is roughly double the cost of the food basket). Given the low frequency of enforcement prices between \$105 and \$130, these *absolutist* choices appear to be far more common than one would expect merely from truncation of the enforcement price distribution. This observation raises the possibility that there is an absolutist type with qualitatively distinct objectives. We will return to that possibility in the next section.

**Figure 4:** Distribution of interventions and surrogate choices



**Notes:** Both graphs pool across all treatments. Both show the coefficients in WLS regressions of indicator variables (one for each category on the horizontal axis); spikes show 95% confidence intervals. Graphs exclude individuals whose choices in the corresponding multiple decision lists violate monotonicity.

**Do interventions reflect malevolence or spite toward the recipients?** In principle, CAs may restrict recipients out of a desire to harm recipients. However, when given the opportunity at the end of the study, only 3.9% of CAs choose to reduce the number of shipments at all, and a mere 0.6% of CAs choose to cancel all shipments. (Those who reduce them do so by an average of 3.16 monthly shipments.) Similarly, when deciding to split \$50 between their assigned recipient and a random U.S. taxpayer, 90.0% of CAs give more than half to the welfare recipient and only 3.4% of CAs give nothing to him at all. Overall, behavior in our study is not driven by malevolence.

**Do those who intervene believe that providing aid in-kind is consequential?** In principle, imposing food deliveries simply frees up cash that recipients may spend as they like. The primary objective of CAs who take this view might be to ensure that recipients obtain the deliveries with the greatest monetary value. In such cases, intervention would not necessarily indicate a preference for in-kind aid.

In practice, CAs' responses to our questions about effects on food expenditures imply that most do not hold such beliefs. Roughly 80% think that the receipt of one of our food baskets, which cost \$55-\$75 to provide, will reduce discretionary spending on food by less than \$50. Moreover, on average across CAs and conservatively assuming a food basket cost of \$50, the expected rate of crowd-out is 49.6%. In contrast, nearly 40% of CAs think the receipt of \$65 in gift cards will have no effect on

grocery expenditures, and the expected increase is, on average, less than 2%.<sup>16</sup> Furthermore, beliefs about crowding out, which we elicited after CAs had made all decisions concerning recipients, do not predict either enforcement or surrogate reservation prices. The latter findings suggest that CAs may not have considered crowding out when they made their decisions. See Appendix B.3 for details.

CAs' responses to questions about the reasons for their choices provide additional evidence. CAs who are most inclined to intervene say they do so to influence overall consumption. Specifically, CAs with higher enforcement prices are significantly less likely to agree that 'Giving [name] a choice is the right thing to do' and significantly more likely to agree that 'Making sure [name] consumes food rather than the things he could buy with the gift cards is the right thing to do.' Relations between enforcement prices and other statements are much weaker. Appendix B.4 presents details.

**Among those who intervene, is there also a degree of respect for the recipient's preferences or autonomy?** A desire to intervene may involve complete disregard for the recipient's preferences and autonomy, but a desire to do so selectively may be consistent with broad deference to recipients' judgments. We illuminate the extent of deference in two ways.

First, we ask whether CAs' decisions are sensitive to information about recipients' preferences. For this purpose, we calculate the average difference between surrogate reservation prices before and after CAs receive information about the recipient. The CAs' surrogate reservation prices rise on average by \$18.89 (s.e. \$1.10) upon learning that the recipient's reservation price for food deliveries is higher than \$70, and falls by \$14.45 (s.e. \$1.20) upon learning that it is lower than \$70. In other words, surrogate reservation prices are substantially higher when CAs discover that recipients place greater value on food. This finding suggests that CAs place considerable weight on recipients' preferences.

Second, we compare enforcement prices with surrogate reservation prices. Intuitively, the latter represents the price at which the CA judges the food baskets and gift cards to be equally beneficial for the recipient. A CA who considers only her own judgment and who places no value on the recipient's autonomy will restrict the recipient's options by enforcing food deliveries whenever the value of the gift cards is below the surrogate reservation price, so that the enforcement price and the surrogate reservation price will coincide. In contrast, CAs who are deferential to but uncertain about recipients' preferences, or who simply place weight on recipients' autonomy, will be more reluctant to intervene. They will do so only if, in their judgment, the potential for recipient error is sufficiently severe. Consequently, the enforcement price will be lower than the surrogate reservation price. To the extent the CA also derives sufficient utility from controlling others, the sign of this difference may flip.

Panel B of Figure 4 shows the distribution of the differences between the CAs' enforcement prices and surrogate reservation prices. A notable feature of this figure is that the distribution is sharply left-skewed. Specifically, enforcement prices exceed surrogate reservation prices for roughly 50% of

<sup>16</sup>Similarly, Hastings and Shapiro (2018) document a substantial flypaper effect for in-kind transfers. They estimate a marginal propensity to consume food out of incremental 'food stamps' of about 50%, but almost no change in food consumption when a drop in gasoline prices frees up cash.

CAs and are less than surrogate reservation prices for roughly 10% of CAs. Another notable feature of the figure is that the two prices coincide for just over 40% of subjects.<sup>17</sup>

A possible explanation for the combination of patterns described above is that roughly half of CAs (those whose enforcement prices are less than their surrogate reservation prices) place weight on recipients’ preferences and autonomy while roughly half (those whose enforcement prices equal or exceed their surrogate reservation prices) do not. However, the data are inconsistent with this explanation. As Appendix B.6 shows, both groups of CAs strongly respond to information about the recipient’s reservation price. Reconciling the sensitivity of CAs’ decisions to information about recipients with the prevalence of CAs for whom enforcement prices equal or exceed surrogate reservation prices therefore requires a different explanation. An alternative hypothesis is that CAs generally exhibit a degree of deference to recipients’ preferences but also typically derive utility from exerting control over others. We will return to this possibility in Section 5.

**Do people intervene to enforce ostensibly good behavior?** Next, we turn to analyses of CAs motives for restricting recipients’ options. One hypothesis is that they seek to improve recipients’ dietary health. We explore this possibility through the regressions that appear in Table 1.A.

We first regress enforcement prices on CAs’ beliefs about the effects of the food deliveries on recipients’ dietary health, pooling across participants in treatments with healthy and representative food baskets. As shown in column 1, the estimated coefficient is statistically insignificant and small in magnitude. Specifically, it implies that a one-standard-deviation increase in the CA’s belief about the health impact of food deliveries (1.14 points on the subjective scale) is associated with a small increase in the enforcement price (\$1.74).

The preceding finding is correlational. To measure causal effects, we regress enforcement prices on a dummy variable indicating whether the CA made decisions involving the healthy food basket as opposed to the representative food basket. As shown in column 2, enforcement prices are a mere \$0.79 higher for CAs whose decisions involved the healthy food basket, and the effect is far from statistically significant.

There are two possible explanations for the absence of a significant relationship between enforcement prices and the type of food basket: either the promotion of dietary health is not a significant motivating factor for CAs, or CAs do not believe that the healthy food basket promotes health more effectively than the representative food basket. Column 3 investigates the second possibility by regressing CAs’ beliefs about the health impact of food deliveries on a dummy variable indicating whether the response concerns the healthy food basket or the representative food basket. The effect is large

---

<sup>17</sup>Significantly, for all gift card values  $p$  between zero and \$130, among those for whom  $p$  is the surrogate reservation price,  $p$  is also a common enforcement price (see Appendix B.5). This pattern suggests that the phenomenon is not attributable to the presence of subjects who set both enforcement and surrogate reservation prices equal to the cost of the food deliveries.

**Table 1:** Encouraging the good? Discouraging the bad?

<b>A. Encouraging the good</b>				
	(1)	(2)	(3)	(4)
Dependent variable	Enforcement Price		Dietary health	Enforcement Price
Method	WLS	WLS	WLS	2SLS
Beliefs about dietary health (1 to 5)	1.527 (0.995)			0.504 (1.419)
<i>Treatment</i>				
Healthy food deliveries		0.785 (2.215)	1.531*** (0.048)	
Observations	1928	1928	1928	1928

<b>B. Discouraging the bad</b>				
	(1)	(2)	(3)	(4)
Dependent variable	Enforcement Price		Sin goods beliefs	Enforcement Price
Method	WLS	WLS	WLS	2SLS
Believed spending on sin goods in %	0.467*** (0.090)			2.369** (0.986)
<i>Treatment</i>				
Information about high alc. consumption		6.034** (2.163)	2.405*** (0.687)	
Observations	1928	1928	1928	1928

**Notes:** In Panel A, dietary health is measured on a five-point Likert scale, encoded as follows: ‘If [name] receives monthly deliveries of the Food Box, how will his eating change? He will eat’ 1=much less healthily, 2=slightly less healthily, 3=just as healthily or unhealthily, 4=slightly more healthily, 5=much more healthily ‘than usual’. Regressions in both panels control for the three order indicators and for recipient demographics, use weighting, and exclude subjects with multiple switches in the price lists for enforcement decisions. Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

(well over one standard deviation) and highly statistically significant. Consequently, the evidence favors the first explanation.

For column 4, we reestimate the relationship between enforcement prices and beliefs about the health impact of food deliveries using treatment variation (whether the CA’s decisions involve the healthy or representative food basket) as an instrument for beliefs. The  $F$  statistic for the first stage (column 3) exceeds 1000, which indicates that the treatment is a strong instrument. The coefficient reported in column 4 implies that beliefs about the health impact of food deliveries has a negligible causal effect on enforcement prices.

Taken as a whole, these results imply that CAs do not intervene to promote dietary health.

**Do people intervene to discourage ostensibly bad behavior?** A second hypothesis concerning CAs’ motives for restricting recipients’ options is that they seek to discourage bad behavior such as the



consumption of *sin goods*, specifically alcohol, tobacco, and lottery tickets. We explore this possibility through the regressions that appear in Table 1.B.

We first regress enforcement prices on CAs’ expectations concerning the incremental spending on sin goods that would result if a recipient were to receive \$100 in gift cards.<sup>18</sup>

As shown in column 1, the estimated coefficient is highly statistically significant. The magnitude implies that, when expected incremental sin-good spending is one standard deviation greater (\$13.01), the enforcement price is \$6.08 higher.<sup>19</sup>

The preceding finding is correlational. To measure causal effects, we regress enforcement prices on a dummy variable indicating whether the CA received a truthful informational nudge suggesting that SNAP recipients’ propensity to consume sin goods is high rather than modest. We find that the informational treatment raises enforcement prices by \$6.03, and the effect is highly statistically significant (column 2).

Assuming the treatment influences enforcement prices by altering the CAs’ beliefs about SNAP recipients’ marginal propensity to consume sin goods rather than through some other mechanism, we can reestimate the specification in column 1 using this treatment variation as an instrument for our measure of those beliefs. The first-stage regression appears in column 3. It shows that the treatment increases CAs’ expectations concerning incremental spending on sin goods by \$2.41. The effect is highly statistically significant, and the  $F$  statistic for this regression is 12.27, which exceeds the usual threshold for diagnosing weak instruments.

Column 4 shows the second-stage regression. The estimated coefficient of 2.37 implies that an exogenous increase in CAs’ expectations concerning SNAP recipients’ incremental spending on sin goods has a positive and statistically significant effect on enforcement prices. The magnitude of this effect is also substantial: a one-standard-deviation increase in expected incremental spending on sin goods raises enforcement prices by \$30.82.

Overall, these results imply that CAs intervene in significant part to discourage behavior they consider normatively undesirable.

## 5 The structure of interventionist preferences

In this section, we formulate and estimate a structural model of CAs’ interventionist preferences. Structural analysis provides additional insights concerning the nature of those preferences and enables us to quantify the importance of welfarist, non-welfarist, and absolutist motives. It also allows us to simulate counterfactual scenarios in which CAs have accurate beliefs about recipients.

<sup>18</sup>We calculate expected spending on sin goods (alcohol, tobacco, and lottery tickets) as the percentage of gas station spending the CA believes the recipient allocates to sin goods multiplied by her expectation concerning the dollar value of gas station gift cards the recipient will select when the total budget is \$100.

<sup>19</sup>We obtain a similar coefficient when we separately control for CAs’ expectations concerning other categories of incremental spending, including luxury goods, entertainment and fast food, sporting goods, and items purchased at gas stations that do not fall into the other categories. The omitted category includes necessities. See Appendix B.7.

## 5.1 The model

**Overview** Our model has three main components. First, we assume the CA cares about the recipient’s welfare. The CA recognizes that recipients may have superior information concerning their needs, but she may nevertheless disagree with their values and hence with the choices they make conditional on their information. Second, we allow for the possibility that the CA derives utility or disutility from the act of limiting another person’s options. For example, she may enjoy controlling others, have an aversion to restricting others’ autonomy, believe that welfare recipients do not deserve choices, or feel constrained to act in accordance with pertinent cultural norms. Third, we also allow for the possibility that some CAs are absolutists who always impose food deliveries, even when the value of gift cards is high. For example, these individual may believe that the only legitimate purpose of aid is to supplement nutrition. This feature allows the model to reproduce the distribution of enforcement prices shown in Figure 4.A including the relatively high concentration at the upper bound.

**Details** The CA selects the recipient’s choice set,  $C$ , from a menu of choice sets,  $\Gamma$ . In our experiment, there are two possible menus, one for the surrogate decision,  $\{\{\text{food}\}, \{\text{cards of value } p\}\}$ , and one for the intervention decision,  $\{\{\text{food}\}, \{\text{food, cards of value } p\}\}$ . When making decisions, a non-absolutist CA takes two considerations into account. First, the CA cares about the welfare the recipient derives from the opportunity to choose from  $C$ . We write the CA’s assessment of the recipient’s welfare as  $U(C)$ . Second, the CA personally derives utility or disutility of  $N(C, \Gamma)$  when selecting the choice set  $C$  from the menu  $\Gamma$ . This consideration might capture a desire to respect another’s autonomy, a preference for control, a belief that welfare recipients do not deserve choices, or respect for a norm. The non-absolutist CA seeks to maximize  $V(C, \Gamma) = U(C) + N(C, \Gamma)$ .

We assume  $U(C)$  reflects the CA’s expectations concerning the recipient’s choice for  $c \in C$ , as well as the money-metric welfare derived from choosing  $c$  according to the CA’s perspective. Letting  $c(C, \theta)$  denote the selection made from the set  $C$  by a recipient with characteristics  $\theta$ , we can write the CA’s assessment of the recipient’s welfare as  $W(c(C, \theta), \theta)$ . Notice that the recipient’s preferences (which  $\theta$  encompasses) can affect the CA’s evaluation both through the recipient’s preferences (by altering the chosen option  $c$ ) and separately through the CA’s preferences. Accordingly,

$$U(C) = E_{\theta} [W(c(C, \theta), \theta) \mid I].$$

Here,  $E_{\theta}$  denotes the expectation treating  $\theta$  as a random variable, while  $I$  denotes the CA’s information about the recipient.<sup>20</sup>

---

<sup>20</sup>In our experiment,  $I$  differs across decisions and treatments. The CA always has information concerning the recipient’s demographic characteristics. In the first surrogate decision, the CA has no information about the recipient’s reservation price. In the second surrogate decision, the CA knows either that the recipient’s reservation price for food baskets exceeds \$70 or that it falls short of \$70.

We assume the CA believes the recipient’s choice  $c$  and characteristics  $\theta$  map to welfare  $W(c, \theta)$  as follows. From the CA’s perspective, the appropriate reservation price for a given recipient is  $p_o$ . In other words, she thinks the recipient ought to receive the food deliveries if the value of the gift cards is  $p_o$  or lower; otherwise, she thinks the recipient ought to receive the gift cards (hence the subscript  $o$ , which stands for ‘ought’). To allow for the possibility that the CA considers the recipient’s preferences when forming this opinion, we assume that  $p_o$  depends on the recipient’s reservation price,  $p_r$ :

$$p_o(p_r) = \alpha + \beta p_r.$$

The parameter  $\alpha$  represents the CA’s belief concerning the appropriate reservation price for a recipient who places no value on food. We can also interpret it as  $\alpha = (1 - \beta) p_v$ , where  $p_v$  represents the CA’s assessment of the appropriate reservation price according to her own values. Under that interpretation, she places weight  $\beta$  on the recipient’s opinion and weight  $1 - \beta$  on her own opinion.<sup>21</sup>

The CA assesses the money metric utility of a recipient with known reservation price  $p_r$  as  $W = p_o(p_r)$  if the recipient consumes food, and as  $W = p$  if he receives  $\$p$  in gift cards. Uncertainty about  $W$  reflects the CA’s incomplete information about  $p_r$ , which affects both  $p_o$  and, in cases where the recipient has discretion, the option  $c$  chosen from the set  $C$ .

We assume the CA initially believes that  $p_r$  follows a Gaussian distribution with mean parameter  $\mu_0$  and variance parameter  $\sigma_0^2$ , truncated at zero. In treatments where the CA learns that  $p_r$  is either greater or less than 70, we assume she updates her belief based on a prior Gaussian distribution with mean  $\mu_1$  and variance  $\sigma_1^2$ , truncated at zero.<sup>22</sup> The purpose of allowing for the possibility that  $\mu_1 \neq \mu_0$  and  $\sigma_1^2 \neq \sigma_0^2$  is to accommodate non-Bayesian updating.<sup>23</sup>

With respect to the term  $N(C, \Gamma)$ , we are mainly interested in the possibility that the CA experiences utility or disutility when limiting the recipient’s options. Consequently, we assume there is a parameter  $A$  such that  $N(C, \Gamma) = A$  whenever  $C \in \Gamma$  involves a restriction (formally, when there exists  $C' \in \Gamma$  such that  $C \subset C'$ ), and  $N(C, \Gamma) = 0$  otherwise. In principle, the function  $N$  could exhibit many other forms of menu dependence. However, in a setting where the recipient always has either one option or two, there is no need to model complexities such as variation in utility associated with the number of options removed from the choice set. Additionally, highly flexible formulations of  $N$  can compromise identification.

We interpret positive values of  $A$  as a taste for control and negative values as respect for autonomy. Critically,  $A$  has a clear quantitative interpretation. Suppose the CA is certain about  $p_r$  and hence

<sup>21</sup>The CA’s assessment of the recipient’s ideal reservation price may differ from her beliefs about his actual reservation price for several reasons. As in [Hickman \(2024\)](#), she may believe that behavioral issues such as self-control problems distort the recipient’s relative valuation of the food basket. As in [Gadenne et al. \(2024\)](#), she may believe that in-kind transfers offer insurance against price-variation that the recipient may neglect. Or she may simply believe she knows better what is good for the recipient than the recipient himself.

<sup>22</sup>Because the CA learns whether  $p_r$  exceeds or falls short of \$70, the posterior distribution is simply the prior distribution truncated at \$70.

<sup>23</sup>Appendix B.8 displays the distributions of beliefs about recipients’ reservation prices both before and after receiving information.

about  $W$ . If  $A$  is negative, its magnitude is the maximal dollar-denominated welfare loss (according to her assessment) she is willing to let the recipient incur without depriving him of autonomy. If  $A$  is positive, its magnitude is the maximal dollar-denominated welfare loss (according to her assessment) she is willing to impose on the recipient for the satisfaction of restricting his options.

For any decision involving two menus  $C$  and  $C'$ , we assume the CA selects  $C$  if

$$V(C, \{C, C'\}) - V(C', \{C, C'\}) \geq \varepsilon$$

where  $\varepsilon$  is a mean zero Gaussian error with a variance that may differ across types of decisions. Given this structure, it is straightforward to derive the algebraic conditions governing the CA's behavior in surrogate and intervention decisions.

First, consider the optimal surrogate choice. Recalling that the CA's assessment of the recipient's money-metric utility is  $W(\text{cards of value } p, \theta) = p$  if he receives gift cards and  $W(\text{food}, \theta) = p_o$  if he receives food deliveries, and considering that neither choice set contains the other, the following expressions govern the perceived value of each option:

$$U(\{\text{food}\}) = E_{p_r}[p_o(p_r) \mid I]$$

$$U(\{\text{cards of value } p\}) = p.$$

We simplify by taking the expectation over  $p_r$ , which is the only relevant element of  $\theta$ . It follows that the CA selects food deliveries if<sup>24</sup>

$$E_{p_r}[p_o(p_r) \mid I] - p > \varepsilon_1.$$

Next, consider intervention decisions. When evaluating the choice set that provides both options, the CA must account for the fact that the recipient will choose according to his own preferences. Hence, her assessment of the recipient's welfare is

$$U(\{\text{food}, \text{cards of value } p\}) = E_{p_r}[p_o(p_r)\mathbb{1}(p < p_r) + p\mathbb{1}(p > p_r) \mid I].$$

The CA's only alternative to providing the recipient with a choice is to enforce food, in which case she receives utility  $U(\{\text{food}\}) + A$ , where the first term is defined above. The expression includes  $A$  because the set  $\{\text{food}, \text{cards of value } p\}$  contains the subset  $\{\text{food}\}$ . Hence, the CA gives the recipient a choice if

$$E_{p_r}[p_o(p_r)\mathbb{1}(p < p_r) + p\mathbb{1}(p > p_r) \mid I] - E_{p_r}(p_o(p_r) \mid I) - A \geq \varepsilon_2.$$

---

<sup>24</sup>We allow the variance of the mean-zero shock  $\varepsilon_1$  to differ from the variances of the shocks  $\varepsilon_3$  and  $\varepsilon_4$  that apply to the conditional surrogate choices for recipients who do and who do not prefer \$70 in gift cards over the food basket, respectively.

As noted at the start of this section, the final component of our model allows for the possibility that some of the CAs are absolutists who insist that aid must always take the form of food, both in the intervention decision and in all surrogate choice decisions. Specifically, we assume that any given CA is absolutist with probability  $q$ .

**Identification and estimation** To estimate our model, we use three types of data: (i) enforcement decisions conditional on values of  $p$ , (ii) surrogate choices conditional on values of  $p$  for each of the three possible informational signals concerning the recipient’s reservation price ( $\{\emptyset\}$ ,  $\{p_r < \$70\}$ ,  $\{p_r > \$70\}$ ), and (iii) CAs’ beliefs concerning the distribution of  $p_r$  for each of the three informational signals.

The features of the data that identify each of the model’s parameters are reasonably intuitive. Our direct measures of the CA’s beliefs for the three information treatments provide identification for the parameters of the belief distributions ( $\mu_0$ ,  $\mu_1$ ,  $\sigma_0^2$ , and  $\sigma_1^2$ ). Conditional on these beliefs, the three main preference parameters— $\alpha$ ,  $\beta$ , and  $A$ —jointly determine (at least) four average reservation prices: one for the basic surrogate treatment, one each for the two surrogate treatments that provide information concerning  $p_r$ , and (at least) one for the enforcement treatment. A higher value of  $\beta$  implies larger differences between surrogate reservation prices across the informational treatments. A higher value of  $A$  implies a higher enforcement reservation price relative to the surrogate reservation prices, which  $A$  does not affect. A higher value of  $\alpha$  implies a higher enforcement price as well as a higher surrogate reservation price. The variances of  $\varepsilon$  and  $\eta$  determine the distributions of reservation prices around these means. Finally, the parameter  $q$  accounts for any unexplained mass of CAs who opt for food deliveries when  $p = 130$ .

We estimate the model using the two-step efficient generalized method of moments estimator (see, e.g., [Hayashi, 2000](#)). We use a total of 47 moment conditions from the intervention decisions, surrogate choices, and belief elicitations. See Appendix C for the full list of moment conditions.

## 5.2 Estimates

Estimates of the structural model, which appear in column 1 of Table 2, illuminate the normative principles underlying CAs’ choices. Specifically, the three components of our model allow us to decompose motives for intervention into three categories: disagreement with recipients concerning the merits of the food baskets ( $p_o$  versus  $p_r$ ), the utility or disutility the CA personally derives from limiting the recipient’s options ( $A$ ), and absolutism ( $q$ ).

Concerning the welfarist motive, we find that CAs display a surprisingly high degree of deference toward recipients when forming judgments concerning the value of food. First, the CA’s ideal reservation price for the average recipient,  $p_o(\bar{p}_r)$ , is nearly identical to the average recipient’s reservation price according to the CA’s beliefs,  $\bar{p}_r$ . As shown in the table,  $\bar{p}_r$  is \$71.81 while  $p_o(\bar{p}_r)$  is \$71.58. The difference, 23 cents, is tiny and statistically insignificant. Second, because the estimate of  $\beta$  (0.849)

is relatively close to unity,  $p_o$  tracks  $p_r$  reasonably closely as the latter varies. For example, when  $p_r$  is \$100,  $p_o$  is \$95.51; when  $p_r$  is zero,  $p_o$  is \$10.61. Recalling that  $p_o(0) = \alpha$ , and adopting the interpretation, suggested earlier, that  $\alpha/(1 - \beta)$  equals  $p_v$ , the CA’s assessment of the appropriate reservation price according to her own values, we infer that  $p_v$  is \$70.27. In other words, CAs believe that the average recipient’s value of food is close to their own private opinion (the difference between  $p_v$  and  $\bar{p}_r$  being \$1.55).

In light of this deference, why do CAs intervene so frequently? The third motive for intervention, absolutism, provides a partial explanation. The estimates in column 1 of Table 2 imply that nearly 15% of CAs are absolutists, in the sense that they impose food deliveries irrespective of  $p$ , the value of the gift cards.

Critically, we find that interventions are also attributable in large part to the second motive. Specifically, our estimates imply that CAs derive substantial utility rather than disutility from limiting SNAP recipients’ options. The value of  $A$ , 6.79, indicates that the CA is willing to reduce the recipient’s dollar-denominated welfare (according to her assessment) by up to \$6.79 in order to experience the satisfaction of imposing restrictions.

To compare the quantitative impact of the three motives on interventions, we compute counterfactual intervention rates where we neutralize each motive individually. Figure 5 displays the results. The solid blue line depicts fitted intervention rates for each  $p$  when all three motives are in play. Neutralizing the welfarist motive by setting  $\alpha = 0$  and  $\beta = 1$  has a minor effect on intervention rates for all values of  $p$ . When the gift card budget is \$65 (the midpoint of the range of food delivery costs we convey to subjects), the predicted intervention rate fall from 52.1% to 44.8%. The effect of the subjection motive is dramatically larger, especially for lower gift card budgets. When  $p = \$65$ , neutralizing the subjection motive reduces predicted intervention rates by nearly half, to 28.7%. The absolutist motive, in contrast, primarily affects interventions when gift card budgets are high. When  $p = \$65$ , neutralizing it reduces predicted intervention rates to 43.9%, which is similar to the effect of the welfarist motive. Overall, when the food basket and the gift cards have similar monetary values, the subjection motive clearly dominates; the welfarist and absolutist motives have much smaller effects. This evidence is consistent with the hypothesis that people intervene primarily because they are averse to granting autonomy to the recipient, or even derive utility from imposing restrictions, rather than out of concern for the recipient’s welfare.

