

UnderStandingAmericaStudy

RECRUITMENT EXPERIMENTS IN THE UAS



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INTRODUCTION

Over the years, the UAS has implemented several recruitment experiments and will keep doing that with future recruitment batches. The analyses that follow evaluate completed UAS recruitment experiments.

Throughout this document, we will use the terms *initial recruitment survey* and *intake survey* interchangeably to refer to the survey that is included in the UAS' recruitment invitation package. Potential participants may complete and return this survey in paper format or online. They also indicate in the survey whether they want to join the UAS panel. For brevity, in this document, we will mostly refer to this survey as the "intake survey" in tables and figures. For more information about the UAS' methodology, including recruitment sampling and procedures please visit <https://uasdata.usc.edu/page/Methodology>.

We will focus on three outcomes of interest:

- **Return:** The likelihood that a contacted household completes and returns the initial recruitment survey or intake survey.
- **Agree:** The likelihood that a contacted household agrees to join the UAS.
- **Join:** The likelihood that a contacted household joins the UAS.

Since returning the intake survey is a necessary condition for agreeing to join the UAS and, in turn, agreeing to join the UAS is a necessary condition for eventually joining the UAS, we analyze both the likelihood that a contacted household agrees to join the UAS conditional on returning the intake survey (Agree | Return) and the likelihood that a contacted household joins the UAS conditional on agreeing to do so (Join | Agree). In addition, we analyze the unconditional likelihood that a contacted household joins the UAS (Join).

Throughout this document, we use the same variable names as in the **UAS Recruitment and Attrition Data Set** (available for download at [this link](#)) and report them in *italic*. In some cases, variables identifying a recruitment experiment contain a number (e.g., *experiment37*). Such a number is completely arbitrary and does not necessarily reflect the chronological order in which recruitment experiments were implemented.

For all the analyses described in this document, we only consider the person within a contacted household who first completed and returned the intake survey and eventually joined the UAS (*primary_respondent*).

RECRUITMENT

Figure 1 shows the unweighted and weighted (using base weights) fraction of individuals who returned the intake survey over time. Figure 2 shows the unweighted and weighted fraction of individuals who joined the UAS over time. In both figures, the vertical dashed lines indicate changes in the sampling procedure. In December 2018, the number of addresses randomly drawn within each zip code selected by the adaptive sampling algorithm changed from being fixed to being proportional to the zip code's population. In December 2021, the zip code-based adaptive sampling algorithm was replaced by the current household-based adaptive sampling algorithm (a description of the different sampling algorithms adopted by the UAS and how base weights are calculated can be found [here](#)).

As can be seen, unweighted and weighted fractions are very similar. Weighted participation rates – especially the fraction of individuals who become panel members – tend to be larger than unweighted participation rates. This is not surprising given that individuals who are more likely to participate – typically non-racial/ethnic minorities and highly educated individuals – receive a lower probability of inclusion by the adaptive sampling algorithm and, therefore, have a larger base weight.

Figure 1:

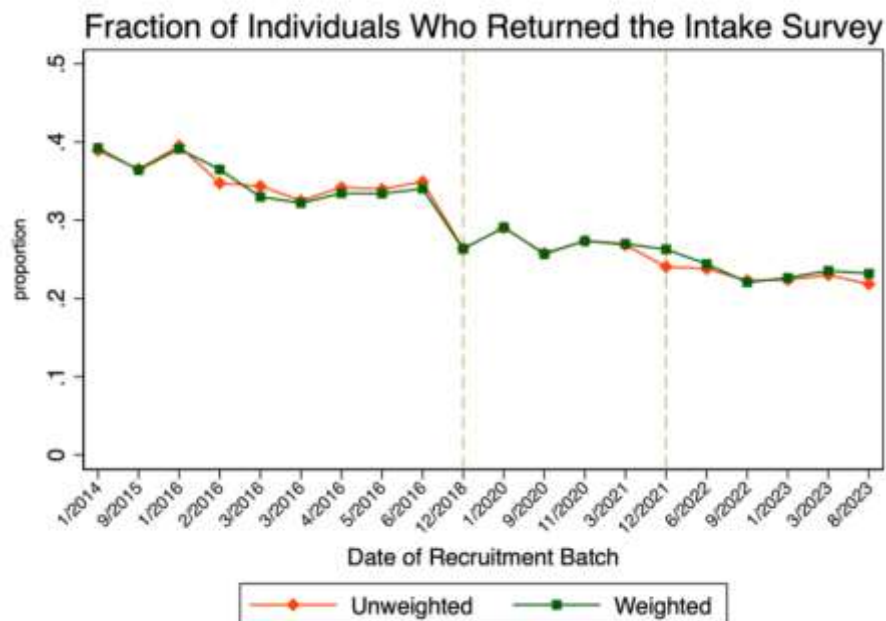
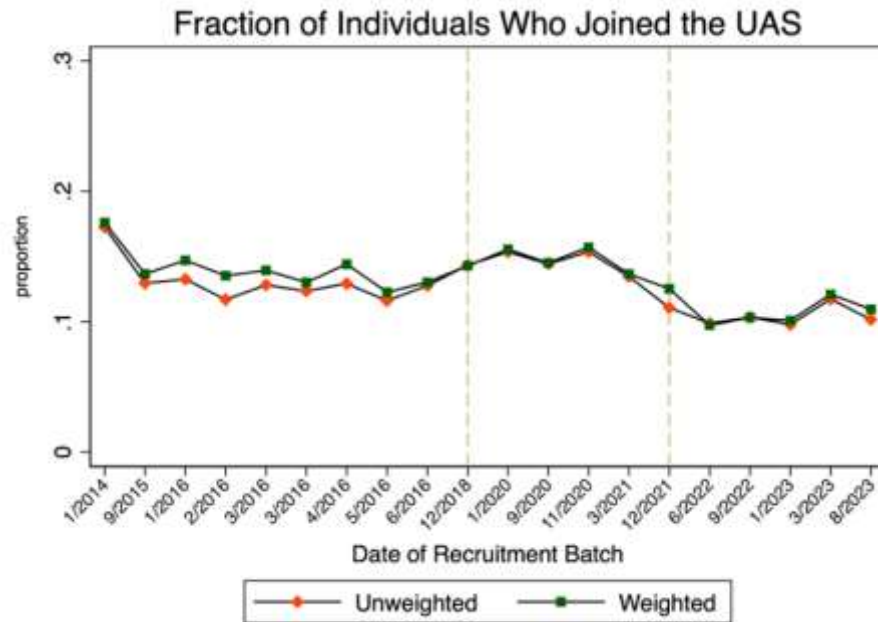


Figure 2:



For all recruitment batches, we have analyzed heterogeneity in participation rates by demographics at the census