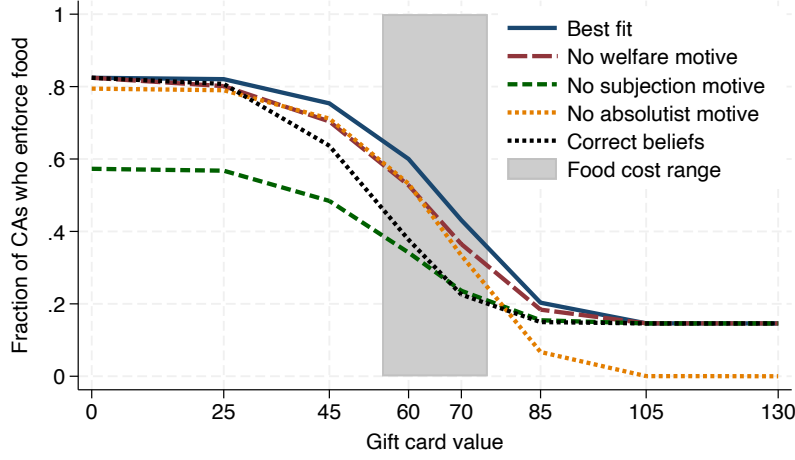
The sign and importance of  $A$  is inconsistent with the hypothesis of specific egalitarianism. Recall that this parameter only impacts intervention decisions. In contrast, a desire to reduce inequality within the domain of food consumption would impact both surrogate and intervention decisions, most plausibly through the perceived value of food deliveries,  $p_o$ . For the same reason, the role of  $A$  is inconsistent with versions of ward paternalism that assume the CA seeks to benefit the recipient but distrusts the recipient’s judgment. Rather, it points toward a version of ward paternalism in which the CA’s motive involves a desire to control the recipient.

**Table 2:** Structural estimation results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>CA sample</b>							
<i>Food basket</i>							
Healthy	✓	✓			✓	✓	
Representative	✓		✓		✓	✓	
<i>Alcohol information</i>							
Low	✓	✓	✓		✓		
High	✓	✓	✓			✓	
Difference in estimates				(2)-(3)		(5)-(6)	
<b>Model parameters</b>							
<i>Consequentialist part</i>							
Weight on recipient res. price, $\beta$	0.849*** (0.017)	0.856*** (0.022)	0.847*** (0.024)	0.009 (0.033)	0.871*** (0.022)	0.858*** (0.025)	0.013 (0.034)
Ideal res. price for mean rec., $p_o(\bar{p}_r)$	71.581*** (0.428)	73.278*** (0.579)	70.168*** (0.595)	3.109*** (0.830)	69.399*** (0.531)	73.796*** (0.616)	-4.397*** (0.814)
<i>Nonconsequentialist part</i>							
Utility from intervention, $A$	6.785*** (0.249)	7.291*** (0.364)	6.228*** (0.311)	1.062** (0.479)	6.514*** (0.306)	6.906*** (0.348)	-0.392 (0.463)
Fraction of absolutist types, $q$	0.146*** (0.007)	0.157*** (0.011)	0.139*** (0.009)	0.018 (0.014)	0.115*** (0.009)	0.169*** (0.010)	-0.054*** (0.014)
<b>Beliefs about reservation prices</b>							
Prior belief mean, $\bar{p}_r$	71.815*** (0.463)	72.631*** (0.659)	71.228*** (0.610)	1.403 (0.899)	70.660*** (0.579)	72.479*** (0.658)	-1.819** (0.877)
Prior mean parameter, $\mu_0$	70.091*** (0.478)	70.296*** (0.694)	69.939*** (0.623)	0.357 (0.932)	69.494*** (0.596)	70.311*** (0.688)	-0.817 (0.910)
Prior SD parameter, $\sigma_0$	34.270*** (0.439)	36.475*** (0.674)	32.449*** (0.542)	4.026*** (0.865)	31.726*** (0.564)	35.932*** (0.618)	-4.207*** (0.837)
Posterior mean parameter, $\mu_1$	96.120*** (0.409)	96.357*** (0.583)	95.792*** (0.519)	0.565 (0.780)	95.415*** (0.589)	96.423*** (0.518)	-1.008 (0.784)
Posterior SD parameter, $\sigma_1$	25.958*** (0.359)	26.983*** (0.521)	24.510*** (0.447)	2.473*** (0.687)	24.609*** (0.457)	26.714*** (0.516)	-2.105*** (0.689)
<b>Best-fitting enforcement price</b>	61.80*** (0.62)	63.22*** (0.92)	60.12*** (0.78)	3.10** (1.21)	59.91*** (0.74)	63.05*** (0.92)	-3.14*** (1.18)
<b>Counterfactuals</b>							
Counterfactual: $\alpha = 0, \beta = 1$							
Enforcement price	56.87*** (0.80)	57.44*** (1.15)	56.10*** (1.02)	1.35 (1.54)	57.04*** (0.92)	56.57*** (1.18)	0.48 (1.50)
Difference to actual	4.94*** (0.68)	5.78*** (0.96)	4.03*** (0.91)	1.75 (1.32)	2.87*** (0.85)	6.48*** (0.98)	-3.62*** (1.29)
Counterfactual: $A = 0$							
Enforcement price	21.13*** (2.28)	21.98*** (3.03)	19.64*** (3.20)	2.34 (4.41)	15.83*** (3.19)	23.31*** (3.17)	-7.48* (4.50)
Difference to actual	40.68*** (2.15)	41.24*** (2.87)	40.49*** (3.02)	0.76 (4.17)	44.08*** (2.98)	39.74*** (3.02)	4.34 (4.24)
Counterfactual: correct beliefs							
Enforcement price	49.16*** (0.74)	49.34*** (1.09)	48.59*** (0.95)	0.75 (1.45)	46.13*** (0.99)	50.82*** (1.04)	-4.69*** (1.43)
Difference to actual	12.64*** (0.39)	13.88*** (0.58)	11.53*** (0.49)	2.35*** (0.76)	13.78*** (0.55)	12.23*** (0.55)	1.55** (0.78)
$N$	1997	976	1021		932	1065	

**Notes:** Each column represents a separate estimation. Best-fitting and counterfactual enforcement prices concern non-absolutist CAs only. Robust standard errors in parentheses. Estimates of the variances of the stochastic choice parameters  $\varepsilon_i$  are listed in Appendix B.9. Standard errors of  $\bar{p}_r$  and  $p_o(\bar{p}_r)$  calculated by the Delta method.  $\bar{p}_r$  is the expected value of a Gaussian with mean  $\mu_0$  and standard deviation  $\sigma_0$  after left-truncation at zero. Standard errors on for the counterfactuals involving correct beliefs treat the correct-belief parameters as deterministic. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Figure 5:** Relative effect of each motive and biased beliefs on intervention rates



**Notes:** The figure displays the intervention rates predicted by our fitted structural model, along with the counterfactual intervention rates when each of three motives is turned off, respectively, for each gift card value about which subjects made decisions in the study. The shaded area indicates the cost range of a food basket delivery communicated to CAs.

Building on our earlier discussion of identification, we can distill the behavioral patterns that cause the estimate of  $A$  to be positive. A CA who defers to the recipient’s judgment concerning the value of food but is uncertain about their reservation price should grant the recipient some leeway by setting an enforcement price that is less than the surrogate reservation price. With either greater deference or greater uncertainty, this gap should be larger. From the CAs’ elicited beliefs and surrogate decisions, we know that they are highly uncertain about the recipient’s reservation price and responsive to information about it, which indicates substantial deference. Nevertheless, as shown in Panel B of Figure 4, they often provide recipients with little or no leeway. Heterogeneity among CAs is not a viable explanation for this puzzle because, as we have seen, surrogate reservation prices respond strongly to information about recipients’ preferences even among those whose enforcement prices equal or exceed their surrogate reservation prices. Consequently, these patterns are difficult to reconcile for CAs who only have welfarist motives. Allowing for the possibility that CAs also derive satisfaction from limiting recipients’ options enables us to reconcile the absence of significant leeway with evidence of uncertainty about and deference to recipients’ preferences. To verify this explanation, we reestimate the model for various fixed values of the deference parameter,  $\beta$ . Imposing lower values of  $\beta$  decreases  $A$ . Indeed, when we fix the value of  $\beta$  at 0.2, the estimate of  $A$  drops to \$1.39; see Appendix B.10.

We have conducted additional analyses to evaluate whether the positive value of  $A$  is attributable to spurious factors. One possibility is that our elicitation procedure exaggerates CAs’ subjective uncertainty concerning recipients’ preferences, thereby inflating the leeway a pure welfarist would provide. To explore this possibility, we reestimate the model fixing the standard deviation of the belief



distribution at 10. This value is considerably smaller than the estimated standard deviations for the unconditional and conditional distributions (34.27 and 25.96, respectively). Nevertheless, the value of  $A$  remains positive and substantial. Appendix B.10 provides details. Likewise, imposing Bayesian updating on the CAs’ belief formation process affects magnitudes without altering our qualitative conclusions.

We also use the structural model to explore motives associated with promoting good behavior and preventing bad behavior in greater depth. With respect to promoting good behavior, Section 4 found no difference in enforcement prices between treatments with the healthy food basket and the representative food basket. In principle, this finding could reflect countervailing effects on different parameters rather than a lack of concern for the nutritional value of the food. To test this hypothesis, we estimate our structural model separately for these two treatments; see columns 2 and 3 of Table 2. As shown in column 4, differences across the food baskets are generally small. Differences between the estimates of the fraction of CAs who are absolutists and of the deference parameter  $\beta$  are not statistically significant. But when deciding about the healthy food basket, CAs exhibit slightly greater aversion to granting the recipient autonomy (\$1.06,  $p < 0.05$ ) and somewhat higher ideal reservation prices (\$3.11,  $p < 0.01$ ).<sup>25</sup>

With respect to preemption of bad behavior, Section 4 found substantial differences in enforcement prices between treatments that nudged CAs’ beliefs concerning recipients’ consumption of sin goods in different directions. To identify the mechanisms behind this effect, we estimate our structural model separately for each treatment; see columns 5 and 6 of Table 2. We find significant differences for two preference parameters. Specifically, greater concern about the consumption of sin goods leads to a substantial increase (5.4 percentage points) in the frequency of absolutism ( $q$ ) and to an increase of \$4.40 in the reservation price CAs believe the average recipient ought to set ( $p_o(\bar{p}_r)$ ). For the parameters governing deference ( $\beta$ ) and the utility derived from intervention ( $A$ ), the differences are not statistically significant.

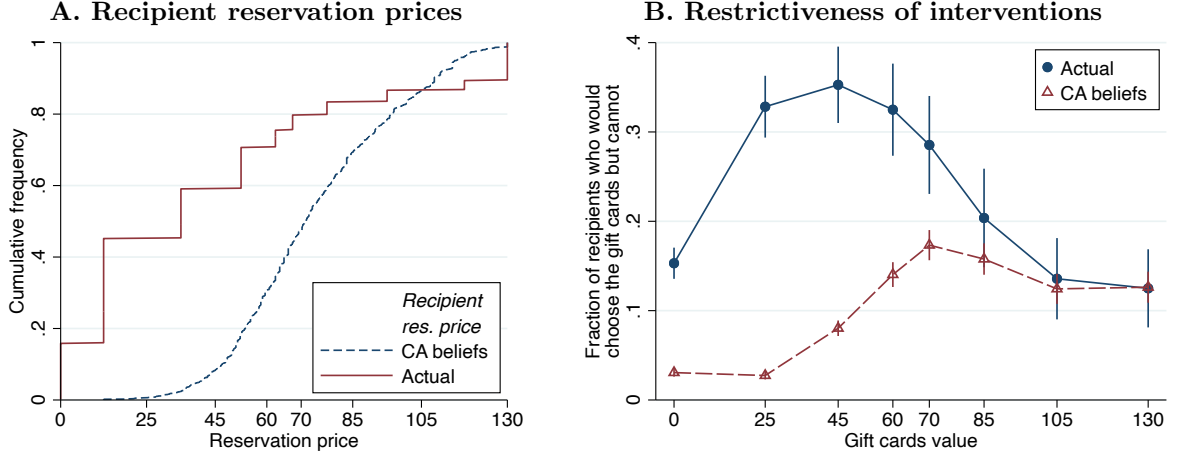
## 6 To what extent are interventions misguided?

We have found that CAs typically try to account for recipients’ preferences when evaluating the desirability of restrictive interventions. It follows that, if CAs’ beliefs about recipients’ preferences are incorrect, some intervention decisions are likely misguided. For example, a CA who systematically overestimates recipient preferences for food will impose restrictions that are excessive according to their own objectives.

---

<sup>25</sup>For the generalized version of the model that appends an asymmetric loss function, we find that CAs disapprove of mistaken gift card consumption to a larger extent when the foregone opportunity involves the healthy food basket rather than the representative food basket. This finding suggests that CAs may attach somewhat higher normative weight to the healthy basket.

**Figure 6:** Actual and perceived distribution of reservation prices, and the restrictiveness of interventions



**Notes:** Data are pooled across all treatments. Panel A shows cumulative distribution functions accounting for population weights. Panel B shows the coefficients of WLS regressions relating impact frequencies to indicator variables, one for each category listed on the horizontal axis. In Panel B, whiskers show 95% confidence intervals. Panel B excludes individuals whose intervention choices violate monotonicity.

There are two main reasons why CAs might overestimate recipients' reservation prices. First, if CAs suffer from false consensus bias (Ross et al., 1977), they will exaggerate the degree to which recipients agree with them concerning the relative merits of food baskets and gift cards. In fact, one would naturally expect the perceived value of food baskets to be considerably higher for CAs than for recipients. One reason is that CAs typically have higher incomes than recipients. They may be accustomed to paying more for groceries because they purchase premium items such as brand-name or organic products (Gundala and Singh, 2021), spend less time searching for cheap alternatives, select out of cost-reducing ordeal mechanisms such as collecting coupons (Narasimhan, 1984; Shimp and Kavas, 1984), or live in areas where the cost of living is higher (Diamond and Moretti, 2021). Alternatively, people may attach less importance to general discretionary spending relative to necessities when thinking about others than when thinking about themselves. Second, CAs who fall prey to the Flaw of Averages (Savage and Markowitz, 2009) may fail to account for preference heterogeneity among recipients. For example, they may assume that a representative food basket matches *every* recipients' tastes rather than those of the average recipient. Properly accounting for mismatches would imply a lower average reservation price for recipients.

Analysis of the data confirms this expectation. As Figure 6.A shows, CAs greatly overestimate recipients' reservation prices. While recipients' mean reservation price is \$48.10, CAs believe that the mean is \$74.75.<sup>26</sup> Thus, CAs overestimate recipients' reservation prices by more than half.

<sup>26</sup>We calculate this value by multiplying the probability mass a subject assigns to each interval by the midpoint of that interval, summing up across intervals, and taking the population-weighted mean across subjects. This method

Because CAs place substantial weight on recipient preferences, these inflated beliefs lead to excessively restrictive interventions according to the CAs’ own value judgments. One way to gauge the importance of these mistaken beliefs is to compute the fraction of recipients whom CAs unintentionally restrict. We will first focus on the restrictions CAs impose when the value of the gift cards is \$60, which roughly coincides with the cost of a food delivery. For  $p = \$60$ , the average CA believes that 12.9% of recipients would have chosen the gift cards but are forced to receive food due to the CAs’ collective interventions.<sup>27</sup> In fact, CAs’ decisions restrict 32.5% of the recipients, more than twice the percentage according to CAs’ beliefs.<sup>28</sup> Panel B of Figure 6 shows analogous results for each value of  $p$ . Subjects significantly underestimate the restrictiveness of their interventions for all gift card values below \$105, and their error is particularly severe for smaller  $p$ .<sup>29</sup>

Another way to gauge the importance of CAs’ mistaken beliefs about recipients’ reservation prices is to simulate the counterfactual choices CAs would make if they held correct beliefs (i.e., a mean of \$48.1 and standard deviation of \$43.7) using the structural model. As shown in Figure 5, in that counterfactual scenario, the intervention rate would fall sharply for gift card values near the cost of the food basket. For example, when  $p = \$65$ , the predicted rate falls by nearly half, to 29.2%. We also calculate the effect of correcting beliefs on mean enforcement prices for CAs without an absolutist motive, as shown in the bottom rows of Table 2 (column 1). The correction reduces the enforcement price from \$61.80 to \$49.16. The magnitude of the effect—a reduction of \$12.64—is substantial and highly statistically significant. Analogous simulations imply similar effects for treatments involving healthy and representative food baskets; see columns 2 and 3.

Overall, because CAs hold false beliefs concerning recipients’ preferences, their interventions are excessively restrictive according to their own objectives. These findings suggest that the dissemination of accurate information concerning the preferences of SNAP recipients might significantly erode support for providing aid in-kind rather than as cash.

## 7 Political views, policy preferences, and demographics

In this section, we investigate how the propensity to intervene varies with the characteristics of CAs and recipients. The first subsection focuses on the CA’s political affiliation. The second evaluates external validity by examining relationships between choices within the experiment and attitudes

---

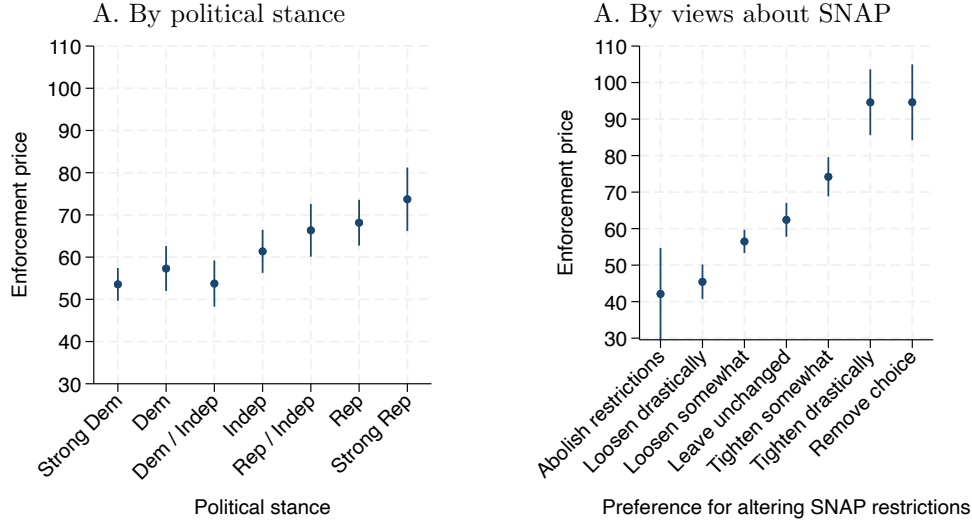
differs from our structural analysis; the difference in methods potentially explains the divergence from the prior belief mean  $\bar{p}_r$  of \$71.82 estimated in our structural analysis; see column 1 of Table 2.

<sup>27</sup>To calculate this percentage, we first determine the fraction of recipients with a reservation price below \$60 according to the beliefs of each CA. We set this number to zero for CAs who do not restrict the recipient when  $p = \$60$ , then we average across CAs.

<sup>28</sup>This figure is the product of the fraction of CAs who restrict the recipient when  $p = \$60$  and the fraction of recipients whose reservation price is lower than \$60.

<sup>29</sup>For these calculations, we use data on decisions and beliefs for all CAs regardless of whether they were matched with real or hypothetical recipients. Consequently, the sample of recipients to which the CAs’ decisions pertain differs from the sample for which we observe actual reservation prices. However, this mismatch is not consequential: when we restrict the analysis to CAs who made decisions about real recipients, the results are highly similar. See Appendix B.11.

**Figure 7:** Enforcement prices by CA attributes



*Notes:* Whiskers represent 95% confidence intervals.

toward SNAP policies. The third studies the role of demographics, focusing particularly on the question of whether paternalism implicates stereotypes involving race or gender.

## 7.1 Political affiliation

Ex ante, it is unclear how the propensity to intervene would vary with the CA’s political affiliation. Given the prevalence of libertarian attitudes among traditional conservatives, one might expect conservative CAs to intervene less aggressively than their liberal counterparts. However, in light of the current association between conservatism and authoritarianism, one might also expect the opposite pattern. The relationship might even be non-monotonic. For example, people with greater confidence in their own views may be more willing both to impose those views on others and to position themselves further from the center on the political spectrum.

Panel A of Figure 7 illuminates this issue by plotting average enforcement prices against CAs’ self-reported political affiliations. We observe a strong positive association between conservatism and the propensity to intervene. For strong Republicans, the average enforcement price is roughly \$20 higher than for strong Democrats (\$73.71 vs. \$53.55).<sup>30</sup>

To shed additional light on the nature of the relationship between political orientation and the propensity to intervene, we estimate our structural model separately for the subsamples of left-leaning and right-leaning CAs; see columns 1 and 2 of Table 3. The parameters describing the welfarist

<sup>30</sup>This finding is consistent with cross-country evidence in [Hessami and Uebelmesser \(2013\)](#) showing that conservative-leaning governments more often use in-kind restrictions than progressive-leaning governments. However, that evidence does not distinguish between direct and indirect motives for intervention.

component of the model are similar across the two groups; the difference in the deference parameter  $\beta$  is minuscule and the ideal reservation price  $p_o(\bar{p}_r)$  is only moderately higher for right-leaning subjects (\$2.30,  $p < 0.05$ ). Beliefs about recipients' reservation prices are also similar.

Instead, our structural analysis attributes the relationship between CAs' choices and their political orientations to the model's other two components. Compared to liberal CAs, conservative CAs derive greater satisfaction from limiting SNAP recipients' options. Specifically, according to our estimates, the smallest money-metric loss for a recipient that would deter a CA from intervening—in other words, the parameter  $A$ —is 36% higher for conservatives than for liberals (\$7.83 versus \$5.76). Additionally, the prevalence of absolutist attitudes is nearly three times higher among conservatives than among liberals (20.4% versus 7.6%).

**Table 3:** Structural estimation results by CA characteristics and views about SNAP

	(1)	(2)	(3)	(4)	(5)	
			Difference (1)-(2)			Difference (4)-(5)
<b>CA sample</b>						
Political orientation	Left	Right				
Views about SNAP restrictions				Tighten	Loosen	
<b>Model parameters</b>						
<i>Consequentialist part</i>						
Weight on recipient res. price, $\beta$	0.881*** (0.020)	0.860*** (0.030)	0.021 (0.036)	0.794*** (0.024)	0.891*** (0.023)	-0.096*** (0.033)
Ideal res. price for mean rec., $p_o(\bar{p}_r)$	71.366*** (0.536)	73.668*** (0.733)	-2.303** (0.909)	75.263*** (0.668)	68.811*** (0.524)	6.451*** (0.849)
<i>Nonconsequentialist part</i>						
Utility from intervention, $A$	5.755*** (0.289)	7.832*** (0.441)	-2.077*** (0.527)	7.926*** (0.393)	5.516*** (0.271)	2.411*** (0.477)
Fraction of absolutist types, $q$	0.076*** (0.006)	0.204*** (0.013)	-0.127*** (0.014)	0.226*** (0.012)	0.068*** (0.007)	0.158*** (0.014)
<b>Beliefs about reservation prices</b>						
Prior belief mean, $\bar{p}_r$	73.583*** (0.581)	72.644*** (0.784)	0.939 (0.976)	75.243*** (0.752)	69.194*** (0.528)	6.049*** (0.919)
Prior mean parameter, $\mu_0$	71.970*** (0.601)	70.300*** (0.819)	1.670 (1.016)	72.609*** (0.821)	68.214*** (0.534)	4.395*** (0.980)
Prior SD parameter, $\sigma_0$	34.583*** (0.537)	36.507*** (0.741)	-1.923** (0.915)	38.379*** (0.730)	30.348*** (0.478)	8.031*** (0.872)
Posterior mean parameter, $\mu_1$	97.489*** (0.477)	95.257*** (0.567)	2.232*** (0.741)	96.989*** (0.578)	94.777*** (0.533)	2.212*** (0.787)
Posterior SD parameter, $\sigma_1$	24.898*** (0.460)	26.027*** (0.563)	-1.129 (0.727)	26.811*** (0.515)	24.854*** (0.457)	1.957*** (0.689)
$N$	1031	700		915	1082	

**Notes:** Standard errors of  $\bar{p}_r$  and  $p_o(\bar{p}_r)$  calculated by the Delta method. Each column represents a separate estimation. Columns 2 and 3 exclude subjects who rate themselves politically centrist. Estimates of the variances of the stochastic choice parameters  $\varepsilon_i$  are listed in Appendix B.9.  $\bar{p}_r$  is the expected value of a Gaussian with mean  $\mu_0$  and standard deviation  $\sigma_0$  after left-truncation at zero. Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## 7.2 Attitudes toward SNAP policy and external validity

Next, we relate in-experiment choices to CAs' views about SNAP policy. The results speak to the external validity of our findings.

As shown in Panel B of Figure 7, the relationship between enforcement prices and CAs' preferences concerning the restrictiveness of the SNAP program are extremely strong. For example, the average enforcement price is less than \$50 among CAs who would prefer to drastically loosen SNAP restrictions and greater than \$90 among those who would prefer to drastically tighten them.

With respect to our structural analysis, a key question is whether our findings concerning the parameter  $A$  have external relevance. In principle, our estimates of this parameter might capture the utility derived from personally taking steps to limit the recipient's options, rather than from restrictions imposed by others, including through public policy. We address this issue by estimating the model separately for CAs who prefer tighter SNAP restrictions and for those who prefer looser restrictions; see columns 4 and 5 of Table 3. Critically, the value of  $A$  is 44% larger for the former group than for the latter (\$7.93 versus \$5.52). This finding confirms the policy-relevance of our findings concerning the satisfaction CAs derive from restricting SNAP recipients' options.

Further inspection of the estimates in columns 4 and 5 of Table 3 reveal that nearly all the other preferences parameters differ across these subsamples in the direction one would expect if in-experiment behavior reflects policy preferences. Those in favor of tightening restrictions display less respect for recipients' preferences ( $\beta = 0.79$  versus  $\beta = 0.89$ ), place greater value on food consumption ( $p_o(\bar{p}_r) = \$75.26$  versus  $\$68.81$ ), and are more than three times as likely to be absolutist (22.6% versus 6.8%). All these differences are statistically significant. These results broadly corroborate the external relevance of our structural estimates.

## 7.3 Demographic patterns

Next, we ask whether the proclivity to intervene varies systematically with demographic characteristics. This analysis speaks to the hypothesis that political support for in-kind aid is rooted in stereotypes concerning race and gender.

**Table 4:** Structural estimation results by recipient demographics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Recipient	Black	White	Difference (1)-(2)	Male Childless	Female Childless	Female With child	Difference (4)-(5)	Difference (5)-(6)
<b>Model parameters</b>								
<i>Consequentialist part</i>								
Weight on recipient res. price, $\beta$	0.805*** (0.024)	0.885*** (0.023)	-0.080** (0.033)	0.873*** (0.030)	0.840*** (0.024)	0.824*** (0.031)	0.033 (0.038)	0.016 (0.039)
Ideal res. price for mean rec., $p_o(\bar{p}_r)$	74.570*** (0.562)	68.310*** (0.589)	6.260*** (0.814)	69.500*** (0.883)	71.036*** (0.600)	74.217*** (0.697)	-1.536 (1.068)	-3.181*** (0.920)
<i>Nonconsequentialist part</i>								
Utility from intervention, $A$	6.789*** (0.333)	6.621*** (0.343)	0.168 (0.478)	7.223*** (0.450)	6.013*** (0.335)	6.825*** (0.392)	1.210** (0.561)	-0.812 (0.516)
Fraction of absolutist types, $q$	0.169*** (0.010)	0.126*** (0.009)	0.044*** (0.014)	0.194*** (0.015)	0.130*** (0.010)	0.114*** (0.012)	0.064*** (0.018)	0.016 (0.015)
<b>Beliefs about reservation prices</b>								
Prior belief mean, $\bar{p}_r$	74.496*** (0.686)	69.376*** (0.591)	5.120*** (0.906)	70.105*** (0.867)	71.761*** (0.635)	73.752*** (0.888)	-1.656 (1.074)	-1.991* (1.091)
Prior mean parameter, $\mu_0$	72.439*** (0.706)	67.986*** (0.614)	4.453*** (0.936)	67.933*** (0.928)	70.495*** (0.638)	71.865*** (0.916)	-2.563** (1.126)	-1.370 (1.116)
Prior SD parameter, $\sigma_0$	36.416*** (0.676)	32.129*** (0.530)	4.287*** (0.859)	34.976*** (0.865)	32.561*** (0.587)	35.581*** (0.790)	2.416** (1.045)	-3.021*** (0.984)
Posterior mean parameter, $\mu_1$	98.796*** (0.655)	94.181*** (0.487)	4.614*** (0.816)	97.043*** (0.757)	95.610*** (0.637)	96.730*** (0.608)	1.433 (0.990)	-1.120 (0.881)
Posterior SD parameter, $\sigma_1$	27.166*** (0.520)	24.612*** (0.463)	2.555*** (0.696)	26.406*** (0.583)	25.280*** (0.536)	26.990*** (0.627)	1.127 (0.792)	-1.710** (0.825)
$N$	1000	997		582	845	570		

**Notes:** Data only include observations from CAs assigned to a hypothetical recipient. Standard errors of  $\bar{p}_r$  and  $p_o(\bar{p}_r)$  calculated by the Delta method. Each column represents a separate model. Columns 2 and 3 exclude subjects who rate themselves politically centrist. Estimates of the variances of the stochastic choice parameters  $\varepsilon_i$  are listed in Appendix B.9.  $\bar{p}_r$  is the expected value of a Gaussian with mean  $\mu_0$  and standard deviation  $\sigma_0$  after left-truncation at zero. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

We begin with reduced-form results based on WLS regressions that relate enforcement prices to recipients' demographic characteristics. Significantly, because the assignment of recipient demographics to CAs is exogenously randomized, these regressions plausibly measure causal effects. See Appendix B.12.1 for detailed results.

The most interesting patterns that emerge from this analysis concern race. The average enforcement price is \$3.93 higher for blacks than for whites, and we can reject zero with 93% confidence. We are wary of this coefficient's marginal statistical significance, particularly given our *ex ante* interest in multiple hypotheses (i.e., the effects of both race and gender). However, we also find that the average surrogate reservation price is \$4.75 higher for blacks than for whites, and that difference is highly statistically significant ( $p < 0.01$ ). Consequently, there is some suggestive evidence that CAs are more inclined to act paternalistically toward blacks than toward whites. When we estimate the same regressions separately for liberal-leaning and conservative-leaning CAs, we find that the effects of the recipient's race are entirely attributable to conservatives.

To investigate the role of the recipient's race in greater depth, we estimate separate structural models for black and white recipients; see columns 1 and 2 of Table 4. We find that CAs respect black recipients' revealed preferences less than those of white recipients ( $\beta = 0.805$  versus  $0.885$ ,  $p < 0.05$ ), their average ideal reservation price is substantially higher for blacks than for whites ( $p_o(\bar{p}_r) = \$75.57$  versus  $\$68.31$ ,  $p < 0.01$ ), and they are more likely to have absolutist attitudes towards blacks than toward whites ( $q = 16.9\%$  versus  $12.6\%$ ,  $p < 0.01$ ). When we estimate the model separately for conservative CAs, we find substantial black-white differences for all preference parameters. The average ideal reservation price ( $p_o(\bar{p}_r) = \$79.17$  versus  $\$70.84$ ,  $p < 0.01$ ), the money metric utility derived from limited the recipient's options ( $A = \$11.74$  versus  $\$7.81$ ,  $p < 0.01$ ), and the prevalence of absolutism ( $q = 33.4\%$  versus  $14.8\%$ ,  $p < 0.01$ ) are all higher for black recipients, whereas deference to recipient preferences is significantly lower ( $0.825$  vs.  $0.939$ ,  $p < 0.05$ ). When we estimate the model separately for liberals, we only find a significant black-white difference for the prevalence of absolutism and the effect is much smaller than for conservatives ( $q = 8.9\%$  versus  $6.5\%$ ,  $p < 0.05$ ); we also find a small difference in ideal reservation prices ( $\$71.94$  versus  $70.05$ ,  $p < 0.1$ ). Differences for the other preference parameters are small and statistically insignificant. See Appendix B.12.2 for details.

According to our reduced-form estimates, none of the other demographic characteristics, including gender and the presence of a child, have effects on either enforcement prices or surrogate reservations prices that approach statistical significance.<sup>31</sup> Furthermore, because these characteristics predict CAs' beliefs about recipients' spending patterns, we can rule out the possibility that CAs simply overlooked the demographic information in recipients' profiles.<sup>32</sup>

<sup>31</sup>There is a single exception when we estimate separate regressions for left-leaning and right-leaning CAs (Appendix B.12.1): liberals set lower enforcement prices for older recipients.

<sup>32</sup>We estimate weighted regression of expenditures shares on the recipient's demographic characteristics as well as the CA's own race, gender, age, political attitudes, income, parental status, and participation in welfare programs, plus



Of course, even these null results could reflect the interplay of offsetting forces. We therefore estimate separate structural models for male childless recipients, female childless recipients, and female recipients with a young child; see columns 4, 5, and 6 of Table 4. For female recipients, the presence of a child raises the CA’s average ideal reservation price by \$3.81, but no other differences approach statistical significance. Comparing male and female recipients without children, we see that CAs derive greater utility from limiting men’s choices ( $A = \$7.22$  versus \$6.01,  $p < 0.01$ ) and are more likely to act as absolutists when choosing for men ( $q = 19.4\%$  versus 13.0%,  $p < 0.01$ ), but we do not find significantly different ideal reservation prices across recipient genders.

We have also explored the ways in which interventionist preferences vary with the CA’s demographic characteristics; see the reduced-form analysis in Appendix B.14. We find that enforcement prices and surrogate reservation prices are both higher for older CAs; they are both lower for CAs who are themselves SNAP participants (but not recipients of other welfare programs). The CAs’ other demographic characteristics do not predict interventions even when interacted with recipient characteristics (see Appendix B.14).

## 8 Conclusion

Using a lab-in-the-field experiment in which members of the U.S. general population act as “Choice Architects” for SNAP recipients, we have investigated the strength and structure of preferences for providing aid in-kind rather than as cash. We find that a substantial majority of individuals prevent recipients from choosing alternatives to groceries when the alternatives are insufficiently valuable. To some extent, these interventions reflect paternalistic concern for the recipient’s well-being. However, the importance of that motive is limited by two considerations: first, CAs’ evaluations of recipient welfare largely respect recipients’ judgments concerning the relative importance of food; second, CAs believe (incorrectly) that the average recipient’s judgment does not differ much from their own. Moreover, despite seeking to suppress the consumption of sin goods, CAs display a surprising lack of concern for recipients’ dietary health. Accordingly, our structural analysis identifies two important motives for interventions other than paternalistic welfarism: First, CAs derive considerable satisfaction from limiting SNAP recipients’ options. This motive is considerably more consequential than welfarist concerns. Second, a small but significant minority, whom we call absolutists, are opposed to unrestricted aid as a matter of principle.

One significant implication of our findings is that many interventions are misguided in the sense that they are predicated on false beliefs concerning recipients’ preferences. Additional results show that, compared to liberals, politically conservative individuals exhibit a greater propensity to intervene, which our structural model attributes to the prevalence of absolutist attitudes and the amount of

---

indicator variables capturing experimental order and information treatments. We observe statistically significant effects on beliefs about spending patterns for almost all demographic characteristics; see Appendix B.13.

satisfaction derived from imposing constraints on SNAP recipients. We find suggestive evidence that CAs, specifically conservatives, are more inclined to act paternalistically toward blacks than whites, but we mostly obtain null effects for other demographic characteristics including gender and the presence of child. Strong correlations between in-experiment behavior and SNAP policy preferences provide reassurance concerning external validity.

A limitation of our experiment is that it does not allow us to distinguish among various hypotheses concerning the satisfaction CAs derive from limiting SNAP recipients' options. One possibility is that people enjoy exercising control over others; a second is that they think welfare recipients do not deserve choices; a third is that they feel constrained to act in accordance with pertinent cultural norms. Given the apparent importance of this class of motives, further investigation is warranted.

## References

- Ambuehl, S. and B. D. Bernheim (2022). Interpreting the will of the people. a positive analysis of ordinal preference aggregation. *Unpublished*.
- Ambuehl, S., B. D. Bernheim, and A. Ockenfels (2021). What motivates paternalism? an experimental study. *American Economic Review* 111(3), 787–830.
- Ambuehl, S., S. Blesse, P. Doerrenberg, C. Feldhaus, and A. Ockenfels (2025). Politicians’ social welfare criteria: An experiment with german legislators. *Unpublished*.
- Andreoni, J., D. Aydin, B. Barton, B. D. Bernheim, and J. Naecker (2020). When fair isn’t fair: Understanding choice reversals involving social preferences. *Journal of Political Economy* 128(5), 1673–1711.
- Bartling, B., A. W. Cappelen, H. Hermes, B. Tungodden, and M. Skivenes (2023). Free to fail? paternalistic preferences in the united states. *NHH Dept. of Economics Discussion Paper* (09).
- Batista, C., D. Silverman, and D. Yang (2015). Directed giving: evidence from an inter-household transfer experiment. *Journal of Economic Behavior & Organization* 118, 2–21.
- Bennett, R. M., L. Raiz, and T. S. Davis (2016). Development and validation of the poverty attributions survey. *Journal of Social Work Education* 52(3), 347–359.
- Bernheim, B. D., K. Kim, and D. Taubinsky (2024). Welfare and the act of choosing. Technical report, National Bureau of Economic Research.
- Bjerga, A. (2018, Feb). Trump’s budget proposal swaps food stamps for ready-to-eat meal kits. *TIME*. Accessed: 2025-02-26.
- Campbell, C. and S. M. Gaddis (2017). “i don’t agree with giving cash”: A survey experiment examining support for public assistance. *Social Science Quarterly* 98(5), 1352–1373.
- Caplan, B. (2020, October). Nudge: Welfare state edition. <https://web.archive.org/web/20220223125531/https://www.econlib.org/nudge-welfare-state-edition/>.
- Caspi, A., J. Gilman, and C. Rafkin (2024). Preferences for rights.
- Currie, J. and F. Gahvari (2008). Transfers in cash and in-kind: Theory meets the data. *Journal of Economic Literature* 46(2), 333–83.
- Daniels, R. J. and M. J. Trebilcock (2004). *Rethinking the welfare state: the prospects for government by voucher*. Routledge.

- Davern, M., R. Bautista, J. Freese, S. L. Morgan, and T. W. Smith (2021). General social survey 2021 cross-section. Principal Investigator, Michael Davern; Co-Principal Investigators, Rene Bautista, Jeremy Freese, Stephen L. Morgan, and Tom W. Smith. 1 datafile (68,846 cases) and 1 codebook (506 pages).
- Delavande, A., X. Giné, and D. McKenzie (2011). Measuring subjective expectations in developing countries: A critical review and new evidence. *Journal of Development Economics* 94(2), 151–163.
- Diamond, R. and E. Moretti (2021). Where is standard of living the highest? local prices and the geography of consumption.
- Eden, M. and P. G. Piacquadio (2024). The ethical mirror. *Working Paper*.
- Fisher, A. (2019). The identity crisis of america’s largest anti-hunger program. <https://web.archive.org/web/20190804150212/https://thereader.mitpress.mit.edu/snap-identity-crisis/>.
- Fong, C. M. and E. F. Luttmer (2011). Do fairness and race matter in generosity? evidence from a nationally representative charity experiment. *Journal of Public Economics* 95(5-6), 372–394.
- Fryer Jr, R. G. and S. D. Levitt (2004). The causes and consequences of distinctively black names. *The Quarterly Journal of Economics* 119(3), 767–805.
- Gadenne, L., S. Norris, M. Singhal, and S. Sukhtankar (2024). In-kind transfers as insurance. *American Economic Review* 114(9), 2861–2897.
- Gangadharan, L., P. J. Grossman, K. Jones, and C. M. Leister (2018). Paternalistic giving: Restricting recipient choice. *Journal of Economic Behavior & Organization* 151, 143–170.
- Gundala, R. R. and A. Singh (2021). What motivates consumers to buy organic foods? results of an empirical study in the united states. 16(9). Publisher: Public Library of Science.
- Harberger, A. C. (1984). Basic needs versus distributional weights in social cost-benefit analysis. *Economic Development and Cultural Change* 32(3), 455–474.
- Harrison, G. W., M. I. Lau, E. E. Rutström, and M. B. Sullivan (2005). Eliciting risk and time preferences using field experiments: Some methodological issues. In *Field experiments in economics*. Emerald Group Publishing Limited.
- Hastings, J. and J. M. Shapiro (2018). How are snap benefits spent? evidence from a retail panel. *American Economic Review* 108(12), 3493–3540.
- Hayashi, F. (2000). *Econometrics*. Princeton University Press.

- Helms, S. E., B. L. Scott, and J. P. Thornton (2012). Choosing to give more: experimental evidence on restricted gifts and charitable behaviour. *Applied Economics Letters* 19(8), 745–748.
- Hessami, Z. and S. Uebelmesser (2013). Empirical determinants of in-kind redistribution: Partisan biases and the role of inflation. *Economics Letters* 118(2), 318–320.
- Hickman, P. J. (2024). Cash for me, food for you? experimental evidence on paternalism in anti-poverty programs. In *Essays in Applied Microeconomics*, Chapter 1. Harvard University.
- Jacobsson, F., M. Johannesson, and L. Borgquist (2007). Is altruism paternalistic? *The Economic Journal* 117(520), 761–781.
- Jones, K. (2017). Paternalism and ethnicity in giving. *Economic Record* 93(302), 420–433.
- Krawczyk, M. and L. P. Wozny (2017). An experiment on temptation and attitude towards paternalism. *Unpublished*.
- Liscow, Z. and A. Pershing (2022). Why is so much redistribution in-kind and not in cash? evidence from a survey experiment. *National Tax Journal* 75(2), 000–000.
- Lloyd-Jones, D. M., Y. Hong, D. Labarthe, D. Mozaffarian, L. J. Appel, L. Van Horn, K. Greenlund, S. Daniels, G. Nichol, G. F. Tomaselli, et al. (2010). Defining and setting national goals for cardiovascular health promotion and disease reduction: the american heart association’s strategic impact goal through 2020 and beyond. *Circulation* 121(4), 586–613.
- Minear, M. and D. C. Park (2004). A lifespan database of adult facial stimuli. *Behavior research methods, instruments, & computers* 36(4), 630–633.
- Miratrix, L. W., J. S. Sekhon, A. G. Theodoridis, and L. F. Campos (2018). Worth weighting? how to think about and use weights in survey experiments. *Political Analysis* 26(3), 275–291.
- Narasimhan, C. (1984). A price discrimination theory of coupons. 3(2), 128–147. Publisher: INFORMS.
- Nichols, A. L. and R. J. Zeckhauser (1982). Targeting transfers through restrictions on recipients. *The American Economic Review* 72(2), 372–377.
- Pew Research Center (2021). What the data says about food stamps in the u.s. <https://pewrsr.ch/43yi480>.
- Pikulina, E. S. and C. Tergiman (2020). Preferences for power. *Journal of Public Economics* 185, 104173.
- Ross, L., D. Greene, and P. House (1977). The “false consensus effect”: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology* 13(3), 279–301.

- Savage, S. L. and H. M. Markowitz (2009). *The flaw of averages: Why we underestimate risk in the face of uncertainty*. John Wiley & Sons.
- Shimp, T. A. and A. Kavas (1984). The theory of reasoned action applied to coupon usage. *11*(3), 795–809. Publisher: Oxford University Press.
- Simonsohn, U. (2016). Greg vs. jamal: Why didn’t bertrand and mullainathan (2004) replicate? <http://datacolada.org/51>.
- Tobin, J. (1970). On limiting the domain of inequality. *The Journal of Law and Economics* *13*(2), 263–277.
- Tversky, A. and D. J. Koehler (1994). Support theory: A nonextensional representation of subjective probability. *Psychological review* *101*(4), 547.
- Tzioumis, K. (2018). Demographic aspects of first names. *Scientific data* *5*(1), 1–9.
- Uhl, M. (2011). Do self-committers mind commitment by others? an experiment on weak paternalism. *Rationality, Markets and Morals* *2*, 13–34.
- U.S. Census Bureau (2021). American community survey public use microdata sample. <https://data.census.gov/mdat/#/search?ds=ACSPUMS1Y2021>.
- U.S. Department of Agriculture (2021). Official usda thrifty food plan: U.s. average, september 2021. Technical report, U.S. Department of Agriculture, <https://fns-prod.azureedge.net/sites/default/files/media/file/CostofFoodSep2021Thrifty.pdf>.
- Zhang, F. F., J. Liu, C. D. Rehm, P. Wilde, J. R. Mande, and D. Mozaffarian (2018). Trends and disparities in diet quality among us adults by supplemental nutrition assistance program participation status. *JAMA network open* *1*(2), e180237–e180237.

# ONLINE APPENDIX

## Interventionist Preferences and the Welfare State: The Case of In-Kind Aid

Sandro Ambuehl, B. Douglas Bernheim, Tony Q. Fan, Zach Groff

### Table of Contents

---

<b>A</b>	<b>Additional design materials</b>	<b>1</b>
A.1	Food basket content . . . . .	1
A.2	Restrictions on gas station sales . . . . .	3
A.3	Design details and additional elicitations . . . . .	4
A.4	Sampling details . . . . .	9
<b>B</b>	<b>Additional analysis</b>	<b>10</b>
B.1	Demographics . . . . .	10
B.2	Order effects . . . . .	13
B.3	Crowding out . . . . .	14
B.4	Stated reasons for interventions . . . . .	16
B.5	Joint distribution of surrogate and enforcement prices . . . . .	17
B.6	Response to information about recipient preferences . . . . .	18
B.7	Table 1.B with additional controls . . . . .	19
B.8	Belief updating . . . . .	20
B.9	Estimates of ancillary parameters . . . . .	21
B.10	Drivers and robustness of the structural estimates . . . . .	23
B.11	Actual and believed restrictiveness of interventions on matched pairs . . . . .	25
B.12	Effect of recipient demographics . . . . .	26
B.13	Recipient demographics and CAs' beliefs about recipients' spending . . . . .	28
B.14	Choice Architect attributes . . . . .	29
<b>C</b>	<b>Structural estimation details</b>	<b>32</b>
<b>D</b>	<b>Experiment instructions</b>	<b>34</b>
D.1	Choice Architects . . . . .	34

D.2 Recipients . . . . .	76
--------------------------	----

<b>References</b>	<b>94</b>
-------------------	-----------

---



## A Additional design materials

### A.1 Food basket content

Tables A.1 and A.2 list the contents of the healthy and representative food baskets, respectively.

At the prices on walmart.com in June 2022 for Sacramento, the contents of the healthy and representative food baskets cost \$51.68 and \$51.73, respectively. Actual deliveries to recipients dispersed across the US varied by location but usually cost between \$55 and \$75. Whenever Walmart does not deliver to a recipient, or when the listed items are unavailable, we select the closest available substitutes.

**Table A.1:** Contents of the healthy food basket

	Package size	Amount	Unit price
<b>Unsaturated fats</b>			
Canned salmon	14 oz	1	3.24
Olive Oil	8.54 fl oz	1	2.77
<b>Fiber</b>			
Rolled oats (whole grain)	42 oz	1	2.58
Whole wheat bread	20 oz	2	1.48
<b>Legumes, nuts, seeds</b>			
Chickpeas	15.5oz	2	0.72
Pinto beans	15.5oz	2	0.72
Walnuts	4oz	1	2.36
<b>Vegetables</b>			
Broccoli Florets, Frozen	32oz	1	2.24
Whole carrots	1ct	1	0.98
Bell peppers	3ct	1	3.37
Roma tomatoes	1ct	4	0.29
Cucumber	1ct	2	0.50
Iceberg Lettuce	1ct	1	1.68
Frozen peas	2lb	1	2.22
Low-salt canned tomato sauce	8oz	1	0.38
No salt added whole kernel corn	15.25 oz	2	0.58
Canned sliced carrots	8.25 oz	1	0.50
<b>Fruit</b>			
Fuji Apples	3lb	1	3.98
Bananas	1ct	6	0.23
Navel oranges	2lb	1	5.23
Frozen berries	16oz	1	2.68
Apple sauce, no sugar added	3.9 oz	6	0.42
<b>Other</b>			
Russet potatoes	5lb	1	2.37
Milk	0.5gal	1	2.06

**Table A.2:** Contents of the representative food basket

	Package size	Amount	Unit price
<b>Soda</b>			
Coca cola 2L	2 L	2	2.14
Mountain Dew 2L	2 L	1	1.98
Fanta 2L	2 L	1	1.36
<b>Cookies, and snacks</b>			
Oreo style cookies	14.3 oz	1	2.28
Honey Roasted Peanuts	2.875 oz	2	0.98
Pringles	5.2 oz	1	1.78
Buttery Crackers	13.7 oz	1	2.18
<b>Ready-made meals</b>			
Canned spaghetti Os	15.8 oz	4	0.89
Canned beef with vegetable soup	18.8 oz	1	1.46
Canned beef ravioli	15 oz	1	1.24
Canned pea soup	18.8 oz	1	1.98
<b>Meat and fish</b>			
Oscar Meyer wieners	8 ct	1	2.86
Pulled pork in BBQ sauce (pouch)	2.6 oz	1	1.34
Canned tuna	5 oz	2	0.78
Rotisserie chicken	9 oz	1	3.48
<b>Dairy</b>			
2% Milk	0.5 gal	1	2.06
Cheddar cheese block	8 oz	1	1.86
Yoghurt	6 oz	1	0.64
<b>Fruit and vegetable products</b>			
Dill pickles	24 fl oz	1	1.76
Jar of roasted red bell pepper slices	12 oz	1	1.38
Banana	1 ct	6	0.23
Orange juice	4 fl oz	1	2.58
Canned green beans	14.5 oz	1	0.98
Canned tomato sauce	8 oz	1	0.29
<b>Carbs and proteins</b>			
Dried spaghetti	16 oz	1	0.92
White bread loaf	20 oz	2	0.93
Crunchy honey oats	18 oz	1	2.72

## A.2 Restrictions on gas station sales

Table A.3 lists the restrictions on gas station sales across the states that we assign to hypothetical recipients. In all states, a license must be obtained for the sale of alcohol and tobacco, and sales are permitted to individuals 21 and over. For the sale of lotteries, the age restriction is 18 and over, unless stated otherwise. A state may have dry (alcohol prohibited), wet (no restrictions beyond age), and/or moist (additional restrictions beyond age) counties. As an exception, Connecticut has no dry counties. Additional local ordinances at the county or city level may apply.

**Table A.3:** Regulations on alcohol, tobacco, and lottery sales across states used in the experiment

State	Alcohol	Tobacco	Lottery
Kentucky	Permits the sale of beer and wine, subject to local ordinances.	License and age requirements.	License and age requirements.
Mississippi	Allowed to sell beer and light wine, subject to local ordinances.	License and age requirements.	License and age requirements (21 and over).
West Virginia	Allowed to sell beer and light wine, subject to local ordinances.	License and age requirements.	License and age requirements.
Connecticut	Allowed to sell beer.	License and age requirements.	License and age requirements.
Massachusetts	Permits the sale of beer and wine, subject to local ordinances.	Cannot sell any flavored e-cigarettes or vaping products. Can only sell non-flavored e-cigarettes with 35mg/ml or less nicotine content.	License and age requirements.
Rhode Island	Allowed to sell beer, subject to regulations and licensing requirements.	Restrictions on the sale of flavored tobacco products are subject to local ordinances.	License and age requirements.

### A.3 Design details and additional elicitations

Table A.4 displays the detailed structure of the experiment in schematic form.

**Table A.4:** Schematic overview of the experiment

<p><b>A. Main decisions</b></p> <ol style="list-style-type: none"> <li>1. Intervention decisions</li> <li>2. Surrogate choice</li> <li>3. Elicitation of beliefs about recipient’s reservation price</li> <li>4. Surrogate choice conditional on information about recipient preferences</li> <li>5. Elicitation of belief about unconstrained recipient choices conditional on information about recipient preferences</li> <li>6. Distributing money between the recipient and random taxpayer.</li> </ol> <p><b>B. Attitudes and beliefs related to decisions</b></p> <ol style="list-style-type: none"> <li>1. Beliefs about <ol style="list-style-type: none"> <li>(a) crowding out grocery spending due to receiving the food deliveries</li> <li>(b) effect of food basket on the recipient’s dietary health</li> <li>(c) food spoilage</li> <li>(d) crowding out grocery spending due to receiving gift cards</li> <li>(e) gift card selection and spending of gas station gift cards</li> </ol> </li> <li>2. Reasons for choices in stage A</li> <li>3. Poverty attribution</li> <li>4. Reducing the number of shipments</li> <li>5. Preference between food baskets</li> <li>6. Appropriateness of each of the food baskets</li> </ol> <p><b>C. Attitudes and beliefs concerning SNAP</b></p> <ol style="list-style-type: none"> <li>1. View on SNAP restrictions</li> <li>2. View on SNAP amount</li> <li>3. General views on SNAP</li> <li>4. Beliefs about demographics of SNAP recipients</li> </ol> <p><b>D. CAs’ own characteristics</b> Demographics</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

*Notes:* See text for randomization of these orders.

**Details about the interface** Instructions immediately precede each scenario. Throughout the study, a bar at the top displays the pixelated photo of the recipient, the description of the recipient’s characteristics, and two buttons that the user can click to show the contents of the food basket or the selection of gift cards from which the recipient may choose.

Next to the buttons CAs can click to recommend choosing the food baskets or the gift cards, they can write an open-ended message to the recipient (knowing that offensive language will be removed).

Our survey displays the full page only once the pixelated image of the recipient is fully loaded. This feature ensures that all see that image regardless of the speed of their internet connection.

**Details about hypothetical recipients** The names for hypothetical recipients come from gender-linked social security data and race-linked mortgage data. We take a list of first names by gender from social security data for the years 1991-2000. For each year, the data include all names with at least five occurrences. For any name with both male and female observations, we keep only the observations with the gender that is more common for that name. We collapse the data to get a list of name-gender pairs with the number of occurrences of each. We then merge this with 2007-2010 mortgage data from [Tzioumis \(2018\)](#) that links names to the percent that are in each of six racial groups. We multiply the number of occurrences of each name-gender pair in the social security data by the share white and the share black according to the mortgage data to estimate the number of occurrences of each name among black males, black females, white males, and white females born in the 1990s. We then randomly draw 1000 names with replacement according to the empirical frequency, and we randomly assign a name to each recipient from this sample. We refrain from conveying race through the use of stereotypical names because these names are associated with characteristics other than race, such as socioeconomic status ([Fryer Jr and Levitt, 2004](#); [Simonsohn, 2016](#)).

We draw pictures of hypothetical recipients’ faces from the database by [Minear and Park \(2004\)](#). We display the images with a resolution of  $35 \times 35$  pixels. Hence, the identity of the individual is hidden, but the skin-color can easily be seen. We use 80 pixelated pictures, 10 for each category defined by the dimensions age, gender, and race. To each CA, we randomly display one of the 10 images consistent with the assigned recipient characteristics. We ask real clients to take a picture of themselves using their webcam. A pixelated version of this picture is sent to our server, which we display to the CA assigned to that recipient.

**Details about incentivized elicitations** We elicit beliefs about crowding out of grocery spending through receiving the food deliveries, in intervals  $\{[\infty, -50], [-50, -30], [-30, -15], [-15, -5], [-5, 5], [5, 15], [15, 30], [30, 50], [50, \infty]\}$ . We incentivize accuracy; a subject who selects the interval that is correct according to [Hastings and Shapiro \(2018\)](#) receives a bonus of \$5, and \$0 otherwise.

We ask CAs to predict how 10 previous recipients have allocated \$50 in gift cards across the various categories. We incentivize their answer by discounting a constant marginal penalty \$0.05 from a baseline payment of \$5 for each dollar that needs to be assigned to a different category to make the subjects’ answer match the empirical distribution.

In each case, the main screen informs subjects that the accuracy of their answer may determine their study payments, and a button labeled “details” reveals an explanation of the specific incentive mechanism.

To measure the relative weight subjects place on their assigned welfare recipient relative to other citizens, each CA decides how to split a one-time payment of \$50 between the welfare recipient and a randomly selected taxpayer. To measure spite towards the welfare recipient, each CA can reduce the number of shipments by any number of months.

CAs predict the share of all SNAP participants that are black women, black men, white women, and white men. For each of these demographic categories, they also estimate the fraction of recipients who have children. We incentivize the latter questions by applying a constant penalty for each percentage point by which the stated response differs from the truth.

**Details about unincentivized elicitations** We elicit beliefs about crowding out of grocery spending through receiving \$50 in gift cards using the same format as for the previous crowding out question. We elicit the CA’s belief about the percentage of the food in the food deliveries that will go to waste if sent to the recipient, in the following intervals:  $\{\{0\}, [0, 10], [10 - 25], [25 - 50], [50, 100]\}$ .

We elicit CAs’ beliefs about how recipients will use gas station gift cards across the categories gas, tobacco products, alcoholic beverages, hot foods, and other.

We ask what determined the CAs’ choices regarding their paternalism decisions. Subjects rate each of the following three possible reasons as ‘completely unimportant’, ‘slightly unimportant’, ‘slightly important’, or ‘very important’: (i) ‘Sending a food box has only a negligible impact on [name]’s consumption, because he will just buy less food in the store.’ (ii) ‘Giving [name] a choice is the right thing to do’, (iii) ‘Making sure [name] consumes food rather the things he could buy with the gift cards is the right thing to do’. They further indicate agreement with each of the following two statements by selecting ‘completely disagree’, ‘slightly disagree’, ‘slightly agree’, or ‘completely agree’: (i) ‘My choice reflects what I would like if I were the welfare recipient’, (ii) ‘What is right does not depend on the value of the gift cards that the recipient could receive instead of the food box’.

We use a subset of the questions from the poverty attribution literature (Bennett et al., 2016). We ask ‘Why do you think [name] is poor enough to enroll in SNAP (food stamps)?’ For each of six possible reasons, the CA chooses between *extremely unlikely*, *somewhat unlikely*, *somewhat likely*, and *extremely likely*. The possible reasons are: (i) *Lack of patience and drive*, (i) *Lack of education and skills*, (iii) *Tendency to make bad life choices*, (iv) *Society doesn’t give all people an equal chance*, (v) *Discrimination against minorities and the poor*, (vi) *Bad luck (not anybody’s fault and not society’s fault)*. The first three of these reasons attribute poverty to factors internal to the recipient while the latter three attribute it to factors outside the individual.

Subjects indicate their attitudes about current SNAP restrictions. They choose from seven answer categories whether restrictions should be tightened drastically, tightened somewhat, left unchanged,

loosened somewhat, loosened drastically, abolished, or that recipients should not have a choice at all. Subjects also indicate whether they think benefit levels should be increased by 20% or more, by 20% or less, left unchanged, cut by 20% or less, or cut by 20% or more. Additionally, we elicit agreement on a four-point Likert scale about the following statements: (i) *The SNAP (food stamps) program as it is currently administered in the US is a good thing.* (ii) *Welfare recipients make bad choices if they receive cash instead of food.* (iii) *SNAP is a welfare program, hence SNAP participants are taking advantage of others.* In each of these questions, CAs may indicate that they have no opinion on the matter.

At the very end of the survey, we elicit the CAs’ own attributes. We ask about age, gender, ethnicity, how close the CA feels to their own ethnic group (following [Fong and Luttmer, 2011](#)), household income, number of people in household, education, marital status, number of children, political party closest to own views, agreement with closest party’s views. At the very beginning of the survey, we additionally elicit state, citizenship (only U.S. citizens are allowed to participate), and social welfare program participation.

**Details concerning randomization** We randomize the assignment of recipient characteristics as shown in [Table A.5](#).

**Table A.5:** Randomization over characteristics of hypothetical recipients

Probability	Gender	Race	Children	Age
$1/14$	Male	White	No children	Old (50-69)
$1/14$	Female	White	No children	Old (50-69)
$1/14$	Male	Black	No children	Old (50-69)
$1/14$	Female	Black	No children	Old (50-69)
$1/14$	Male	White	No children	Young (20-29)
$1/14$	Male	Black	No children	Young (20-29)
$1/7$	Female	White	No children	Young (20-29)
$1/7$	Female	White	One 2-year old	Young (20-29)
$1/7$	Female	Black	No children	Young (20-29)
$1/7$	Female	Black	One 2-year old	Young (20-29)

We randomize the following survey elements: (i) A random half of CAs proceed through the decisions in the order listed in [Figure A.4](#). The remaining CAs reveal beliefs before making decisions, both before and after learning about the recipient’s preferences. Specifically, they proceed through the stages in the following order: 3, 1, 2, 5, 4, 6. (ii) A random half of CAs see the gift card amounts in increasing order throughout, the other half see them in decreasing order throughout.

CAs assigned to a hypothetical recipient observe recipient characteristics according to the distribution in [Table A.5](#).

We randomly vary the color used as a background for the description of the recipient.

The order in which gift cards of different categories are shown to CAs is randomized on the individual level, except that the category *Gas stations and associated convenience stores* always appears second. This placement ensures that CAs will not miss them while limiting demand effects by not placing it first.

**Comprehension and monotonicity check** CAs must pass a comprehension check after the instructions on their restriction decisions. Specifically, they must select the correct ones out of the following three statements to be able to continue with the survey: (i) ‘If I decide that [name] will get the food box deliveries, that’s what he will get. There will be no choice’, ‘If I decide that [name] will get the food box deliveries, he will get to choose whether he might rather get gift cards instead’, ‘If I give [name] a choice, he will get the monthly gift cards. He won’t be able to select the food deliveries.’

Two further comprehension checks ensure that subjects correctly process the information about the recipient’s preferences. Both checks ask whether, when given the choice, the recipient would choose  $\$X$  in gift cards or the food box. Answer options are ‘[Name] would choose the food box’, ‘I cannot say based on the information given’, and ‘[Name] would choose  $\$70$  in gift cards’. In the first check,  $X = 70$ . In the second check,  $X = 55$  for a subject whose recipient prefers the food box over  $\$70$  in gift cards, and  $X = 85$  in case of the reverse preference. The second check thus conveys the implications of preference monotonicity. Subjects must answer correctly to continue. They have as many attempts as required.

In addition, we nudge CAs towards providing answers in the multiple price lists that exhibit at most two (in the case of paternalism decisions) or one (in the case of surrogate choice) switching points. If there is an excess number of switches, the subject sees the message ‘*Your choices appear to be inconsistent or random. Most people decide in one of the  $X$  ways below. Your choices fit none of those patterns. Please click the Back button and change your choices to make them consistent with one of these  $X$  common patterns.*’ followed by a list of the admissible patterns ( $X$  is five in case of restriction decisions and three in case of surrogate choice). The subject decides herself whether to change her decisions or whether to leave her decisions unchanged and continue with the survey.



## A.4 Sampling details

**Pilot studies** Before collecting our main sample analyzed in this paper, we collected an earlier sample with  $n = 4,087$  US residents participating as CAs through Kantar, a market research company, in August through October 2022. Unfortunately, the usefulness of that sample was compromised by a belief elicitation format that subjects struggled to understand. Specifically, we elicited subjective cumulative distribution functions, asking, for each of our grid of reservation prices, the probability with which the recipient would choose the food basket over gift cards of that amount. However, subjects frequently provided non-monotonic responses, and technically valid responses implied implausibly high beliefs about reservation prices that exceeded CAs’ beliefs about the costs of the food baskets severalfold.

After revising the belief elicitation mechanism to the current version, we conducted a pilot with 428 CAs in the Summer of 2023. Power simulations based on that pilot sample revealed that a sample of 2,000 CAs would suffice. Based on these calculations, we collected our final study sample of 1,997 CAs in January and February 2024. As the data collection coincided with the academic job market for economists, we regrettably failed to update the preregistration to the new, lower sample size before data collection.

**Surveys with SNAP recipients** 137 SNAP participants took the study in August 2023, and the remaining 133 participated in December 2024. There is no noticeable or statistically detectable difference in the distribution of reservation prices across the two waves, neither for each food basket separately nor when considering them jointly. The latter were included in the database shown to CAs in our main sample, the former to CAs in a pilot study (see Appendix A.4). Additional potential recipients had participated but provided unrecognizable pictures. We excluded these participants before running the corresponding CA sample; these participants’ information was never shown to a CA. We also exclude them in our analysis of recipient responses.

After completion of the CA sessions, recipients participated in a second survey to make their choice (if the CA provided them with the opportunity). If applicable, recipients decided on their preferred selection of gift cards for the first delivery. While the available gift card amounts are typically not fully flexible (some are available only in increments of \$5, for instance), there is a wide range of available amounts. We delivered gift cards electronically where possible but delivered by postal mail where electronic gift cards were unavailable.

## B Additional analysis

### B.1 Demographics

Table [B.1](#) displays the distribution of demographic characteristics among our CA sample and compares it to the population frequencies according to the 2022 General Social Survey (GSS, [Davern et al., 2021](#)) for the characteristics on which data are available. Table [B.2](#) displays the distribution of demographic characteristics among our welfare recipient sample.

**Table B.1:** Demographic characteristics of the CAs

Characteristic	Fraction among	
	CAs	US population
<b>Gender</b>		
Male	0.511	0.491
Female	0.489	0.509
<b>Age</b>		
18-19	0.009	0.017
20-29	0.204	0.181
30-39	0.195	0.178
40-49	0.182	0.164
50-59	0.204	0.159
60-69	0.169	0.162
> 70	0.037	0.140
<b>Race</b>		
White	0.743	0.658
Black	0.154	0.116
Other	0.104	0.226
<b>Marital status</b>		
Married	0.441	0.501
Widowed	0.022	0.052
Divorced	0.100	0.133
Separated	0.016	0.026
Never married	0.422	0.289
<b>Children</b>		
0	0.480	0.317
1	0.146	0.154
2	0.213	0.274
3	0.104	0.142
4	0.035	0.068
> 4	0.023	0.044
<b>Household income</b>		
\$0-\$10,000	0.039	0.068
\$10,000-\$20,000	0.075	0.072
\$20,000-\$30,000	0.092	0.071
\$30,000-\$40,000	0.083	0.065
\$40,000-\$50,000	0.093	0.074
\$50,000-\$60,000	0.091	0.062
\$60,000-\$90,000	0.198	0.160
more than \$90,000	0.330	0.320
<b>Household size</b>		
1	0.208	
2	0.316	
3	0.187	
4	0.182	
5	0.062	
6	0.030	
7	0.009	
> 7	0.005	
<b>Geographic area</b>		
Urban	0.296	
Suburban	0.512	
Rural	0.191	
<b>Political preference</b>		
Strong democrat	0.221	0.187
Not very strong democrat	0.137	0.137
Independent, closer to democrat	0.161	0.118
Independent, as far from democrats as from republicans	0.129	0.230
Independent, closer to republican	0.120	0.078
Not very strong republican	0.130	0.094
Strong republican	0.102	0.130
Other	0.000	0.028
<b>Public assistance</b>		
Medicaid	0.213	
Medicare	0.185	
Veteran Disability Benefits	0.014	
Earned Income Tax Credit	0.082	
Social Security	0.181	
Supplemental Nutrition Assistance Program	0.130	
Temporary Assistance for Needy Families	0.006	
Public Housing	0.018	
Pell Grants	0.047	
None of the above	0.506	
<b>N</b>	1997	4032

*Notes:* Variables for demographic comparison are from the 2022 General Social Survey (GSS, [Davern et al., 2021](#)).

**Table B.2:** Demographic characteristics of the welfare recipients in our sample

Characteristic	Fraction of recipients
<b>Gender</b>	
Male	0.233
Female	0.767
<b>Age</b>	
20-29	0.170
30-39	0.304
40-49	0.256
50-59	0.215
60-69	0.033
<b>Race</b>	
White (non-hispanic)	0.681
Black	0.181
White (hispanic)	0.085
Other	0.052
<b>Marital status</b>	
Married, living with partner	0.237
Married but separated	0.056
Not married, living with partner	0.189
Not married, single	0.519
<b>Children</b>	
0	0.515
1	0.215
2	0.156
3	0.085
> 3	0.030
<b>Public assistance</b>	
Medicaid	0.681
Medicare	0.248
Veteran Disability Benefits	0.011
Earned Income Tax Credit	0.126
Social Security	0.244
Supplemental Nutrition Assistance Program	1.000
Temporary Assistance for Needy Families	0.041
Public Housing	0.104
Pell Grants	0.059
<b>N</b>	270

## B.2 Order effects

Table B.3 examines the effect of the order in which survey items are displayed to CAs on enforcement price, surrogate reservation price, and beliefs about the mean reservation price. The only randomization dimension that causes substantial effects is whether prices in multiple decision lists are shown in ascending or descending order.

**Table B.3:** Order effects

VARIABLES	(1) Enforcement price	(2) Surrogate res. price	(3)	(4) Belief mean res. price	(5)
After receiving information about recipient WTP			✓		✓
Dep. var. mean	59.516*** (0.875)	77.110*** (0.711)	80.333*** (0.689)	74.474*** (0.524)	76.924*** (0.627)
Beliefs about gift card spending elicited first	-0.194 (1.746)	-1.019 (1.423)	-0.567 (1.380)	1.561 (1.034)	-0.369 (1.256)
Beliefs about recipient's WTP elicited first	-0.648 (1.748)	-2.459 (1.425)	-0.500 (1.382)	-2.189* (1.036)	-0.623 (1.258)
Money amounts shown high to low	-6.370*** (1.747)	-0.769 (1.424)	1.693 (1.381)	-7.219*** (1.035)	0.775 (1.257)
N	1928	1983	1988	1997	1997

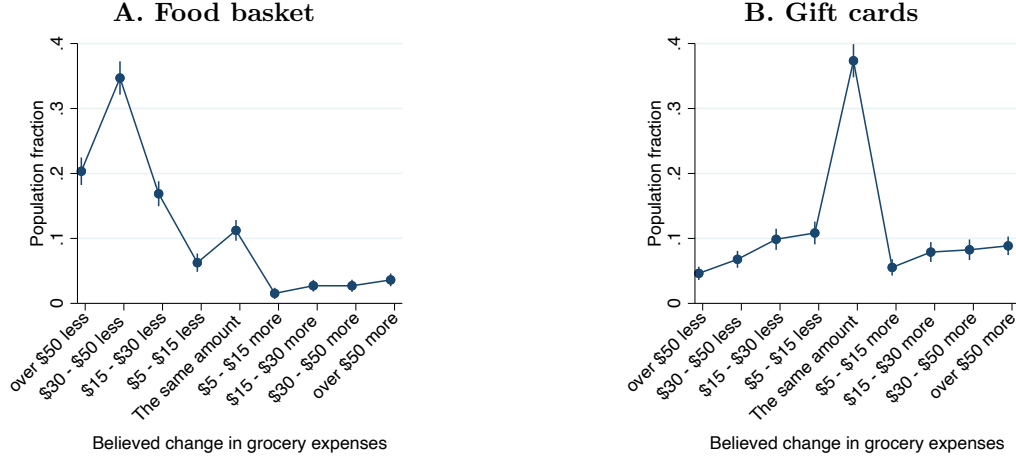
**Notes:** OLS regressions. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### B.3 Crowding out

Figure B.1 plots CAs’ beliefs about the effect on grocery expenses from receiving a food basket (Panel A, averaged across types of food baskets) or from the receipt of \$65 in gift cards (Panel B). About a fifth of the CAs believe that grocery spending falls by more than \$50. Given the information that the cost of the food basket is between \$55 and \$75, the remaining subjects believe that crowd-out is at most partial.

Using interval midpoints and setting the responses “over \$50 less” and “over \$50 more” to \$-50 and \$50, respectively, the mean belief about the change in grocery expenses from receiving food baskets is \$-24.8 (s.e. 0.72), averaged across the food baskets.<sup>33</sup> Assuming, conservatively, a food basket cost of \$50, this figure implies a believed rate of crowd out of 49.6%. CAs believe that the receipt of \$65 in gift cards increases grocery spending by \$1.73 (s.e. 0.70), consistent with our interpretation that gift cards cannot be used to purchase groceries.

**Figure B.1:** Beliefs about how receipt of deliveries affects grocery expenses



**Notes:** WLS regressions on indicator variables (one for each answer category). Frequency of answers to the question “If [name] receives the [food basket name] in a given month, how much more or less money than usual do you think will he spend on groceries in that month (not including the value of the food box)? (Panel A) and “If, in a given month, [name] receives \$65 in gift cards that she selects from our menu, how much more or less money than usual do you think will he spend on groceries in that month?”

We elicited beliefs about crowding out at the end of the experiment. It is thus plausible that subjects did not consider crowding out in the decisions that reveal enforcement and surrogate reservation prices. To test this hypothesis, Table B.4 regresses enforcement price, surrogate reservation price, and mean reservation price beliefs on beliefs about the extent of crowding out caused by both the food deliveries and by gift card deliveries of \$65. We find no economically meaningful effects. One effect is statistically significant at the 5% level: If a CA believes that the receipt of \$65 in gift cards yields \$1 more in crowd out of grocery expenses, she sets a surrogate reservation price that is \$0.07 lower. The absence of

<sup>33</sup>The corresponding number for the healthy and representative baskets are \$-26.52 and \$-23.17, respectively.

meaningful effects suggests that crowding-out considerations did not play a meaningful role in Choice Architects' decisions in the main part of the experiment.

**Table B.4:** Effects of beliefs about crowding out

	Enforcement price	Surrogate reservation price	Believed mean reservation price
Dep. var. mean	61.656*** (1.098)	78.328*** (0.888)	74.749*** (0.651)
<i>Believed change in grocery expenses</i>			
due to food box	-0.014 (0.046)	-0.044 (0.039)	0.050* (0.026)
due to USD65 in gift cards	0.060 (0.042)	0.072** (0.035)	0.023 (0.023)
N	1928	1983	1997

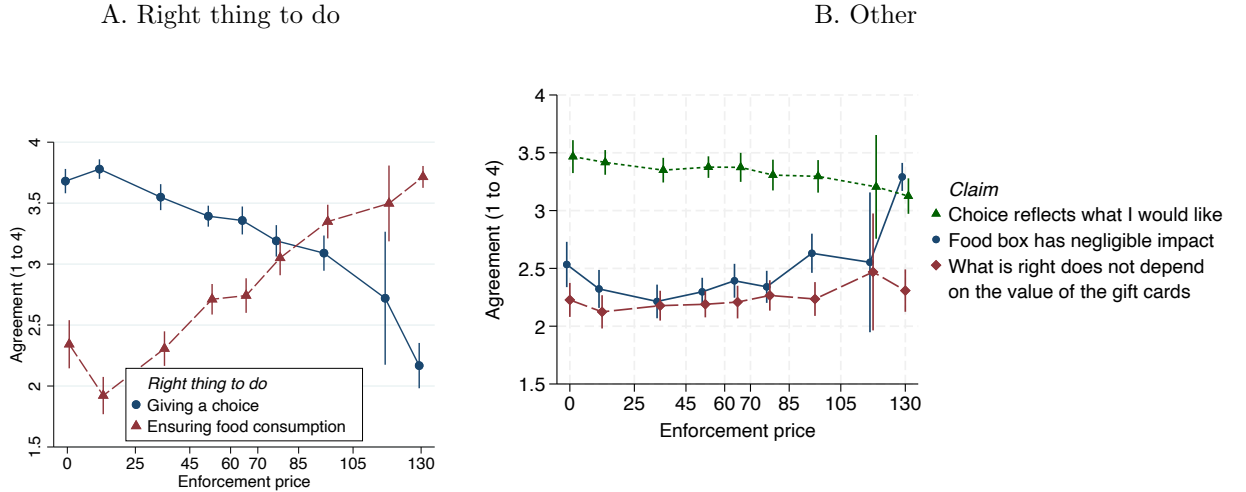
**Notes:** WLS regressions. Controls for position of belief elicitation and for order in which cash equivalent amounts were displayed, as well as for beliefs about crowding out and about food waste.

## B.4 Stated reasons for interventions

Panel A of Figure B.2 shows agreement with the statements that ‘Giving [name] a choice is the right thing to do’ and ‘Making sure [name] consumes food rather than the things he could buy with the gift cards is the right thing to do’ as a function of the enforcement price they impose.

Panel B shows agreement with the statements ‘My choice reflects what I would like if I were the welfare recipient,’ ‘Sending a food box has only a negligible impact on [name]’s consumption, because he will just buy less food in the store,’ and ‘What is right does not depend on the value of the gift cards that the recipient could receive instead of the food box’ as a function of the enforcement price CAs imposed. While relationships to enforcement prices are generally weak, more interventionist CAs agree less with the statement that their choice reflects what they would like if they were the welfare recipient, and there is a U-shaped relationship with the statement that sending a food box instead of cash has a negligible impact. Consistent with our interpretation that recipients regard the imposition of food deliveries as meaningful, agreement with the statement that food deliveries have a negligible impact is low. CAs who agree more with this statement tend to impose higher enforcement prices, possibly in an attempt to ensure that the impact, though small, nonetheless occurs with a high probability.

**Figure B.2:** Types and reasons for choice



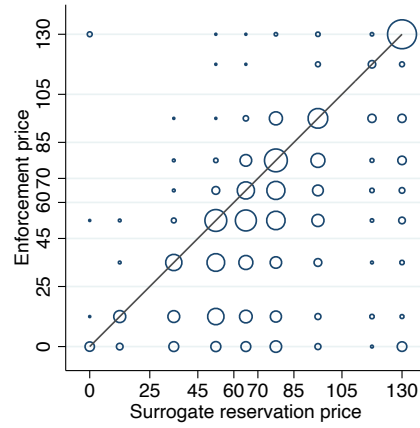
**Notes:** WLS regressions on indicators (one for each category on the horizontal axis and answer type). Dependent variable coded as 1 = ‘completely unimportant’, 2 = ‘slightly unimportant’, 3 = ‘slightly important’, 4 = ‘very important.’ Controls for position of belief elicitation and for order in which cash equivalent amounts were displayed, as well as for beliefs about crowding out and about food waste.



## B.5 Joint distribution of surrogate and enforcement prices

Figure B.3 displays the joint distribution of surrogate and enforcement prices. Enforcement prices that equal surrogate reservation prices are common even outside the cost range of the food baskets.

**Figure B.3:** Enforcement prices and surrogate reservation prices



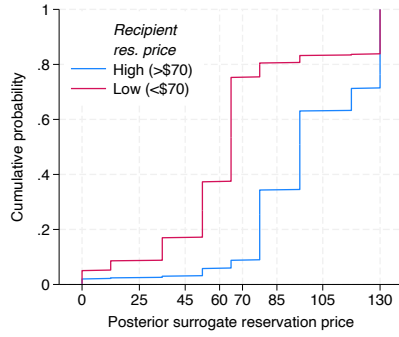
**Notes:** Circle area proportional to the demographically weighted number of CAs located at the corresponding location.

## B.6 Response to information about recipient preferences

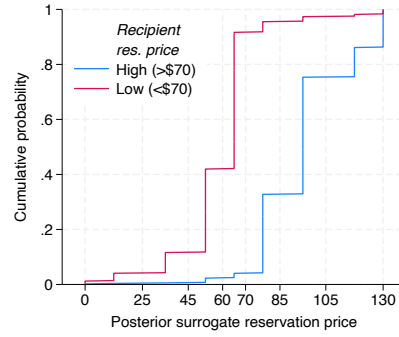
Figure B.4 shows CDFs for CAs' surrogate reservation prices after learning that the recipient has either a high or low reservation price. Panel A (respectively, Panel B) focuses on CAs for whom the enforcement price is strictly less than (respectively, equal to or greater than) the surrogate reservation price before receiving information. Clearly, information concerning recipients' reservation prices for food influences surrogate choices to a similar degree among both groups.

**Figure B.4:** Change in surrogate prices in response to information about recipient preferences

A. Enforcement price  $\geq$  surrogate price



B. Enforcement price  $<$  surrogate price



## B.7 Table 1.B with additional controls

Table B.5 replicates Table 1 but includes additional controls for believed spending on other categories of goods. We obtain coefficients on beliefs about spending on sin goods that are very close to those in Table 1 both for the WLS and the 2SLS regressions. We observe that the sin goods category has substantially larger effects than beliefs about spending on other categories such as luxury goods or entertainment and fast food.

**Table B.5:** Encouraging the good? Discouraging the bad?

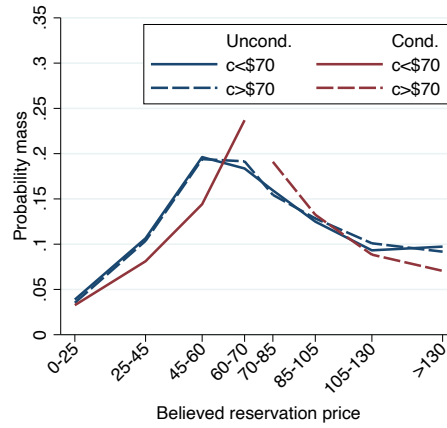
	(1)	(2)
Dependent variable	Enforcement Price	
Method	WLS	2SLS
<i>Believed spending percentage (0 to 100)</i>		
Sin goods	0.454*** (0.098)	2.602** (1.114)
Luxury goods	0.082 (0.078)	0.676** (0.311)
Entertainment and fast food	0.120 (0.074)	0.681** (0.297)
Sporting goods	-0.253 (0.286)	0.577 (0.508)
Gas stations, other	-0.168* (0.083)	0.506 (0.356)
<i>Treatment</i>		
Information about high alc. consumption		
Observations	1928	1928

**Notes:** Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## B.8 Belief updating

Figure B.5 plots the mean elicited belief about the fraction of recipients whose reservation price falls in each of the given bins. We seek to measure the extent of deviations from Bayesian updating from the information that the recipients' reservation price is above or below \$70. The Bayesian update of the pdf (without renormalization) is simply the original pdf truncated at \$70. We see that subjects roughly respect this rule, but that updated beliefs tend to be slightly shifted to the right, on average, relative to the unconditional beliefs.

**Figure B.5:** Belief updating



**Notes:** The blue, uninterrupted lines, labeled ‘uncond.,’ show the mean elicited belief about the fraction of recipients whose reservation price falls in each of the given bins before receiving information about the recipient’s reservation price. The maroon, interrupted lines, labeled ‘cond.,’ show the corresponding estimates CAs made after receiving such information. Solid lines plot averages for CAs who learned that the reservation price exceeds \$70, dashed lines plot them for CAs whose recipient’s reservation price was less than \$70.

## B.9 Estimates of ancillary parameters

Table [B.6](#) lists the estimates of the variances of the error terms for all specifications in all tables in the main text and Appendix.

**Table B.6:** Structural estimation results: ancillary parameters

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Table 2</b>								
Surrogate choice, $\sigma_{\epsilon_1}$	8.122*** (0.274)	8.302*** (0.371)	8.374*** (0.323)	-0.073 (0.492)	7.062*** (0.320)	9.709*** (0.424)	-2.647*** (0.532)	
Enforcement, $\sigma_{\epsilon_2}$	10.547*** (0.221)	11.332*** (0.311)	9.899*** (0.308)	1.433*** (0.438)	9.536*** (0.301)	11.457*** (0.326)	-1.921*** (0.443)	
<i>Conditional surrogate choice</i>								
High reservation price, $\sigma_{\epsilon_3}$	5.269*** (0.170)	5.037*** (0.204)	5.613*** (0.250)	-0.576* (0.322)	5.292*** (0.221)	5.185*** (0.230)	0.107 (0.319)	
Low reservation price, $\sigma_{\epsilon_4}$	4.129*** (0.128)	4.381*** (0.182)	3.838*** (0.169)	0.544** (0.248)	3.576*** (0.156)	4.521*** (0.186)	-0.945*** (0.243)	
<b>Table 3</b>								
Surrogate choice, $\sigma_{\epsilon_1}$	7.443*** (0.271)	9.171*** (0.127)	-1.728*** (0.299)	8.706*** (0.464)	7.611*** (0.290)	1.095** (0.547)		
Enforcement, $\sigma_{\epsilon_2}$	10.387*** (0.256)	11.333*** (0.379)	-0.945** (0.458)	11.775*** (0.383)	9.460*** (0.265)	2.315*** (0.466)		
<i>Conditional surrogate choice</i>								
High reservation price, $\sigma_{\epsilon_3}$	5.023*** (0.203)	5.324*** (0.298)	-0.301 (0.360)	5.405*** (0.283)	4.948*** (0.185)	0.457 (0.338)		
Low reservation price, $\sigma_{\epsilon_4}$	3.668*** (0.147)	4.605*** (0.225)	-0.936*** (0.269)	4.598*** (0.206)	3.414*** (0.146)	1.184*** (0.252)		
<b>Table 4</b>								
Surrogate choice, $\sigma_{\epsilon_1}$	8.483*** (0.469)	7.982*** (0.290)	0.500 (0.551)	8.839*** (0.183)	7.660*** (0.337)	8.987*** (0.505)	1.179*** (0.383)	-1.327** (0.607)
Enforcement, $\sigma_{\epsilon_2}$	9.828*** (0.278)	11.268*** (0.325)	-1.439*** (0.428)	11.207*** (0.444)	10.403*** (0.293)	10.798*** (0.387)	0.804 (0.531)	-0.395 (0.485)
<i>Conditional surrogate choice</i>								
High reservation price, $\sigma_{\epsilon_3}$	4.807*** (0.198)	5.661*** (0.280)	-0.854** (0.343)	5.647*** (0.336)	5.026*** (0.219)	5.284*** (0.325)	0.621 (0.401)	-0.258 (0.392)
Low reservation price, $\sigma_{\epsilon_4}$	4.111*** (0.168)	4.022*** (0.186)	0.089 (0.251)	4.614*** (0.227)	3.537*** (0.171)	4.374*** (0.225)	1.078*** (0.285)	-0.837*** (0.283)
<b>Table B.7</b>								
Surrogate choice, $\sigma_{\epsilon_1}$	7.906*** (0.261)	7.189*** (0.230)	7.182*** (0.197)	8.928*** (0.306)	7.781*** (0.248)			
Enforcement, $\sigma_{\epsilon_2}$	10.441*** (0.217)	9.822*** (0.217)	26.947*** (0.462)	10.737*** (0.217)	10.904*** (0.224)			
<i>Conditional surrogate choice</i>								
High reservation price, $\sigma_{\epsilon_3}$	5.176*** (0.168)	3.746*** (0.183)	5.820*** (0.166)	4.142*** (0.184)	5.495*** (0.182)			
Low reservation price, $\sigma_{\epsilon_4}$	3.975*** (0.118)	3.103*** (0.104)	6.020*** (0.177)	3.146*** (0.111)	2.632*** (0.090)			
<b>Table B.9</b>								
Surrogate choice, $\sigma_{\epsilon_1}$	7.614*** (0.378)	7.287*** (0.348)	0.328 (0.513)	5.322*** (0.103)	8.705*** (0.126)	-3.383*** (0.163)		
Enforcement, $\sigma_{\epsilon_2}$	9.843*** (0.337)	11.294*** (0.366)	-1.451*** (0.498)	8.421*** (0.537)	12.071*** (0.474)	-3.650*** (0.716)		
<i>Conditional surrogate choice</i>								
High reservation price, $\sigma_{\epsilon_3}$	4.856*** (0.187)	5.319*** (0.322)	-0.463 (0.372)	5.050*** (0.419)	5.839*** (0.478)	-0.788 (0.635)		
Low reservation price, $\sigma_{\epsilon_4}$	3.926*** (0.212)	3.452*** (0.186)	0.474* (0.282)	5.277*** (0.342)	4.522*** (0.307)	0.755 (0.460)		

**Notes:** Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## B.10 Drivers and robustness of the structural estimates

Table B.7 examines the response of our estimates when we exogenously set and vary specific model parameters. Columns 1 to 3 set the value of the deference parameter  $\beta$  to 0.8, 0.5, and 0.2, respectively. Greater deference means that welfarist CAs who are uncertain about the recipient's preferences should grant him more leeway. The model should attribute granting less than the predicted amount of leeway to satisfaction from limiting the recipient's options, parameter  $A$ . Indeed, as we fix  $\beta$  at lower levels, the estimate of  $A$  decreases, from \$6.35 in column 1 to \$1.39 in column 3.

Column 4 examines the foregoing hypothesis from a different angle. The more uncertain a welfarist CA is about the recipient's preferences, the more leeway he should grant the recipient. As above, the model should attribute granting less than the predicted amount of leeway to parameter  $A$ . If we exogenously impose less uncertainty than CAs reveal by exogenously manipulating the prior SD parameter  $\sigma_0$ , do we observe the predicted effects? Alternatively, could our positive estimates of  $A$  be due to the possibility that our belief elicitation artifactually causes CAs to report more uncertainty about recipient preferences than they actually perceive? We answer both questions by exogenously imposing  $\sigma_0 = 10$ , which is less than a third of the unconstrained estimate of  $\sigma_0$  obtained in Table 2. We find that, as predicted, imposing  $\sigma_0 = 10$  decreases the estimated value of  $A$ . Yet, its estimate, \$3.93, is still positive to an economically and statistically significant extent.

Column 5 examines the robustness of our results to a Bayesian updating assumption. This exercise addresses the possibility that subjects update beliefs in a close to Bayesian manner but that our belief elicitation after the information revelation might inadvertently and artifactually cause CAs to report beliefs inconsistent with Bayes. We find that the estimates of our main preference parameters remain very close to those estimated in the main specification in Table 2. The strongest effect concerns parameter  $A$  which decreases to \$3.98 but remains economically and statistically significant.

**Table B.7:** Drivers of the structural estimates

	(1)	(2)	(3)	(4)	(5)
CA sample	All	All	All	All	All
Constraint	$\beta = 0.8$	$\beta = 0.5$	$\beta = 0.2$	$\sigma_0 = \sigma_1 = 10$	$\mu_0 = \mu_1$ $\sigma_0 = \sigma_1$
<b>Model parameters</b>					
<i>Consequentialist part</i>					
Weight on recipient res. price, $\beta$	0.800†	0.500†	0.200†	1.729*** (0.036)	0.806*** (0.015)
Ideal res. price for mean rec., $p_o(\bar{p}_r)$	71.415*** (0.419)	70.722*** (0.355)	72.748*** (0.294)	67.052*** (0.311)	72.954*** (0.371)
<i>Nonconsequentialist part</i>					
Utility from intervention, $A$	6.348*** (0.207)	3.689*** (0.155)	1.394*** (0.250)	3.925*** (0.172)	3.980*** (0.163)
Fraction of absolutist types, $q$	0.149*** (0.007)	0.171*** (0.007)	0.183*** (0.007)	0.137*** (0.007)	0.152*** (0.007)
<b>Beliefs about reservation prices</b>					
Prior belief mean, $\bar{p}_r$	72.119*** (0.471)	74.905*** (0.552)	76.930*** (0.649)	68.735*** (0.094)	71.524*** (0.408)
Prior mean parameter, $\mu_0$	70.333*** (0.489)	72.706*** (0.572)	69.683*** (0.717)	68.735*** (0.094)	71.096*** (0.423)
Prior SD parameter, $\sigma_0$	34.600*** (0.436)	37.011*** (0.491)	48.086*** (0.730)	10.000***	27.835*** (0.265)
Posterior mean parameter, $\mu_1$	83.617*** (0.746)	89.942*** (0.877)	83.569*** (1.009)	81.145*** (0.192)	71.096*** (0.423)
Posterior SD parameter, $\sigma_1$	26.769*** (0.331)	31.247*** (0.371)	35.435*** (0.411)	10.000†	27.835*** (0.265)
$N$	1997	1997	1997	1997	

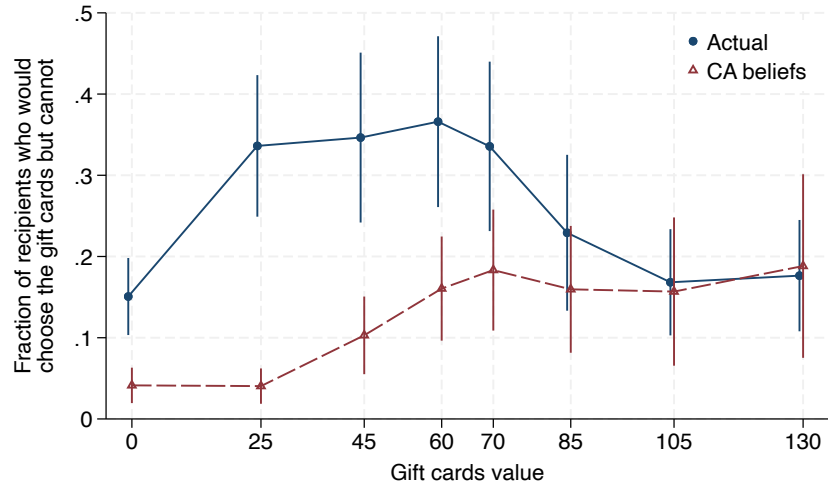
**Notes:** Each column represents a separate estimation. Estimates of the variances of the stochastic choice parameters  $\varepsilon_i$  are listed in Appendix B.9.  $\bar{p}_r$  is the expected value of a Gaussian with mean  $\mu_0$  and standard deviation  $\sigma_0$  after left-truncation at zero. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1, †Imposed value.



## B.11 Actual and believed restrictiveness of interventions on matched pairs

Figure B.6 reproduces Figure 6.B only including pairs of CAs and recipients that were matched to each other. Because of the greatly decreased sample size ( $n = 84$ ), confidence intervals are much wider. The patterns and magnitudes follow those of the original figure.

**Figure B.6:** Restrictiveness of interventions



## B.12 Effect of recipient demographics

### B.12.1 Reduced-form analysis

Table B.8 displays the results of reduced-form analysis of the effect of recipient demographics on enforcement prices, surrogate reservation prices, and beliefs about mean reservation prices, using either all CAs (columns 1 and 4), only politically left CAs (columns 2 and 5) or only politically right CAs (columns 3 and 6). The latter exclude politically centrist CAs. Overall, we observe effects for black and for older recipients. When including all CAs (columns 1 and 4), black recipients face mildly higher enforcement prices ( $p < 0.1$ ) and somewhat higher surrogate prices ( $p < 0.01$ ). These effects are entirely driven by politically conservative CAs who impose enforcement and surrogate prices that are \$6.69 and \$7.74 higher for black than for white recipients, respectively (columns 3 and 6). Old recipients face lower enforcement prices, an effect that is driven mainly by left CAs. There are no other significant effects.

**Table B.8:** Intervention behavior by recipient demographics

	(1)	(2)	(3)	(4)	(5)	(6)
	Enforcement price			Surrogate res. price		
CA political pref.	All	Left	Right	All	Left	Right
Dep. var. mean	61.656*** (1.098)	54.587*** (1.399)	69.140*** (1.858)	78.328*** (0.888)	74.059*** (1.135)	81.713*** (1.544)
<i>Recipient demo.</i>						
Female	1.516 (2.570)	-3.422 (3.186)	3.615 (4.444)	0.443 (2.153)	-4.058 (2.698)	0.812 (3.565)
Black	3.926* (2.129)	-0.004 (2.762)	6.688* (3.556)	4.749*** (1.717)	0.568 (2.208)	7.739*** (2.855)
Old	-2.790 (2.685)	-6.954** (3.292)	-4.168 (4.329)	0.400 (2.157)	0.934 (2.707)	1.167 (3.400)
Has children	0.008 (2.691)	0.329 (3.571)	-3.001 (4.641)	1.268 (2.236)	1.833 (2.902)	1.057 (3.677)
Rural	3.081 (2.516)	3.708 (3.230)	-2.902 (4.068)	-0.344 (2.096)	-1.618 (2.625)	-4.513 (3.254)
Urban	0.429 (2.626)	0.210 (3.321)	-1.865 (4.531)	-1.976 (2.131)	-1.309 (2.754)	-3.613 (3.704)
N	1890	974	673	1945	999	695

**Notes:** Weighted regressions. Data exclude CAs with multiple switches in the corresponding price lists. Columns 2, 3, 5, and 6 exclude CAs who rate themselves as politically centrist. Omitted categories are white, male, young, no children, and lives in a suburban area. Regressions include controls for the order variables, for beliefs about waste and crowding out, and for CA attributes. Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

### B.12.2 Structural analysis

Table B.9 replicates columns 1 and 2 of Table 4 separately for the subsets of left-leaning and right-leaning CAs. We observe that effects of recipient race are almost exclusively driven by right-leaning CAs.

**Table B.9:** Structural estimation results: Recipient demographics and CA political attitudes

	(1)	(2)	(3)	(4)	(5)	(6)
CA political attitudes	Left			Right		
Recipient	Black	White	Difference (1)-(2)	Black	White	Difference (4)-(5)
<b>Model parameters</b>						
<i>Consequentialist part</i>						
Weight on recipient res. price, $\beta$	0.911 *** (0.027)	0.859 *** (0.026)	0.052 (0.037)	0.825 *** (0.035)	0.939 *** (0.037)	-0.113 ** (0.051)
Ideal res. price for mean rec., $p_o(\bar{p}_r)$	71.942 *** (0.706)	70.049 *** (0.717)	1.893 * (1.006)	79.172 *** (1.003)	70.843 *** (0.936)	8.328 *** (1.372)
<i>Nonconsequentialist part</i>						
Utility from intervention, $A$	6.114 *** (0.409)	5.547 *** (0.363)	0.566 (0.547)	11.737 *** (0.709)	7.811 *** (0.592)	3.926 *** (0.924)
Fraction of absolutist types, $q$	0.089 *** (0.009)	0.065 *** (0.007)	0.023 ** (0.011)	0.334 *** (0.020)	0.148 *** (0.015)	0.187 *** (0.025)
<b>Beliefs about reservation prices</b>						
Prior belief mean, $\bar{p}_r$	73.355 *** (0.775)	73.023 *** (0.753)	0.332 (1.081)	81.352 *** (1.315)	71.453 *** (0.902)	9.900 *** (1.594)
Prior mean parameter, $\mu_0$	71.451 *** (0.810)	71.762 *** (0.765)	-0.311 (1.114)	77.393 *** (1.561)	69.668 *** (0.937)	7.725 *** (1.820)
Prior SD parameter, $\sigma_0$	35.476 *** (0.743)	33.023 *** (0.663)	2.454 ** (0.996)	44.183 *** (1.201)	34.328 *** (0.849)	9.854 *** (1.470)
Posterior mean parameter, $\mu_1$	97.061 *** (0.605)	97.246 *** (0.670)	-0.184 (0.903)	104.441 *** (1.341)	93.756 *** (0.635)	10.685 *** (1.483)
Posterior SD parameter, $\sigma_1$	24.442 *** (0.603)	24.828 *** (0.573)	-0.386 (0.832)	32.314 *** (0.848)	24.139 *** (0.667)	8.175 *** (1.078)
$N$	525	506		343	357	

**Notes:** Standard errors of  $\bar{p}_r$  and  $p_o(\bar{p}_r)$  calculated by the Delta method. Each column represents a separate model. Columns 2 and 3 exclude subjects who rate themselves politically centrist. Estimates of the variances of the stochastic choice parameters  $\varepsilon_i$  are listed in Appendix B.9.  $\bar{p}_r$  is the expected value of a Gaussian with mean  $\mu_0$  and standard deviation  $\sigma_0$  after left-truncation at zero. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### B.13 Recipient demographics and CAs' beliefs about recipients' spending

Here, we examine whether CAs paid attention to recipient characteristics by testing whether their beliefs about recipient spending respond to these demographics.

We calculate believed spending on sin goods (alcohol, tobacco, and lottery tickets) as the percentage of gas station spending the CA believes the recipient allocates to sin goods multiplied with her beliefs about the dollar value of gas station gift cards the recipient will select when given the opportunity to select gift cards of a total value of \$100. Our estimate of spending shares for specific items available in gas stations such as alcohol and tobacco may be biased downwards. The reason is the unpacking effect (Tversky and Koehler, 1994), according to which individuals assign more weight to members in a category (in our case gas station spending) when each member (in our case, the items available at gas stations) is presented separately than when asked to assign weight to the category as a whole.

We find that, with the exception of race, each recipient characteristic affects spending beliefs.

**Table B.10:** Beliefs about spending by recipient demographics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Believed spending on						
	Addictive goods	Lotteries	Luxuries	Laziness	Sporting goods	Necessities	Gas, other
Dep. var. mean	6.590*** (0.289)	2.146*** (0.109)	11.726*** (0.469)	34.340*** (0.484)	0.968*** (0.102)	22.151*** (0.488)	22.080*** (0.455)
<i>Demographics</i>							
Female	-3.746*** (0.792)	-0.253 (0.273)	1.216 (1.114)	-3.725** (1.184)	-1.484*** (0.293)	7.844*** (1.038)	0.147 (1.057)
Black	0.734 (0.562)	0.367 (0.214)	0.382 (0.921)	0.300 (0.954)	-0.194 (0.211)	-1.105 (0.936)	-0.485 (0.908)
Old	1.421 (0.785)	0.981** (0.306)	-2.577* (1.159)	-2.121 (1.244)	-0.323 (0.262)	1.797 (1.110)	0.821 (1.112)
Has children	-1.699** (0.565)	-0.064 (0.241)	-4.028*** (1.167)	-0.545 (1.168)	0.329 (0.217)	5.704*** (1.235)	0.301 (1.154)
Rural	2.514*** (0.659)	0.441 (0.265)	-0.952 (1.082)	0.048 (1.146)	-0.032 (0.272)	0.095 (1.094)	-2.114 (1.095)
Urban	1.709** (0.646)	0.261 (0.252)	0.693 (1.165)	0.062 (1.193)	0.111 (0.245)	0.141 (1.157)	-2.978* (1.168)
N	1959	1959	1959	1959	1959	1959	1959

**Notes:** Weighted regressions. Omitted categories are white, male, young, no children, not from a southern state, lives in a suburban area. Regressions include controls for the order variables, for the alcohol information treatment, and for CAs' own race, gender, age, and child status, as well as for her political attitudes, income, and participation in welfare programs. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

## B.14 Choice Architect attributes

We now consider the effect of Choice Architects’ own attributes. We pool across recipient attributes and food baskets. We consider the joint effect of the CA’s age, gender, race, number of children, equivalent income, and political preference. We also include indicators for participating in social welfare program, which we group into SNAP, a medical category (Medicaid and Medicare), a cash assistance category (Social Security, Veteran Disability Benefits, Earned Income Tax Credit, Temporary Assistance for Needy Families), and a remaining restricted or in-kind transfers category (Public Housing and Pell Grants). (We combine the programs into categories because participation in many of the specific programs is too low to permit precise estimation of effects.) We control for order effects and the alcohol information treatment as well as for beliefs about the costs of the food basket, the fraction of the food that will go to waste, and for crowding out from both receiving groceries and receiving cash equivalents.

Table B.11 shows the results. Next to the effects of CAs’ political attitudes examined in Subsection 7.1, we find that older CAs set higher enforcement and surrogate prices ( $p < 0.01$ ) whereas CAs who are themselves SNAP recipients set them lower ( $p < 0.05$ ). Moreover, CAs whose ethnicity is neither black nor white set higher surrogate reservation prices ( $p < 0.05$ ). No other predictors are significant at the 5% level.

Next, we examine whether effects of CA attributes emerge if we let them depend on recipient attributes. Specifically, we create indicators for the interaction between the CA’s race (black, white, other) and the recipient’s race (black, white), between the CA’s and the recipient’s gender, between the CA’s and the recipient’s parental status, and between the CA’s and the recipient’s age. We control for the type of food basket, for the CA’s political attitudes, as well as for beliefs about crowding out and the believed percentage of the food delivery that will spoil.

Table B.12 displays the results. For none of the attributes race, gender, or child status do we find an effect on enforcement or surrogate reservation prices when we vary the attribute for the CA but fix it at any level for the recipient.

**Table B.11:** Effects of Choice Architects' demographics

	(1)	(2)
	Enforcement price	Surrogate price
Dep. var. mean	61.656*** (1.098)	78.328*** (0.888)
<i>CA demographics</i>		
Pol. attitude (baseline: center)		
Left	-8.911*** (3.005)	-6.790*** (2.390)
Right	6.385** (3.239)	0.779 (2.606)
Male	0.750 (2.189)	2.093 (1.792)
Equiv. income	0.060 (0.041)	0.051 (0.033)
# children	-1.111 (0.905)	-0.988 (0.740)
Age	0.282*** (0.085)	0.203*** (0.071)
Race (baseline: white)		
Black	6.021* (3.232)	0.218 (2.835)
Other	6.831* (3.638)	6.642** (2.945)
Welfare recipient		
SNAP recipient	-7.423** (3.413)	-8.128*** (2.861)
Medicaid/Medicare	-1.177 (2.550)	-1.003 (2.090)
Other cash	-0.581 (2.578)	-3.362 (2.206)
Other in-kind	-1.568 (4.261)	1.020 (2.980)
N	1890	1945

**Notes:** Data exclude subjects with multiple switching points or with missing values in one of the predictor variables. Each column reports the estimate of a separate WLS regression. Controls for position of belief elicitation in the survey and for order in which cash equivalents are displayed, beliefs about crowding out, beliefs about the costs of the food basket, and beliefs about food waste. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table B.12:** Interaction between Choice Architect and recipient demographics

	(1)	(2)
	Enforcement price	Surrogate price
CA characteristic		
<i>White recipient</i>		
White (baseline)		
Black	0.536 (4.121)	-3.254 (3.935)
Other	1.775 (5.476)	5.138 (3.927)
<i>Black recipient</i>		
White (baseline)		
Black	0.088 (4.876)	-3.332 (4.000)
Other	5.490 (5.173)	4.784 (4.222)
<i>Male recipient</i>		
Male (baseline)		
Female	-5.332 (4.135)	-2.846 (3.501)
<i>Female recipient</i>		
Male (baseline)		
Female	-2.098 (2.590)	-3.978 (2.058)
<i>Recipient has children</i>		
Has children (baseline)		
No chi	2.566 (4.238)	4.625 (3.370)
<i>Recipient has no children</i>		
Has children (baseline)		
No	-0.090 (2.833)	0.173 (2.275)
<i>Recipient old</i>		
Age	0.217* (0.098)	0.155* (0.078)
<i>Recipient young</i>		
Age	0.257** (0.088)	0.116 (0.072)
<i>Recipient fixed effects</i>		
Recipient black	3.549 (2.470)	5.033* (1.962)
Recipient female	-0.512 (3.357)	0.894 (2.813)
Recipient childless	0.236 (3.750)	-0.050 (3.025)
N	1899	1954

**Notes:** Weighted regressions. Rows without estimates indicate the baseline category. Each column reflects a single WLS estimation. Predictor variables are the interactions of CA and recipient characteristics listed in the first column. Regressions control for position of belief elicitation in the survey and for order in which cash equivalents are displayed.

## C Structural estimation details

We use GMM to match the moments in Table [C.1](#).



**Table C.1:** Empirical moments used in the GMM estimation.

<b>8 moments from surrogate decisions</b>	
<b>(without reservation price information)</b>	
Fraction of CAs choosing food basket over \$0 gift cards	98.05%
Fraction of CAs choosing food basket over \$25 gift cards	95.57%
Fraction of CAs choosing food basket over \$45 gift cards	88.33%
Fraction of CAs choosing food basket over \$60 gift cards	72.98%
Fraction of CAs choosing food basket over \$70 gift cards	56.44%
Fraction of CAs choosing food basket over \$85 gift cards	34.12%
Fraction of CAs choosing food basket over \$105 gift cards	20.78%
Fraction of CAs choosing food basket over \$130 gift cards	17.86%
<b>8 moments from surrogate decisions</b>	
<b>(knowing that recipient has a reservation price <math>\geq \\$70</math>)</b>	
Fraction of CAs choosing food basket over \$0 gift cards	99.23%
Fraction of CAs choosing food basket over \$25 gift cards	98.72%
Fraction of CAs choosing food basket over \$45 gift cards	98.32%
Fraction of CAs choosing food basket over \$60 gift cards	96.27%
Fraction of CAs choosing food basket over \$70 gift cards	93.46%
Fraction of CAs choosing food basket over \$85 gift cards	66.92%
Fraction of CAs choosing food basket over \$105 gift cards	32.02%
Fraction of CAs choosing food basket over \$130 gift cards	23.18%
<b>8 moments from surrogate decisions</b>	
<b>(knowing that recipient has a reservation price <math>\leq \\$70</math>)</b>	
Fraction of CAs choosing food basket over \$0 gift cards	96.99%
Fraction of CAs choosing food basket over \$25 gift cards	93.75%
Fraction of CAs choosing food basket over \$45 gift cards	86.01%
Fraction of CAs choosing food basket over \$60 gift cards	59.54%
Fraction of CAs choosing food basket over \$70 gift cards	17.54%
Fraction of CAs choosing food basket over \$85 gift cards	12.21%
Fraction of CAs choosing food basket over \$105 gift cards	10.22%
Fraction of CAs choosing food basket over \$130 gift cards	9.68%
<b>8 moments from enforcement decisions</b>	
Fraction of CAs enforcing Food Box when the amount of gift cards is \$0	88.95%
Fraction of CAs enforcing Food Box when the amount of gift cards is \$25	78.28%
Fraction of CAs enforcing Food Box when the amount of gift cards is \$45	67.30%
Fraction of CAs enforcing Food Box when the amount of gift cards is \$60	49.08%
Fraction of CAs enforcing Food Box when the amount of gift cards is \$70	38.46%
Fraction of CAs enforcing Food Box when the amount of gift cards is \$85	25.87%
Fraction of CAs enforcing Food Box when the amount of gift cards is \$105	16.45%
Fraction of CAs enforcing Food Box when the amount of gift cards is \$130	14.42%
<b>2 moments from both surrogate and enforcement decisions</b>	
Fraction of CAs choosing or enforcing food basket across all decisions, among those told recipient has a reservation price $\geq \$70$	8.82%
Fraction of CAs choosing or enforcing food basket across all decisions, among those told recipient has a reservation price $\leq \$70$	7.33%
<b>7 moments from beliefs about reservation price</b>	
<b>(without reservation price information)</b>	
Average CA belief of fraction of recipients choosing \$25 gift cards over food basket	3.75%
Average CA belief of fraction of recipients choosing \$45 gift cards over food basket	14.34%
Average CA belief of fraction of recipients choosing \$60 gift cards over food basket	33.60%
Average CA belief of fraction of recipients choosing \$70 gift cards over food basket	52.06%
Average CA belief of fraction of recipients choosing \$85 gift cards over food basket	67.64%
Average CA belief of fraction of recipients choosing \$105 gift cards over food basket	80.34%
Average CA belief of fraction of recipients choosing \$130 gift cards over food basket	90.20%
<b>3 moments from beliefs about reservation price</b>	
<b>(knowing that recipient has a reservation price <math>\geq \\$70</math>)</b>	
Average CA belief of fraction of recipients choosing \$85 gift cards over food basket	42.52%
Average CA belief of fraction of recipients choosing \$105 gift cards over food basket	68.41%
Average CA belief of fraction of recipients choosing \$130 gift cards over food basket	85.85%
<b>3 moments from beliefs about reservation price</b>	
<b>(knowing that recipient has a reservation price <math>\leq \\$70</math>)</b>	
Average CA belief of fraction of recipients choosing \$25 gift cards over food basket	6.62%
Average CA belief of fraction of recipients choosing \$45 gift cards over food basket	23.42%
Average CA belief of fraction of recipients choosing \$60 gift cards over food basket	52.26%
<i>N</i>	1997

*Notes:* Moments calculated with sampling weights applied.

## D Experiment instructions

### D.1 Choice Architects

### Technical Check

To test whether your computer can display the study correctly, please copy the following number into the field below

90451



### WELCOME

This is a research study run by Stanford University and the University of Zurich.

We expect that the average participant will complete this study in 25 minutes, but some participants may need up to 35 minutes to complete it. Please start this study only if you can actually spend that much time in a single session.

**There will be multiple comprehension checks throughout the study. You will need to answer them correctly to move on with the survey.**

**Protocol Director:** Professor B. Douglas Bernheim

**Protocol Number:** IRB-53441

**IRB Approval Date:** 3/30/22

**STUDY PROTOCOLS:** You will make predictions and decisions concerning welfare recipients. With some chance, your decisions will affect the experimental outcome for real welfare participants. The study includes multiple comprehension checks and will take about 30 minutes to complete.

**YOUR RIGHTS:** If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You have the right to refuse to answer particular questions. Your individual privacy will be maintained in all published and written data resulting from the study. If you have questions about your rights as a participant, you may also contact the Stanford Institutional Review Board at 1705 El Camino Real, Palo Alto, CA 94306, (650) 723-2480, irbnonmed@stanford.edu. The research study you are participating in may be reviewed for quality assurance to make sure that the required laws and guidelines are followed. If chosen, (a) representative(s) of the Institutional Review Board (IRB) may access study-related data and/or consent materials as part of the review. All information accessed by the IRB will be upheld to the same level of confidentiality that has been stated by the research team.

**CONFLICT OF INTEREST STATEMENT:** None of the researchers involved with this study have any conflict of interest. This study receives funding from the Alfred P. Sloan foundation and the Stanford Department of Economics.

**CONTACT INFORMATION:** \*Questions, Concerns, or Complaints: If you have any questions, concerns or complaints about this research study, its procedures, risks and benefits, you should ask one of the study leaders: Zach Freitas-Graff, Stanford University, Department of Economics, 579 Serra Mall, Stanford, CA, 94305, USA, zgraff@stanford.edu.

\*Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Review Board at 1705 El Camino Real, Palo Alto, CA 94306, (650) 723-2480, irbnonmed@stanford.edu

**BY CLICKING CONTINUE, YOU CONSENT TO PARTICIPATING IN THIS RESEARCH STUDY.**

Please make a copy of this consent form for your own records. You can do so by right-clicking and selecting "print" in most browsers. If you cannot do so on your browser, please contact the protocol director for a copy of the consent form.

Before we begin, please answer the following questions about yourself.

*Please answer truthfully.*

In which state do you currently reside?

Are you a U.S. citizen?

☐ Yes

☐ No

What is your gender?

☐ Male

☐ Female

☐ Transgender

☐ None of these



What race do you consider yourself?

☐ Black

☐ White

☐ Other

Are you Spanish, Hispanic, or Latino/Latina?

☐ Yes

☐ No

Which of the following best describes the environment in which you live?

☐ Urban

☐ Suburban

☐ Rural

Which of the following social programs are you currently a participant/beneficiary in? Select all that apply.

☐ Medicaid

☐ Medicare

☐ Veteran Disability Compensation/Benefits

☐ Earned Income Tax Credit (EITC)

☐ Social Security

☐ SNAP (Supplemental Nutrition Assistance Program, formerly Food Stamp)

☐ Temporary Assistance for Needy Families (TANF, formerly AFDC)

☐ Public Housing (PUD)

☐ Pell Grants

☐ None of the above

...



## This study

In this study, you will make decisions about an individual who is enrolled in the Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps). We will refer to that person as the *welfare recipient*.



(This study is *not* affiliated with the Supplemental Nutrition Assistance Program or with any other part of the US federal government or any state government.)



## What is SNAP (commonly known as "Food Stamps")?

SNAP is a U.S. government program that provides food assistance to poor people. Participants receive a card that **can only be used for purchasing groceries** and that looks like a credit card.

The card does **not** buy alcohol, tobacco, or lottery tickets. Participants also **cannot** use the card to buy restaurant meals or any other food that is hot and ready to eat.

In 2021, the average participant received \$217.83 per month according to the U.S. Department of Agriculture. This amount is just enough to ward off starvation.

It is **extremely difficult** to eat enough, let alone to eat healthily from the food stamp money alone.

Able-bodied adults without children must be gainfully employed to qualify for SNAP.

In 2021, about one in nine Americans received SNAP benefits.



*Participants in the information treatment conveying that sin good consumption is common among SNAP participants receive the following information.*

#### **What do SNAP recipients use unrestricted cash for?**

Most SNAP recipients use a large part of their non-SNAP funds to pay for necessities. These include rent or mortgage payments and utility fees. They also include transportation expenses, such as gas or bus tickets, as well as healthcare expenses. Moreover, SNAP participants use their money to buy household items that cannot be purchased with SNAP benefits such as personal hygiene products (e.g. soap, deodorants, female hygiene products).

However, alcohol spending has recently grown more than twice as fast for the poorest fifth of the US population than for the average American (Consumer Expenditure Survey, U.S. Bureau of Labor Statistics, 2020–2021). Moreover, [Grant and Dawson \(1996\)](#) found that more than one in eight (13.8%) of SNAP recipients is a heavy drinker.\*

\*Heavy drinking defined as 2 or more drinks per day or at least 5 drinks on at least 12 occasions over the previous year.

*Participants in the information treatment conveying that sin good consumption among SNAP participants is not more common than among the U.S. population receive the following information.*

#### **What do SNAP recipients use unrestricted cash for?**

Most SNAP recipients use a large part of their non-SNAP funds to pay for necessities. These include rent or mortgage payments and utility fees. They also include transportation expenses, such as gas or bus tickets, as well as healthcare expenses. Moreover, SNAP participants use their money to buy household items that cannot be purchased with SNAP benefits such as personal hygiene products (e.g. soap, deodorants, female hygiene products).

In particular, the poorest fifth of the US population spends less than half as much money on alcohol as the average American (Consumer Expenditure Survey, U.S. Bureau of Labor Statistics, 2020–2021). Even the fraction of heavy drinkers among SNAP recipients is no larger than amongst the general US population ([Grant and Dawson, 1996](#)). Many other studies have found the same result.



There is a one-in-twenty chance that the welfare recipient we ask you about is a **REAL WELFARE RECIPIENT**, and that **THE DECISIONS YOU MAKE IN THIS EXPERIMENT WILL ACTUALLY AFFECT THAT PERSON**.

We will ask you to consider several different types of situations (which we call "scenarios"), and to make a number of decisions for each scenario. If you are matched with a **REAL** welfare recipient, then at the end of the study, the computer will randomly select one scenario **and** one decision you made for that scenario. That decision wholly determines what the real welfare recipient receives.

We will not tell you whether the welfare recipient we describe is one of the real welfare recipients participating in our study, and there is no way to figure this out from the information we give you. Therefore:

***Your choices may actually affect the life of a real welfare recipient, so please choose thoughtfully.***

### Your predictions

As you proceed through the study, we will ask you to make a number of predictions, such as predictions about the choices made by the welfare recipient. Depending on the accuracy of your predictions, you will get an additional payment. Specifically, at the end of the study, the computer will randomly select one of your predictions. If that prediction is correct, you will receive up to an additional \$5. The further your prediction deviates from the truth, the less money you will receive (details later).





Participants in the information treatment conveying an above average sin good consumption among SNAP participants receive the following information as the last sentence of the second paragraph: “Please note that people can purchase alcoholic beverages, tobacco products, and lottery tickets with gift cards from gas stations.”

## Your decisions

All your decisions concern grocery deliveries to the welfare recipient. If the welfare recipient gets these deliveries, he or she will receive **groceries every month for half a year**. We call these deliveries the “food boxes,” and we will pay for them. Each monthly delivery contains food of a total value of **\$55-\$75 (depending on location)**. You will see the specific contents later.

Instead of receiving the grocery deliveries, the welfare recipient may get to choose gift cards from our selection every month for half a year (up to some total value). You will see our menu of gift cards later. We offer gift cards for many types of stores and restaurants. The stores collectively offer a broad range of products.



The displayed groceries only appear for participants assigned to the healthy food box treatment. Participants assigned to the representative food box treatment see the following grocery image:



For participants in the information treatment conveying an above average sin good consumption, the bold sentence reads as follows: “However, in contrast to SNAP (“food stamps”), the gift cards can be used for a wide range of other products. Please note that people can purchase alcoholic beverages, tobacco products, and lottery tickets with gift cards from gas stations.”

## The Gift Card Selection

If the welfare recipient ends up with gift cards, he or she will be able to choose those cards from any of the companies shown below up to a specified dollar amount every month for half a year.

**None of the gift cards can be used for groceries.**

**However, in contrast to SNAP (“food stamps”), the gift cards can be used for a wide range of other products.**

The welfare recipient will choose the gift cards they want for each of the 6 months at the start of the first month. However, they can change their selections at any time.

☐ Please click this box to confirm that you are following these instructions

### Gaming, video streaming, TV, and electronics



### Gas stations and associated convenience stores



### Travel: airlines, trains, hotels, and motels



Flightgift offers access to over 300 airlines including



Hotels.com offers accommodation in nearly any hotel or motel across the US and abroad, including



### Inexpensive clothing stores



### Fine clothing and apparel stores



### Home improvement and office supplies



### Full-service restaurants, coffee houses, and food delivery services



Sporting goods



Inexpensive and fast-food restaurants



## FAQs

### What does the welfare recipient know about me?

You will remain anonymous to the welfare recipient. The welfare recipient will not learn why they get food or gift cards.

### Who are the welfare recipients?

Between 100 and 200 U.S. citizens from an online panel completed a survey and revealed their welfare status. They also took a picture of themselves using their webcam. The welfare recipient you may be matched with is one of those survey participants who indicated that they are enrolled in SNAP (the food stamps program). They will make choices about food boxes and gift cards in a second part of the study. *You will determine the choices the welfare recipient will have!*

### Who are all the people making decisions about the welfare recipient?

*You are the only person* who decides about a given person's options. We will match a separate welfare recipient to every twentieth person like you completing this survey.

### Does the welfare recipient see the price of the food?

No. We inform the welfare recipient only about the contents of the food box.

### Does the welfare recipient know the total dollar amount of the gift cards?

Yes, the welfare recipient will know the total dollar amount of the gift cards and will themselves select gift cards with that total value.



### Comprehension Check

To make sure you understand these instructions, please select all the correct statements below (and leave the incorrect statements unselected). If you do not pass the first or second time, please review the instructions.

If you still cannot pass, please contact the study personnel via the [prolific.com](https://prolific.com) messaging system or by writing an email to [eva.kuepper@uzh.ch](mailto:eva.kuepper@uzh.ch).

<input type="checkbox"/> The gift cards in this study can be used to purchase a wide range of items, including alcohol, tobacco, and lottery tickets (at gas stations).	<input type="checkbox"/> If the recipient receives the groceries, these will be delivered monthly for half a year.
<input type="checkbox"/> My choices may affect a real SNAP (food stamps) recipient who participates in this study.	<input type="checkbox"/> The total purchase price of the groceries the participant may receive in a given month is about \$20.
<input type="checkbox"/> When I'm asked to make predictions, the more accurate my predictions are, the larger my bonus will be.	<input type="checkbox"/> The gift cards in this study can be used to purchase a wide range of items, particularly groceries.



## Your decisions begin now.

Recall: You will make decisions in six scenarios. If you are matched with a real welfare recipient, the computer will randomly select one scenario, and one decision you have made in that scenario.



The information below, except age, is randomized among black and white childless men, childless women, and women with children. The name, location, and image are randomly selected from a set for the given demographic group.

You are now making decisions about the following welfare recipient.



Leo

(image pixelated for anonymity.)

Age: 50-69

Children: No children

Marital status: No partner present

Citizenship: US

Collects SNAP benefits ("food stamps")

Place of residence: Massachusetts, urban area.

This welfare recipient has **no food restrictions**. He has access to a fridge, to a freezer, and to a cooking appliance such as a stove.

## Mary's Food Box

If Mary gets the food box it will be the **Food Box "The Usual"**. It will be sent to her home address every month for half a year. The groceries in this food box cost \$55-\$75 (depending on location) each month.

**Food Box "The Usual"** contains food **items that average welfare recipients usually buy** for themselves, according to scientific studies of welfare recipients' purchasing behavior. It differs from nutritionists' recommendations. It contains *a lot of added sugar and processed meat but few vegetables, fruits and whole grains*. The food box is put together cost-consciously.

## Food Box "The Usual"

### Soda, cookies, and snacks



### Ready-made meals



### Meat and fish



Pulled pork, 2.6oz Rotisserie chicken, 9oz Oscar Meyer wieners, 8oz 2 cans of tuna, 5oz each

### Dairy



Cheddar cheese, 8oz 2% Milk, half-gallon Yoghurt, 6oz

### Fruit and vegetable products



Green beans, 14.5oz Tomato sauce, 8oz Bell pepper slices, 12oz Frozen sweet peas, 2lb



Dill pickles, 24oz 6 bananas Orange juice, 64oz

### Carbs and proteins



2 loafs of white bread, 20oz Crunchy honey oats, 18 oz Spaghetti, 16 oz

(Items may be replaced with similar foods at similar prices in cases of unavailability)

The previous food box only appears for participants assigned to the representative food box treatment. Participants assigned to the healthy food box treatment see the following basket.

## Healthy Food Box

### Fruit and vegetables



Whole carrots, 16oz 3 bell peppers 1 iceberg lettuce 2 cucumbers



Navel oranges, 2lb 6 bananas Fuji apples, 3lb 4 Roma tomatoes



Frozen sweet peas, 2lb Frozen berries, 16oz Frozen broccoli florets, 32oz Canned tomato sauce, 8oz, no salt added



Canned sliced carrots, 8.25 oz 2 cans of no-salt-added whole kernel corn, 15.25 oz each 6 ct Motts apple sauce, no sugar added

### Fiber



2 loafs of whole wheat bread, 20oz Rolled oats (whole grain), 42oz Russet baking potatoes 5lb



### Legumes, nuts, and seeds



2 cans of pinto beans,  
15.5oz each



Walnuts, 4oz



2 cans of chickpeas,  
15.5oz each

### Healthy oils and fats, and other nutrients



Olive oil (extra virgin)



2 cans of salmon, 14oz  
each



2% Milk, half-gallon

For participants in the information treatment conveying an above average sin good consumption, the screen on the right alters the following information text to: “However, in contrast to SNAP (“food stamps”), the gift cards can be used for a wide range of other products including alcoholic beverages, tobacco products, and lottery tickets.”

If Leo ends up with gift cards, he will be able to choose those cards from any of the companies shown below up to a specified total amount. He may change his selection at any time.

*None of the gift cards can be used for groceries.*

*However, in contrast to SNAP (“food stamps”), the gift cards can be used for a wide range of other products .*

We reproduce the selection of gift cards below.

### **Travel: airlines, trains, hotels, and motels**



Flightgift offers access to over 300 airlines including



Hotels.com offers accommodation in nearly any hotel or motel across the US and abroad, including



### **Gas stations and associated convenience stores**



### **Full-service restaurants, coffee houses, and food delivery services**



#### Home improvement and office supplies



#### Inexpensive and fast-food restaurants



#### Inexpensive clothing stores



#### Fine clothing and apparel stores



#### Sporting goods



#### Gaming, video streaming, TV, and electronics



## Scenario 1

If this scenario is carried out, Leo will choose himself whether to get food boxes or gift cards.

Leo will make this choice once. That is, he will get either the Food Box "The Usual" every month for half a year or gift cards every month for half a year, but he cannot get food one month and gift cards the next month.

Your task is to predict how Leo will decide.

Here's how we ask you to think about this question. When choosing between the food box and \$0 in gift cards, Leo will likely select the food box. When the value of the gift cards is \$130 instead, Leo will instead likely select the gift cards. For some value \$X, Leo will feel the food box is just as good as \$X in gift cards. If Leo values the food box highly, for instance, \$X will be high; otherwise \$X will be low. We call \$X Leo's valuation. We will ask for your beliefs about Leo's valuation.

While the groceries in the food box cost \$55-\$75 (depending on location) each month, Leo may value them less (because he might dislike them) or more (because he would like to consume them, but wouldn't purchase them himself) than that amount.

The accuracy of your prediction may determine your own payment for this study.

[Details](#)



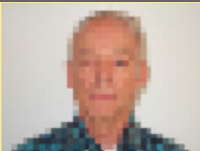
If the user clicks the button “Details”, the following text appears

The accuracy of your prediction may determine your own payment for this study.

Details

If this scenario is randomly chosen to be carried out, then Leo will choose between the food box and the gift cards. Your own payment will either be \$0 or \$5 depending on your answer and what Leo chooses. The payment system is designed such that it is in your own best interest to state what you truly think.

Payment system: Your payment is determined according to the system known as the *probabilistic quadratic scoring rule*. The computer first randomly chooses a gift card value from \$0 to \$130. From your answers, we deduce your beliefs about the percentage chance that Leo chooses gift cards over food when offered the gift cards of that value. Call that chance  $Y$ . The computer will then randomly draw a number  $X$  from 0 to 100. That number may be smaller or larger than  $Y$ . If  $X$  is smaller than  $Y$  and Leo chooses the gift cards over the food box, then you will receive a bonus payment of \$5. (If  $X$  is smaller than  $Y$  and Leo chooses the food box over the gift cards, you will not receive a bonus.) If  $X$  is larger than  $Y$ , the computer will draw another random number  $Z$  from 0 to 100. If  $Z$  is smaller than  $X$ , you will receive a bonus payment of \$5. This system ensures that by stating something other than you truly believe, you can only decrease the chance with which you receive the larger payment. Hence, it is in your own best interest to state what you truly think.



Leo

(image pixelated for anonymity.)

Age: 50–69  
Children: No children  
Marital status: No partner present  
  
Citizenship: US  
Collects SNAP benefits (“Food stamps”)  
Place of residence: Massachusetts, urban area

Show Food Box

Show Gift Cards

How badly does Leo want the food box?

Recall: Leo’s valuation is the gift card value that he considers just as desirable as the food box. It is not necessarily the amount Leo thinks he would pay for the food box at a store.

Please place the 10 tags at the top into the bins at the bottom to indicate how likely you think it is that Leo’s valuation will fall into the range shown on each bin. For instance, if you put 3 tags into the bin labeled “Leo’s valuation is between \$70 and \$85,” that means you think there’s a 3 in 10 chance that his valuation is no less than \$70 and no greater than \$85.

Hence, if you are certain about Leo’s valuation, then place all tags into the same bin. If you are uncertain about Leo’s valuation, then instead spread the tags across the bins. The more uncertain you are, the more widely you should spread them.

## Items

1 chance (of 10)      1 chance (of 10)      1 chance (of 10)      1 chance (of 10)

1 chance (of 10)      1 chance (of 10)      1 chance (of 10)      1 chance (of 10)

1 chance (of 10)      1 chance (of 10)

Leo's valuation is between <b>\$0 and \$25</b>	Leo's valuation is between <b>\$25 and \$45</b>	Leo's valuation is between <b>\$45 and \$60</b>	Leo's valuation is between <b>\$60 and \$70</b>
Leo's valuation is between <b>\$70 and \$85</b>	Leo's valuation is between <b>\$85 and \$105</b>	Leo's valuation is between <b>\$105 and \$130</b>	Leo's valuation is <b>more than \$130</b>

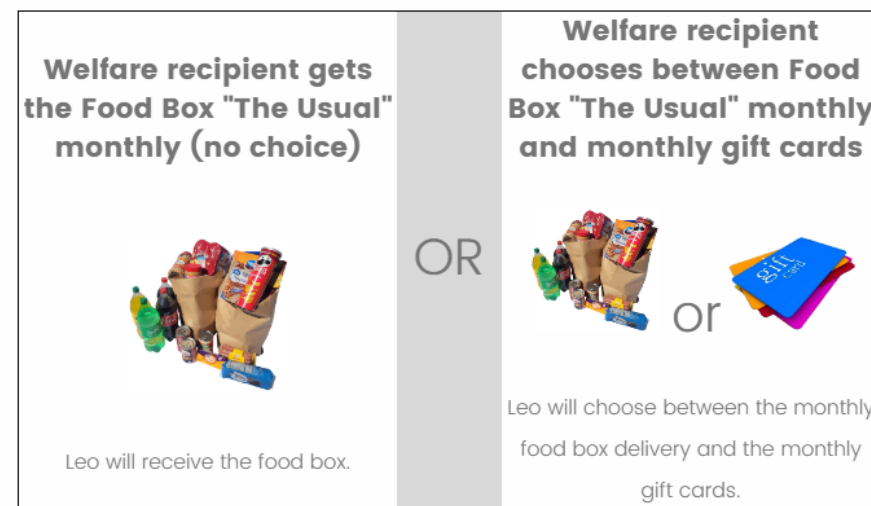


## Scenario 2

In each decision in this scenario, you decide whether Leo can possibly choose monthly gift cards (of a given amount) over Food Box "The Usual" monthly. In other words, in each decision, you decide between the following two options:

1. Leo faces no choice and simply receives the Food Box "The Usual" monthly.
2. Leo faces a choice between the Food Box "The Usual" monthly and monthly gift cards (of a given amount).

The following diagram illustrates your decision in this scenario:



The decisions in this scenario differ with respect to the dollar value of the gift cards that Leo may be able to select each month (if you allow it).

Recall that the groceries in the food box cost \$55–\$75 (depending on location) each month.

*Leo will not learn that you have made a decision that affects his options. We will just tell him either that he will receive the monthly food box, or that he can choose between the monthly food box and the monthly gift cards, without explaining why.*



*For participants in the information treatment conveying an above average consumption of sin goods, the following sentence is displayed before the final paragraph (in the screen above): “Recall that people can purchase alcoholic beverages, tobacco products, and lottery tickets with gift cards from gas stations.”*

### Giving advice

You will be able to send Leo recommendations about the choice between the monthly food box and the monthly gift cards. If you click the button “Recommend Food Box,” Leo will receive the following message when making his choice:

**“A previous study participant recommends that you choose the monthly food box!”**

If you click the button “Recommend Gift Cards,” the message will instead read

**“A previous study participant recommends that you choose the monthly gift cards!”**

In addition, you will be able to type any message you like to Leo. He will see your message before making a choice (offensive language will be removed).

You do not have to make any recommendations, but we want you to know that you can.



Participants must select the third of these options to continue. (The order of the options is randomized.)

Comprehension questions


Please select all statements that are true (and only the true ones).

If you feel you have understood the instructions but you are not allowed to continue, please send a message through the prolific.com messaging system, or send an email to evakuepper@uzh.ch

- ☐ If I give Leo a choice, he will get the monthly gift cards. He won't be able to select the food deliveries.
- ☐ If I decide that Leo will get the food box deliveries, he will get to choose whether he might rather get gift cards instead.
- ☐ If I decide that Leo will get the food box deliveries, that's what he will get. There will be no choice.



The order of dollar amounts in this and the following screens and all subsequent screens either decreases or increases for each respondent based on random assignment.



**Leo**  
(image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

Show Food BoxShow Gift Cards

Please decide on each line whether Leo can choose between the monthly food box and the monthly gift cards, or must receive the monthly food box.

If the gift card allowance is \$0 each month:

**Choice:** Leo chooses between the monthly food box OR \$0 in gift cards each month

Recommend food boxRecommend gift cards

☐ ☐ **Food box (no choice):** Leo will get the monthly food box

If the gift card allowance is **\$25** each month:

**Choice:** Leo chooses between monthly food box OR \$25 in gift cards each month

☐ ☐



**Food box (no choice):** Leo will get the monthly food box

If the gift card allowance is **\$45** each month:

**Choice:** Leo chooses between monthly food box OR \$45 in gift cards each month

☐ ☐



**Food box (no choice):** Leo will get the monthly food box

If the gift card allowance is **\$60** each month:

**Choice:** Leo chooses between monthly food box OR \$60 in gift cards each month

☐ ☐



**Food box (no choice):** Leo will get the monthly food box

If the gift card allowance is **\$70** each month:

**Choice:** Leo chooses between monthly food box OR \$70 in gift cards each month

☐ ☐



**Food box (no choice):** Leo will get the monthly food box

If the gift card allowance is **\$85** each month:

**Choice:** Leo chooses between monthly food box OR \$85 in gift cards each month

☐ ☐



**Food box (no choice):** Leo will get the monthly food box

If the gift card allowance is **\$105** each month:

**Choice:** Leo chooses between monthly food box OR \$105 in gift cards each month

☐ ☐



**Food box (no choice):** Leo will get the monthly food box

If the gift card allowance is **\$130** each month:

**Choice:** Leo chooses between monthly food box OR \$130 in gift cards each month

☐ ☐



**Food box (no choice):** Leo will get the monthly food box

If you like to send a message to Leo, you can do so here:

If Leo is the real welfare recipient, and this is the part of the study that will be carried out, then the computer will randomly select one of the decision above. That decision will entirely determine Leo's opportunities in this study. You are the only person who will affect Leo's opportunities.



*In case of three or more switches, the following page is displayed (our model permits up to two switches). The subject can continue only once her choices no longer display three or more switches.*

Your choices appear to be inconsistent or random. Most people decide in one of the five ways below. Your choices fit none of those patterns.

**Please click the Back button and change your choices to make them consistent with one of these five common patterns:**

- If the value of the gift cards is low, people enforce food (the welfare recipient cannot choose the gift cards), and once the value of the gift cards is high enough, they let the welfare recipient choose between food and gift cards.
- People let the welfare recipient choose between food and gift cards no matter the value of the gift cards.
- People enforce food and do not let the welfare recipient choose gift cards, no matter the value of the gift cards.
- People let the welfare recipient choose gift cards if their value is low, and they enforce food if the value of the gift cards is high.
- If the value of the gift cards is quite low or quite high, people let the welfare recipient choose between food and gift cards, but if the value of the gift cards is intermediate, they enforce food (the welfare recipient cannot choose the gift cards).

**Click the "back" button to change your choices.**



*For participants in the information treatment conveying an above average sin good consumption, the following sentence is added as last paragraph: “Recall that people can purchase alcoholic beverages, tobacco products, and lottery tickets with gift cards from gas stations.”*

**Scenario 3**

In the previous scenario, you decided whether Leo will have a choice between the monthly food box and the monthly gift cards.

In this scenario, **you** make the choice between the monthly food box and monthly gift cards for Leo (but you do not select the specific gift cards for him). That is, you decide whether Leo will receive the Food Box “The Usual” monthly, or whether Leo will select from the monthly gift cards (no groceries). You cannot leave the choice to him.

<p><b>Welfare recipient gets monthly food box</b></p>  <p>Leo will get the food box each month.</p>	OR	<p><b>Welfare recipient gets monthly gift cards</b></p>  <p>Leo will select the gift cards he will get each month.</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

As in the previous scenario, the decisions in this scenario differ with respect to the dollar value of the gift cards that Leo gets each month.

Recall that the groceries in the food box cost \$55–\$75 (depending on location) each month.





**Leo**  
(Image pixelated for anonymity.)

Age: 50–69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts,  
urban area

Show Food BoxShow Gift Cards

Please decide on each line whether Leo will receive the monthly food box or the monthly gift cards.

If the gift card allowance is **\$0** each month:

**Gift cards:** Leo selects gift cards worth \$0 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$25** each month:

**Gift cards:** Leo selects gift cards worth \$25 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$45** each month:

**Gift cards:** Leo selects gift cards worth \$45 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$60** each month:

**Gift cards:** Leo selects gift cards worth \$60 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$70** each month:

**Gift cards:** Leo selects gift cards worth \$70 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$85** each month:

**Gift cards:** Leo selects gift cards worth \$85 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$105** each month:

**Gift cards:** Leo selects gift cards worth \$105 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$130** each month:


**Gift cards:** Leo selects gift cards worth \$130 for each month (no food box, no groceries)

☐☐

**Food box:** Leo will get the food box each month.



*In case of two or more switches, the following page is displayed. The subject can continue only once her choices no longer display multiple switches.*



**Leo**  
(image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

Show Food BoxShow Gift Cards

*Leo's own preference*

We have asked Leo whether he would choose the monthly food box or monthly gift cards worth \$70. Leo would prefer the monthly gift cards worth \$70.

**Please click the Back button and change your choices to make them consistent with one of these three common patterns:**

- If the value of the gift cards is low, people select the food box, and once the value of the gift cards is high enough, they select the gift cards.
- People select the food deliveries all the way through.
- People select the gift cards all the way through.

**Click the "back" button to change your choices.**



*For some respondents, the screen on the right has the groceries circled and the gift cards crossed out, with the caption indicating the Chooser would prefer the food box. The screen depends either on the Chooser's choice (if the Chooser is real) or random assignment.*

**Leo said he prefers \$70 in gift cards each month over the monthly food box deliveries:**



*If the value of the gift cards is smaller than \$70, Leo might still prefer the gift cards, or he might not.*





## Comprehension questions

Would Leo choose the monthly food box or \$70 in gift cards each month?

- ☐ Leo would choose the food box.
- ☐ I cannot say based on the information given.
- ☐ Leo would choose \$70 in gift cards.

Would Leo choose the monthly food box or \$85 in gift cards each month?

- ☐ Leo would choose the food box.
- ☐ I cannot say based on the information given.
- ☐ Leo would choose \$85 in gift cards.



*Respondents must choose “gift cards” for each of these comprehension checks. The order of the answers varies. If the Chooser would prefer the food box, then the respondent must choose “food box” for each comprehension check.*

## Scenario 4

If this scenario is carried out, Leo will choose himself whether to get food boxes or whether he will instead select from the menu of gift cards.

As in Scenario 1, your task is to predict Leo's valuation. Unlike in Scenario 1, you now know that Leo has said that he prefers \$70 in gift cards each month over the monthly food box deliveries.

*The accuracy of your prediction may determine your payment for this study.*

*(The payment system is the same as in Scenario 1)*





**Leo**  
(Image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

Show Food Box

Show Gift Cards

How badly does Leo want the food box?

Recall: Leo's valuation is defined as the gift card value he considers just as desirable as the food box. It is not necessarily the amount Leo thinks he would pay for the food box at a store.

Please place the 10 tags at the top into the bins at the bottom to indicate how likely you think it is that Leo's valuation will fall into the range shown on each bin. For instance, if you put 3 tags into the bin labeled "Leo's valuation is between \$70 and \$85," that means you think there's a 3 in 10 chance that his valuation is no less than \$70 and no greater than \$85.

Hence, if you are certain about Leo's valuation, then place all tags into the same bin. If you are uncertain about Leo's valuation, then instead spread the tags across the bins. The more uncertain you are, the more widely you should spread them.

Leo's preference





Because Leo prefers \$70 in monthly gift cards over the monthly food box, his valuation is at most \$70.

Therefore, the label for each of the bins below shows a range below \$70.

Items

1 chance (of 10)	1 chance (of 10)	1 chance (of 10)	1 chance (of 10)
1 chance (of 10)	1 chance (of 10)	1 chance (of 10)	1 chance (of 10)
1 chance (of 10)	1 chance (of 10)		

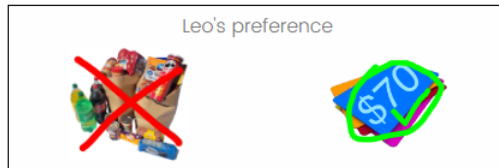
Leo's valuation is between <b>\$0 and \$25</b>	Leo's valuation is between <b>\$25 and \$45</b>	Leo's valuation is between <b>\$45 and \$60</b>	Leo's valuation is between <b>\$60 and \$70</b>



## Scenario 5

In this scenario, **you** make the choice between the food box and the gift card selection for Leo, just as you did in Scenario 3.

Unlike before, you now know that Leo has said that he prefers \$70 in monthly gift cards each month over the monthly food box deliveries.



**Leo**

(image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts,  
urban area

Show Food Box

Show Gift Cards

Knowing that Leo has said that he prefers \$70 in monthly gift cards over the monthly food box, please decide on each line whether Leo will receive food boxes or gift cards.

If the gift card allowance is **\$0**:

**Gift cards:** Leo selects gift cards worth \$0 for each month (no food box, no groceries)

☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$25**:

**Gift cards:** Leo selects gift cards worth \$25 for each month (no food box, no groceries)

☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$45**:

**Gift cards:** Leo selects gift cards worth \$45 for each month (no food box, no groceries)

☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$60**:

**Gift cards:** Leo selects gift cards worth \$60 for each month (no food box, no groceries)

☐ ☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$70**:

**Gift cards:** Leo selects gift cards worth \$70 for each month (no food box, no groceries)

☐ ☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$85**:

**Gift cards:** Leo selects gift cards worth \$85 for each month (no food box, no groceries)

☐ ☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$105**:

**Gift cards:** Leo selects gift cards worth \$105 for each month (no food box, no groceries)

☐ ☐

**Food box:** Leo will get the food box each month.

If the gift card allowance is **\$130**:

**Gift cards:** Leo selects gift cards worth \$130 for each month (no food box, no groceries)

☐ ☐

**Food box:** Leo will get the food box each month.



**Leo**  
(image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

Show Food BoxShow Gift Cards

## Scenario 6

If this scenario is randomly chosen to be carried out, we will distribute \$50 between Leo and a randomly selected US taxpayer (a person who participates in this survey such as yourself) who is *not* enrolled in the SNAP program every month for half a year.

In the question below, select the line that you would most like us to carry out. If this scenario is carried out, we will transfer the corresponding amount to Leo and to a randomly selected US taxpayer each month.

Details about the taxpayer

*If the user clicks the button “Details about the taxpayer”, the following text appears*

☐ Leo receives \$50 monthly,  
the randomly selected US taxpayer receives \$0 monthly

☐ Leo receives \$40 monthly,  
the randomly selected US taxpayer receives \$10 monthly

☐ Leo receives \$30 monthly,  
the randomly selected US taxpayer receives \$20 monthly

☐ Leo receives \$20 monthly,  
the randomly selected US taxpayer receives \$30 monthly

☐ Leo receives \$10 monthly,  
the randomly selected US taxpayer receives \$40 monthly

☐ Leo receives \$0 monthly,  
the randomly selected US taxpayer receives \$50 monthly



Details about the taxpayer

× **The Randomly-Selected Taxpayer**

If we carry out this scenario, we will recruit another participant from the general population using the same research firm that contacted you, or a suitable alternative firm. That person will receive the payment you specify.

## Questions

In this part of the survey we would like to ask you for your thoughts about Leo (the individual for whom you have just made decisions) and about the food box.

*Please answer according to your genuine beliefs and opinions.*



**Leo**

(image pixelated for anonymity.)

Age: 50-69

Children: No children

Marital status: No partner present

Citizenship: US

Collects SNAP benefits ("food stamps")

Place of residence: Massachusetts, urban area.

If Leo receives food deliveries, it will be the Food Box "The Usual":





**Leo**

(Image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts,  
urban area

Show Food Box

Show Gift Cards

## Questions about Leo

*The accuracy of your predictions could determine your payment for this study.*

Details

If Leo **receives the Food Box "The Usual"** in a given month, how much more or less money than usual do you think will he **spend on groceries** in that month (not including the value of the food box)?

- ☐ He will spend over \$50 less on groceries each month
- ☐ He will spend \$30 - \$50 less on groceries each month
- ☐ He will spend \$15 - \$30 less on groceries each month
- ☐ He will spend \$5 - \$15 less on groceries each month
- ☐ He will spend the same amount on groceries each month (within \$5 of usual spending)
- ☐ He will spend \$5 - \$15 more on groceries each month
- ☐ He will spend \$15 - \$30 more on groceries each month
- ☐ He will spend \$30 - \$50 more on groceries each month
- ☐ He will spend over \$50 more on groceries each month

If Leo receives monthly deliveries of the Food Box "The Usual", how will his eating change?

- ☐ He will eat much less healthily than usual
- ☐ He will eat slightly less healthily than usual
- ☐ He will eat just as healthily or unhealthily as usual
- ☐ He will eat slightly more healthily than usual
- ☐ He will eat much more healthily than usual

If Leo **receives the Food Box "The Usual"**, how much of the food in the box will he eventually eat, and **how much will spoil** or will otherwise go to waste?

- ☐ None will go to waste
- ☐ Up to 10% will go to waste
- ☐ 10% to 25% will go to waste
- ☐ 25% to 50% will go to waste
- ☐ More than 50% will go to waste



Questions about Leo



**Leo**  
(Image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

Show Food Box

Show Gift Cards

If, in a given month, Leo **receives \$65 in gift cards** that he selects from our menu, how much more or less money than usual do you think will he **spend on groceries** in that month?

☐

He will spend over \$50 less on groceries each month

☐

He will spend \$30 - \$50 less on groceries each month

☐

He will spend \$15 - \$30 less on groceries each month

☐

He will spend \$5 - \$15 less on groceries each month

☐

He will spend the same amount on groceries each month (within \$5 of usual spending)

☐

He will spend \$5 - \$15 more on groceries each month

☐

He will spend \$15 - \$30 more on groceries each month

☐

He will spend \$30 - \$50 more on groceries each month


☐

He will spend over \$50 more on groceries each month



For participants in the information treatment conveying an above average consumption of sin goods, the following information is displayed between the question and the payment details: “Recall that people can purchase alcoholic beverages, tobacco products, and lottery tickets with gift cards from gas stations.”

Questions about Leo



**Leo**  
(Image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

Show Food Box

Show Gift Cards

If Leo **can select gift cards worth \$100** in a given month, what type of gift cards will he likely choose? (Your answers must total \$100.)

The accuracy of your prediction could determine your payment for this study.

Details

Sporting goods	<div>0</div>
Inexpensive clothing stores	<div>0</div>
Home improvement and office supplies	<div>0</div>
Travel: airlines, trains, hotels, and motels	<div>0</div>
Gaming, video streaming, TV, and electronics	<div>0</div>
Fine restaurants, coffee houses, and food-delivery services	<div>0</div>
Fine clothing and apparel stores	<div>0</div>
Inexpensive and fast-food restaurants	<div>0</div>
Gas stations and associated convenience stores (which offer gas, alcohol, tobacco, lottery tickets, and other products)	<div>0</div>
Total	<div>0</div>



Of the gift cards for gas stations and associated convenience stores, what percentage will Leo spend on each of the following items? (Your answers must total 100%.)

Gas	<input type="text" value="0"/>
Tobacco products	<input type="text" value="0"/>
Alcoholic beverages	<input type="text" value="0"/>
Lottery tickets	<input type="text" value="0"/>
Other	<input type="text" value="0"/>
Total	<input type="text" value="0"/>



## Questions about Leo



**Leo**  
(image generated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present


Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

[Show Food Box](#) [Show Gift Cards](#)

When you decided whether Leo will get deliveries of the Food Box "The Usual" (no choice) or a choice between the food deliveries and monthly gift cards, how important were each of the following reasons?

	Completely unimportant	Slightly unimportant	Slightly important	Very important
Giving Leo a choice is the right thing to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sending a food box has only a negligible impact on Leo's consumption, because he will just buy less food in the store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making sure Leo consumes food rather than the things he could buy with the gift cards is the right thing to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Questions about Leo



**Leo**  
(Image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

[Show Food Box](#)[Show Gift Cards](#)

Why do you think Leo is poor enough to enroll in SNAP (food stamps)? For each of the following, please indicate how likely you think it is.

	Extremely unlikely	Somewhat unlikely	Somewhat likely	Extremely likely
Bad luck (not anybody's fault and not society's fault)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tendency to make bad life choices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of education and skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discrimination against minorities and the poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of patience and drive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Society doesn't give all people an equal chance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Questions about Leo



**Leo**  
(image pixelated for anonymity.)

Age: 50-69  
Children: No children  
Marital status: No partner present

Citizenship: US  
Collects SNAP benefits ("Food stamps")  
Place of residence: Massachusetts, urban area

[Show Food Box](#)
[Show Gift Cards](#)

If one of your decisions for Leo is carried out, he will receive shipments of food or shipments of gift cards every month for half a year.

Would you prefer Leo to receive these shipments for *fewer* than six months (so he receives less overall)? If Leo is the real recipient, your answer *will determine* the number of shipments he receives.

- ☐ The shipments should be made for all 6 months
- ☐ The shipments should only be made for 5 months; 1 shipment should be canceled
- ☐ The shipments should only be made for 4 months; 2 shipments should be canceled
- ☐ The shipments should only be made for 3 months; 3 shipments should be canceled
- ☐ The shipments should only be made for 2 months; 4 shipments should be canceled
- ☐ The shipments should only be made for 1 months; 5 shipments should be canceled
- ☐ No shipment should be made, all shipments should be canceled

You have made decisions about Food Box "The Usual". Other participants such as yourself decide about another food box, called Healthy Food Box. **Healthy Food Box** follows the nutritional **recommendations of the American Heart Association**. It contains *far more vegetables, fruit, whole grains, fish, and legumes* than welfare recipients' usual diet and *far less added sugar*. The food box is put together cost-consciously. You can see the contents of both boxes below.

Which of the two food boxes would you prefer to receive yourself?

Healthy Food Box

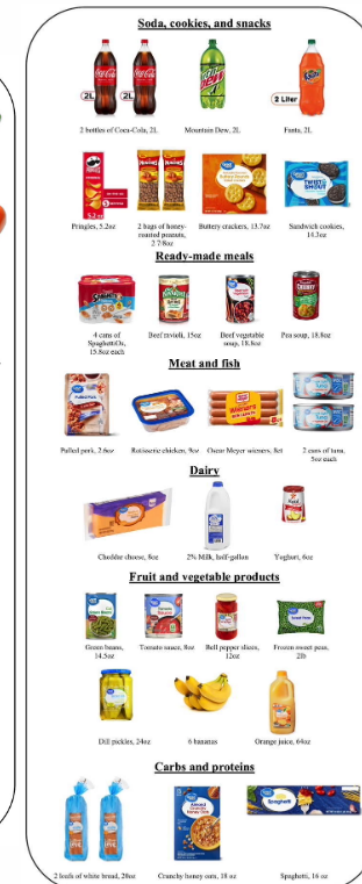


Contents of Healthy Food Box

Food Box "The Usual"



Contents of Food Box "The Usual"



I would much prefer Healthy Food Box <input type="radio"/>	I would slightly prefer Healthy Food Box <input type="radio"/>	I would like both boxes equally much <input type="radio"/>	I would slightly prefer Food Box "The Usual" <input type="radio"/>	I would much prefer Food Box "The Usual" <input type="radio"/>
---------------------------------------------------------------	-------------------------------------------------------------------	---------------------------------------------------------------	-----------------------------------------------------------------------	-------------------------------------------------------------------

Which box offers better value for money for a welfare recipient like Leo? (Both food boxes cost the same amount of money.)

Healthy Food Box offers much better value for money <input type="radio"/>	Healthy Food Box offers slightly better value for money <input type="radio"/>	Both boxes offer the same value for money <input type="radio"/>	Food Box "The Usual" offers slightly better value for money <input type="radio"/>	Food Box "The Usual" offers much better value for money <input type="radio"/>
------------------------------------------------------------------------------	----------------------------------------------------------------------------------	--------------------------------------------------------------------	--------------------------------------------------------------------------------------	----------------------------------------------------------------------------------



### Questions about your views

On the next two pages, we would now like to ask you some general questions about your views.

*Please answer according to your genuine beliefs and opinions.*



Questions about your views

What is your opinion on the SNAP (food stamps) program in the US?

By law, SNAP benefits (food stamps) can only be spent on groceries. They cannot be spent on alcohol, tobacco, pet foods, hot foods, food items that are consumable in the store, and other goods. (Some US states make some exceptions to these rules.)

If the list of eligible and ineligible items were changed, how do you think it should be altered?

- ☐ **Recipients should not have any choice;** the SNAP program should determine which foods the recipients will receive
- ☐ **Restrictions** on the use of the funds should be **tightened drastically;** only healthy and inexpensive foods should be eligible
- ☐ **Restrictions** on the use of the funds should be **tightened somewhat;** certain items such as unhealthy foods should be made ineligible
- ☐ **Restrictions** should be **left unchanged**
- ☐ **Restrictions** on the use of the funds should be **loosened somewhat;** certain items such as inexpensive hot foods and non-food items like personal hygiene products should become eligible
- ☐ **Restrictions** on the use of the funds should be **loosened drastically;** only addictive goods such as alcohol should be excluded
- ☐ **Restrictions** on the use of the funds should be **abolished;** all items should be eligible
- ☐ I do not have an opinion on this

If SNAP benefits levels to current SNAP participants (food stamp recipients) were changed, how should they be altered? Benefits should be...

- ☐ increased by a lot (by 20% or more)
- ☐ increased somewhat (by 20% or less)
- ☐ left unchanged
- ☐ cut somewhat (by 20% or less)
- ☐ cut by a lot (by 20% or more)
- ☐ I have no opinion on this



### Questions about your views

Please indicate your level of agreement with each of the following statements

*"The SNAP (food stamps) program as it is currently administered in the US is a good thing."*

Totally agree	Agree somewhat	Disagree somewhat	Totally disagree	I have no opinion on this
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*"Welfare recipients make bad choices if they receive cash instead of food."*

Totally agree	Agree somewhat	Disagree somewhat	Totally disagree	I have no opinion on this
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*"SNAP is a welfare program, hence SNAP participants are taking advantage of others."*

Totally agree	Agree somewhat	Disagree somewhat	Totally disagree	I have no opinion on this
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Questions about SNAP recipients in general

On this and the next three pages, we will ask you to make predictions about all the SNAP (food stamps) recipients in the US.

*The accuracy of your predictions could determine your payment for this study.*

Details

### Questions about SNAP recipients in general

Among all SNAP participants in the US, what fractions are of each of the following races?

*Your answers must total 100%*

	0	10	20	30	40	50	60	70	80	90	100
White	<input type="text"/>										<input type="text" value="0"/>
Black	<input type="text"/>										<input type="text" value="0"/>
Other race	<input type="text"/>										<input type="text" value="0"/>
<b>Total:</b>											<b>0</b>

Questions about SNAP recipients in general

For this question, consider **black** SNAP participants **only**. Among all black SNAP participants in the US, what fractions are of each of the following genders?

Your answers must total 100%

0 10 20 30 40 50 60 70 80 90 100

Male (black)  0

Female (black)  0

Total: 0

For this question, consider **white** SNAP participants **only**. Among all white SNAP participants in the US, what fractions are of each of the following genders?

Your answers must total 100%

0 10 20 30 40 50 60 70 80 90 100

Male (white)  0

Female (white)  0

Total: 0



Questions about SNAP recipients in general

Among **white men** who are SNAP participants, chosen at random, how many do you think have children (below age 18) in their custody?

0 of 10 have children <input type="radio"/>	1 of 10 have children <input type="radio"/>	2 of 10 have children <input type="radio"/>	3 of 10 have children <input type="radio"/>	4 of 10 have children <input type="radio"/>	5 of 10 have children <input type="radio"/>	6 of 10 have children <input type="radio"/>	7 of 10 have children <input type="radio"/>	8 of 10 have children <input type="radio"/>	9 of 10 have children <input type="radio"/>	10 of 10 have children <input type="radio"/>
------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	-------------------------------------------------------

Among **black men** who are SNAP participants, chosen at random, how many do you think have children (below age 18) in their custody?

0 of 10 have children <input type="radio"/>	1 of 10 have children <input type="radio"/>	2 of 10 have children <input type="radio"/>	3 of 10 have children <input type="radio"/>	4 of 10 have children <input type="radio"/>	5 of 10 have children <input type="radio"/>	6 of 10 have children <input type="radio"/>	7 of 10 have children <input type="radio"/>	8 of 10 have children <input type="radio"/>	9 of 10 have children <input type="radio"/>	10 of 10 have children <input type="radio"/>
------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	-------------------------------------------------------

Among **white women** who are SNAP participants, chosen at random, how many do you think have children (below age 18) in their custody?

0 of 10 have children <input type="radio"/>	1 of 10 have children <input type="radio"/>	2 of 10 have children <input type="radio"/>	3 of 10 have children <input type="radio"/>	4 of 10 have children <input type="radio"/>	5 of 10 have children <input type="radio"/>	6 of 10 have children <input type="radio"/>	7 of 10 have children <input type="radio"/>	8 of 10 have children <input type="radio"/>	9 of 10 have children <input type="radio"/>	10 of 10 have children <input type="radio"/>
------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	-------------------------------------------------------

Among **black women** who are SNAP participants, chosen at random, how many do you think have children (below age 18) in their custody?

0 of 10 have children <input type="radio"/>	1 of 10 have children <input type="radio"/>	2 of 10 have children <input type="radio"/>	3 of 10 have children <input type="radio"/>	4 of 10 have children <input type="radio"/>	5 of 10 have children <input type="radio"/>	6 of 10 have children <input type="radio"/>	7 of 10 have children <input type="radio"/>	8 of 10 have children <input type="radio"/>	9 of 10 have children <input type="radio"/>	10 of 10 have children <input type="radio"/>
------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	------------------------------------------------------	-------------------------------------------------------



## Questions about yourself

Finally, we would like to ask you some questions about yourself.

*Thank you for answering truthfully.*

What is your age?

How close do you feel to your own ethnic or racial group?

- ☐ Very close
- ☐ Close
- ☐ Not very close
- ☐ Not close at all

What is your household's income per year?

- ☐ \$0 - \$10,000
- ☐ \$10,000 - \$20,000
- ☐ \$20,000 - \$30,000
- ☐ \$30,000 - \$40,000
- ☐ \$40,000 - \$50,000
- ☐ \$50,000 - \$60,000
- ☐ \$60,000 - \$70,000
- ☐ \$70,000 - \$80,000
- ☐ \$80,000 - \$90,000
- ☐ \$90,000 - \$100,000
- ☐ \$100,000 - \$125,000
- ☐ \$125,000 - \$150,000
- ☐ more than \$150,000



How many people live in your household?

- ☐ Only me
- ☐ Me and one other
- ☐ Me and two others
- ☐ Me and three others
- ☐ Me and four others
- ☐ Me and five others
- ☐ Me and six others
- ☐ Me and more than six others

What is the highest level of school you have completed or the highest degree you have received?

- ☐ Some high school
- ☐ High school diploma (or equivalent, including GED)
- ☐ Some college
- ☐ Associate's degree in 2-year college
- ☐ Bachelor's degree in 4-year college
- ☐ Master's degree
- ☐ Doctoral degree (PhD)
- ☐ Professional doctorate (JD, MD)

What is your marital status?

- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ Married
- ☐ Never married

How many children do you have (including adult children)?

- ☐ None (I do not have children)
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ more than 5

Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?

- ☐ Strong democrat
- ☐ Not very strong democrat
- ☐ Independent, closer to democrat
- ☐ Independent, as far from democrats as from republicans
- ☐ Independent, closer to republican
- ☐ Not very strong republican
- ☐ Strong republican
- ☐ Other party (please indicate)

How strongly do you agree with the political party you are closest to?

- ☐ Agree with them on very few things
- ☐ Agree with them on some things
- ☐ Agree with them on most things
- ☐ Agree with them on nearly everything

What is your religion?

- ☐ Native american
- ☐ Christian (Protestant)
- ☐ Christian (Catholic)
- ☐ Orthodox-christian
- ☐ Inter-denominational
- ☐ Jewish
- ☐ Muslim/islam
- ☐ Buddhism
- ☐ Hinduism
- ☐ Other eastern religion
- ☐ None
- ☐ Other

To what level do you consider yourself to be religious?

- ☐ Not religious
- ☐ Slightly religious
- ☐ Moderately religious
- ☐ Very religious

How many times do you attend religious services or ceremonies at your place of worship?

☐ Never

☐ Less than once a year

☐ Once or twice a year

☐ Several times a year

☐ Once a month

☐ 2-3 times a month

☐ About once a week

☐ Several times a week



Do you have any comments for us about this study?



## D.2 Recipients

# Welcome!

This is a 10 minute survey by the Department of Economics at Stanford University.

*Please answer the following questions to determine your eligibility.*

What is your gender?

☐ Male

☐ Female

☐ Other (e.g. genderqueer)

Are you an American citizen?

☐ Yes

☐ No

In which state do you currently reside?

Please indicate which of the following social programs you are currently a participant/beneficiary in (click "None of the above" if you are in none of them):

☐ Medicaid

☐ Medicare

☐ Veteran Disability Compensation/Benefits

☐ Earned Income Tax Credit (EITC)

☐ Social Security

☐ SNAP (Supplemental Nutrition Assistance Program, also known as Food Stamps)

☐ Temporary Assistance for Needy Families (TANF, formerly AFDC)

☐ Public Housing (PUD)

☐ Pell Grants

☐ None of the above

Which of the following do you have access to you where you live?  
(Only check if it is functional)

☐ Refrigerator

☐ Stovetop

☐ Oven

☐ Microwave

☐ Crockpot / Slow Cooker / Pressure Cooker

☐ Hot Plate

☐ Rice Maker

☐ I'm not a robot



Unfortunately, you are not eligible for this study.

Please click the Next button to continue.



*Respondents who do not indicate that they are not U.S. citizens, not SNAP (Food Stamps) participants, not in possession of a refrigerator, or neither male nor female see the above screen.*

## Are you willing to participate in this study?

This is a research study conducted by Stanford University. If you decide to participate, you may receive either several monthly shipments of **groceries** (both fresh and shelf-stable), or several monthly shipments of **gift cards** (you will have some choice between different gift cards). You will need to **take a picture of your face which will be sent in pixellated (anonymized) form** to us. You will also need to **provide your first name**. Both your first name and the pixellated picture may be displayed to other participants in this study. Because your picture will be pixellated, you will remain anonymous to any other participant.

In order to receive the food or gift card shipments, you will also have to participate in a brief follow-up survey in a couple of weeks from today. In order to receive these shipments, you will need to provide us with your home address. The shipments will only begin after you have completed the follow-up survey.

Your browser may ask for access to your camera; you must click "allow" for this survey to work properly.

### **Important**

*In order to ensure that this study will have enough participants such as yourself, we need to recruit slightly more than the required number of participants. Hence, only a part of the respondents to this survey will eventually receive gift cards or groceries. Yet, **every** participant will get the rewards promised by Point Club by Innovate MR for completing this study.*

**Protocol Director:** Professor B. Douglas Bernheim

**Protocol Number:** IRB-53441

**IRB Approval Date:** 3/30/22

**Expiration Date:** (does not expire)

**STUDY PROTOCOLS** In this study you will be asked a small number of demographic questions and may then be offered the chance to complete a personality questionnaire followed by some choice tasks. You will be paid between \$2 and \$540 for participation, in addition to receiving either cash payments or certain services, depending on your decisions in the choice tasks as well as other factors. After completing the first survey, you may be invited to a second session between one week and three months later. You will be asked to take a picture of yourself, which will be forwarded to the researchers in pixelated form. You will also be asked to state your first name.

**YOUR RIGHTS** If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You have the right to refuse to answer particular questions. Your individual privacy will be maintained in all published and written data resulting from the study. If you have questions about your rights as participant, you may also contact the Stanford Institutional Review Board at 1705 El Camino Real, Palo Alto, CA 94306, (650) 723-2480, irbnonmed@stanford.edu. The research study you are participating in may be reviewed for quality assurance to make sure that the required laws and guidelines are followed. If chosen, (a) representative(s) of the Institutional Review Board (IRB) may access study-related data and/or consent materials as part of the review. All information accessed by the IRB will be upheld to the same level of confidentiality that has been stated by the research team.

**CONFLICT OF INTEREST STATEMENT** None of the researchers involved with this study have any conflict of interest. This study receives funding from the Alfred P. Sloan foundation and the Stanford Department of Economics.

**CONTACT INFORMATION** \*Questions, Concerns, or Complaints: If you have any questions, concerns or complaints about this research study, its procedures, risks and benefits, you should ask the one of the study leaders: Zach Freitas-Groff, Stanford University, Department of Economics, 579 Serra Mall, Stanford, CA, 94305, USA, zgroff@stanford.edu. \*Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Review Board at 1705 El Camino Real, Palo Alto, CA 94306, (650) 723-2480, irbnonmed@stanford.edu

**BY CLICKING CONTINUE, YOU CONSENT TO PARTICIPATING IN THIS RESEARCH STUDY.**

Please make a copy of this consent form for your own records. You can do so by right-clicking and selecting "print" in most browsers. If you cannot do so on your browser, please contact the protocol director for a copy of the consent form.

***Are you willing to participate in this study?***

Yes, I am willing to participate



No, I am not willing to participate



*Respondents who decline participation go to the end of the survey.*

Before we take your picture, please answer the following questions truthfully.

What is your age?

☐ 18 - 19 years old

☐ 20 - 29 years old

☐ 30 - 39 years old

☐ 40 - 49 years old

☐ 50 - 59 years old

☐ 60 - 69 years old

☐ 70 - 79 years old

☐ 80 - 89 years old

☐ 90 years old or older

Choose the race that you identify with most:

☐ White or Caucasian

☐ Black or African American

☐ American Indian or Alaska Native

☐ Hispanic or Latino

☐ Native Hawaiian or Pacific Islander

☐ Asian or Asian American

☐ Other (please specify)

Recent research on decision making shows that choices are affected by the context in which they are made. Differences in how people feel, in their previous knowledge and experience, and in their environment can influence the choices they make. To help us understand how people make decisions, we are interested in information about you, specifically whether you actually take the time to read the instructions. To help us confirm that you have read these instructions, please select the "none of the above" option below. If you don't, some results may fail to tell us very much about decision making in the real world. Thank you very much.

- ☐ Never
- ☐ Once
- ☐ Most of the time
- ☐ Always
- ☐ None of the above

What is your current marital status?

- ☐ Married, living with spouse
- ☐ Married but living separately from spouse
- ☐ Not married but living with partner
- ☐ Single

How many children are in your custody?

- ☐ None (I do not have children)

How many children are in your custody?

- ☐ None (I do not have children)
- ☐ None (I have children, but they are adults or are not in my custody for some other reason)
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ more than 5

Which of the following best describes the environment in which you live?

- ☐ Urban
- ☐ Suburban
- ☐ Rural



Which of the following best describes the environment in which you live?

☐ Urban

☐ Suburban

☐ Rural

Indicate any food restrictions you have

☐ I do not have any food restrictions

☐ Vegan

☐ Vegetarian

☐ Halal

☐ Kosher

☐ Peanut allergy

☐ Diabetic

☐ Celiac

☐ Lactose intolerant

☐ Other (please indicate)



What is your first name? Please provide your *real* first name, *not* any nickname or username.

If we cannot use your name (for instance because entered no name, a placeholder, or a fake name), you will not be eligible to receive the gift cards or groceries.

Please know that this survey is conducted solely for academic research, and your information will not be used for any commercial purposes.



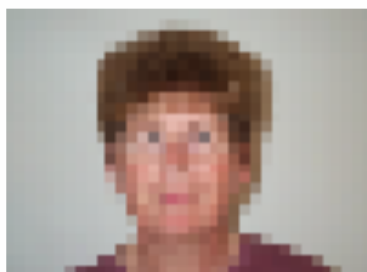
## Take your picture

Below on this page, you can click a button to have your picture taken with your device's webcam. The survey will pixellate the photo so that it does not identify you. We will NOT receive anything except the pixellated version of the photo. You can take your picture multiple times, so feel free to try it out.

### Make sure there is enough light in your picture!

(Some previous respondents took pictures in the dark. This doesn't work.)

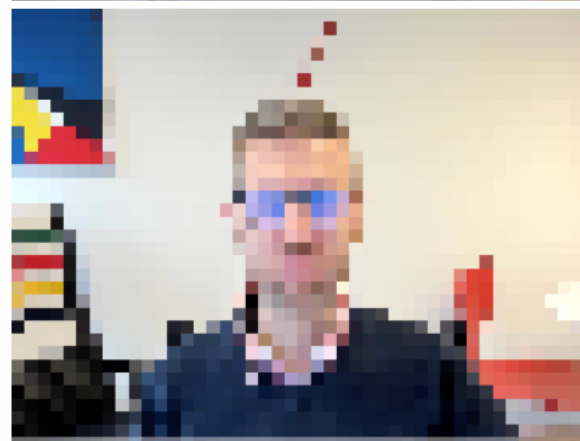
Here's an example of what your picture should look like:



Please move close to the camera so that your face fills the entire available space.

You do not need a clear background. It's fine if there are things in the background. Just make sure your face fills most of the area.

Please make sure the quality of your picture is reasonably close to that of the example. If we cannot use your picture (for instance because your face is only a very small part of the available area), you will not be eligible to receive the gift cards or groceries.



If you would like to retake your picture, simply click on "Take Picture" above again.

If you click "next", the **pixellated version** of your picture will be saved. The clear version of your picture will be deleted in any case.



If you are invited for a follow-up, you will receive either a monthly box of groceries or a monthly shipment of gift cards over several (up to six) months.

If you receive gift cards, you will get to choose gift cards from the following companies, up to a specific amount that you will learn in the follow-up study.

#### Inexpensive clothing stores



#### Gas stations and associated convenience stores



Gas station convenience stores sell many items including tobacco products, beer and wine, lottery tickets, packaged snacks and candy, and over-the-counter medication, such as these:



#### Inexpensive and fast-food restaurants



#### Travel: airlines, trains, hotels, and motels



Flightgift offers access to over 300 airlines including



Flightgift offers access to over 300 airlines including



Hotels.com offers accommodation in nearly any hotel or motel across the US and abroad, including



#### Sporting goods



#### Home improvement and office supplies



#### Fine clothing and apparel stores



#### Gaming, video streaming, TV, and electronics



#### Full-service restaurants, coffee houses, and food delivery services



You will choose how to allocate a given amount of money across the categories of gift cards in a table like this. You will be able to change your selection each month if you like to do so.

Choose your gift cards

Gasoline and Convenience (Shell): (Must be at least \$10.00)

0

Gasoline and Convenience (Exxon): (Available values: \$10, \$15, \$20, \$25, \$50, \$75, \$100)

0

Gasoline and Convenience (Chevron): (Available values: \$10, \$15, \$20, \$25, \$50, \$75, \$100)

0

Gasoline and Convenience (Speedway): (Available values: \$10, \$15, \$20, \$25, \$50, \$75, \$100)

0

Gasoline and Convenience (QuickTrip): (Must be at least \$5.00)

0

Gasoline and Convenience (Sheetz): (Must be at least \$5.00)

0

Home and Clothes (TJ Maxx, Marshalls, HomeGoods, HomeSense, Sierra): (Must be at least \$10.00)

0

Home and Clothes (Ross): (Must be at least \$10.00)

0

Electronics and Entertainment (Best Buy): (Must be at least \$5.00)

0

Electronics and Entertainment (Game Stop): (Must be at least \$10.00)

0

Electronics and Entertainment (Apple Store): (Must be at least \$25.00)

0

Electronics and Entertainment (Netflix): (Must be at least \$25.00)

0

[list continues]

Would you prefer the Healthy Food Box or a specific value of gift cards?

There are two different food boxes you may receive once a month, over a period of several (up to six) months. The Healthy Food Box (picture and contents below) is one of them.

If you are invited for the follow-up, there is some chance that whether you get this food box or the gift cards depends on your own choice. There is also some chance that which of these you receive is determined in some other way.

Healthy Food Box



## List of contents

### Fruit and vegetables



Whole carrots, 16oz



3 bell peppers



1 iceberg lettuce



2 cucumbers



Navel oranges, 2lb



6 bananas



Fuji apples, 3lb



4 Roma tomatoes



Frozen sweet peas, 2lb



Frozen berries, 16oz



Frozen broccoli florets, 32oz



Canned tomato sauce, 8oz, no salt added



Canned sliced carrots, 8.25 oz



2 cans of no-salt-added whole kernel corn, 15.25 oz each



6 ct Mott's apple sauce, no sugar added

### Fiber



2 loaves of whole wheat bread, 20oz



Rolled oats (whole grain), 42oz



Russet baking potatoes 5lb

### Legumes, nuts, and seeds



2 cans of pinto beans, 15.5oz each



Walnuts, 4oz



2 cans of chickpeas, 15.5oz each

### Healthy oils and fats, and other nutrients



Olive oil (extra virgin)



2 cans of salmon, 14oz each



2% Milk, half-gallon

On each line below, please decide whether you would rather have:

1. Healthy Food Box delivered to your home address once a month (over a period of several months).
2. Your choice of gift cards of a value up to the specified amount delivered to your home address once a month (you get that value each month over a period of several months)

*Make your choices carefully. They may determine what you will receive.*

Show gift card selection

On each line, decide which you would rather have. Each line is a separate decision.

- |                                |                                             |                             |
|--------------------------------|---------------------------------------------|-----------------------------|
| \$100 in gift cards each month | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$80 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$65 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$55 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$50 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$45 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$35 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$20 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |
| \$0 in gift cards each month   | <input type="radio"/> <input type="radio"/> | Healthy Food Box each month |

If you receive Healthy Food Box in one month, how much more or less money

- |                                                     |                                                   |
|-----------------------------------------------------|---------------------------------------------------|
| <input type="radio"/> \$55 in gift cards each month | <input type="radio"/> Healthy Food Box each month |
| <input type="radio"/> \$50 in gift cards each month | <input type="radio"/> Healthy Food Box each month |
| <input type="radio"/> \$45 in gift cards each month | <input type="radio"/> Healthy Food Box each month |
| <input type="radio"/> \$35 in gift cards each month | <input type="radio"/> Healthy Food Box each month |
| <input type="radio"/> \$20 in gift cards each month | <input type="radio"/> Healthy Food Box each month |
| <input type="radio"/> \$0 in gift cards each month  | <input type="radio"/> Healthy Food Box each month |

If you receive Healthy Food Box in one month, how much more or less money than usual do you think you would **spend on other groceries** in that month?

- ☐ I would spend over \$35 less on other groceries that month
- ☐ I would spend \$25 – \$35 less on other groceries that month
- ☐ I would spend \$15 – \$25 less on other groceries that month
- ☐ I would spend \$5 – \$15 less on other groceries that month
- ☐ I would spend the same amount on other groceries that month
- ☐ I would spend \$5 – \$15 more on other groceries that month
- ☐ I would spend \$15 – \$25 more on other groceries that month
- ☐ I would spend \$25 – \$35 more on other groceries that month
- ☐ I would spend over \$35 more on other groceries that month

Most people prefer the food box when the gift card value is low and prefer the gift card when the gift card value is high (or they either choose the food box all the way through, or choose the gift card all the way through. Your own choices are inconsistent. When the gift card value was low, you choose the gift card over the food box. But then, for a higher gift card value you chose the food box over the (more valuable) gift card. Please make your choices consistent.

[Close](#)





## Would you prefer the Food Box "The Usual" or a specific value of gift cards?

The Food Box "The Usual" (picture and contents below) is the other of the two food boxes you may receive once a month, over a period of several (up to six) months.

If you are invited for the follow-up, there is some chance that whether you get this food box or the gift cards depends on your own choice. There is also some chance that which of these you receive is determined in some other way.

### Food Box "The Usual"



### List of contents

#### Soda, cookies, and snacks



#### Ready-made meals



#### Meat and fish



#### Dairy



#### Fruit and vegetable products



#### Carbs and proteins



On each line below, please decide whether you would rather have:

1. Food Box "The Usual" delivered to your home address once a month (over a period of several months).
2. Your choice of gift cards of a value up to the specified amount delivered to your home address once a month (you get that value each month over a period of several months)

*Make your choices carefully. They may determine what you will receive.*

Show gift card selection

On each line, decide which you would rather have. Each line is a separate decision.

- |                                |                                             |                                 |
|--------------------------------|---------------------------------------------|---------------------------------|
| \$100 in gift cards each month | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$80 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$65 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$55 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$50 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |

- |                               |                                             |                                 |
|-------------------------------|---------------------------------------------|---------------------------------|
| \$50 in gift cards each month | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$45 in gift cards each month | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$35 in gift cards each month | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$20 in gift cards each month | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |
| \$0 in gift cards each month  | <input type="radio"/> <input type="radio"/> | Food Box "The Usual" each month |

If you receive Food Box "The Usual" in one month, how much more or less money than usual do you think you would **spend on other groceries** in that month?

- |                                                                                    |
|------------------------------------------------------------------------------------|
| <input type="radio"/> I would spend over \$35 less on other groceries that month   |
| <input type="radio"/> I would spend \$25 - \$35 less on other groceries that month |
| <input type="radio"/> I would spend \$15 - \$25 less on other groceries that month |
| <input type="radio"/> I would spend \$5 - \$15 less on other groceries that month  |
| <input type="radio"/> I would spend the same amount on other groceries that month  |
| <input type="radio"/> I would spend \$5 - \$15 more on other groceries that month  |
| <input type="radio"/> I would spend \$15 - \$25 more on other groceries that month |
| <input type="radio"/> I would spend \$25 - \$35 more on other groceries that month |
| <input type="radio"/> I would spend over \$35 more on other groceries that month   |



How much money do you think it would cost you to purchase the contents of Healthy Food Box (consider purchasing it once, not for all the months)?



### Contents



### Contents



- ☐ \$0 - \$10
- ☐ \$10 - \$20
- ☐ \$20 - \$30
- ☐ \$30 - \$40
- ☐ \$40 - \$50
- ☐ \$50 - \$60
- ☐ \$60 - \$70
- ☐ \$70 - \$80
- ☐ \$80 - \$90
- ☐ \$90 - \$100
- ☐ more than \$100

How similar is Healthy Food Box to the groceries you usually consume?

- ☐ Totally different
- ☐ Quite different
- ☐ Somewhat different
- ☐ Somewhat similar
- ☐ Quite similar
- ☐ Totally similar

How similar is Healthy Food Box to the groceries you usually consume?

- ☐ Totally different
- ☐ Quite different
- ☐ Somewhat different
- ☐ Somewhat similar
- ☐ Quite similar
- ☐ Totally similar

If you receive the deliveries of Healthy Food Box, how much of the food in the box do you think you will eventually eat, and how much will spoil or will otherwise go to waste?

- ☐ None will go to waste
- ☐ Up to 10% will go to waste
- ☐ 10% to 25% will go to waste
- ☐ 25% to 50% will go to waste
- ☐ 50% to 75% will go to waste
- ☐ More than 75% will go to waste
- ☐ All of it will go to waste



How much money do you think it would cost you to purchase the contents of Food Box "The Usual" (consider purchasing it once, not for all the months)?



Contents



- ☐ \$0 - \$10
- ☐ \$10 - \$20
- ☐ \$20 - \$30
- ☐ \$30 - \$40
- ☐ \$40 - \$50
- ☐ \$50 - \$60
- ☐ \$60 - \$70
- ☐ \$70 - \$80
- ☐ \$80 - \$90
- ☐ \$90 - \$100
- ☐ more than \$100

How similar is the contents of Food Box "The Usual" to the groceries you usually consume?

- ☐ Totally different
- ☐ Quite different
- ☐ Somewhat different
- ☐ Somewhat similar
- ☐ Quite similar
- ☐ Totally similar

How similar is the contents of Food Box "The Usual" to the groceries you usually consume?

- ☐ Totally different
- ☐ Quite different
- ☐ Somewhat different
- ☐ Somewhat similar
- ☐ Quite similar
- ☐ Totally similar

If you receive the deliveries of Food Box "The Usual", how much of the food in the box do you think you will eventually eat, and how much will spoil or will otherwise go to waste?

- ☐ None will go to waste
- ☐ Up to 10% will go to waste
- ☐ 10% to 25% will go to waste
- ☐ 25% to 50% will go to waste
- ☐ 50% to 75% will go to waste
- ☐ More than 75% will go to waste
- ☐ All of it will go to waste



If you were to **receive \$50 in cash** without any strings attached, how much more or less money than usual do you think you would **spend on groceries** in each of these months, on average (including any of the extra cash spent on groceries)?

- ☐ I would spend over \$35 less on groceries each month
- ☐ I would spend \$25 – \$35 less on groceries each month
- ☐ I would spend \$15 – \$25 less on groceries each month
- ☐ I would spend \$5 – \$15 less on groceries each month
- ☐ I would spend the same amount on groceries each month
- ☐ I would spend \$5 – \$15 more on groceries each month
- ☐ I would spend \$15 – \$25 more on groceries each month
- ☐ I would spend \$25 – \$35 more on groceries each month
- ☐ I would spend over \$35 more on groceries each month

How much food do you usually receive for free from food banks each month, on average?

- ☐ I do not receive food from food banks
- ☐ I receive food worth \$1 – \$10 each month
- ☐ I receive food worth \$10 – \$25 each month
- ☐ I receive food worth \$25 – \$50 each month
- ☐ I receive food worth \$50 – \$75 each month
- ☐ I receive food worth \$75 – \$100 each month
- ☐ I receive food worth \$100 – \$150 each month
- ☐ I receive food worth \$150 – \$200 each month
- ☐ I receive food worth more than \$200 each month

Thank you for your participation in this study!

### Important

You may receive an invitation to the follow-up study in several weeks from today. You will **receive the food or gift-card deliveries only if you complete that follow-up study**. That study will ask for your home address so we can deliver the items to you.

If you have any comments, concerns, or suggestions, please also let us know here.

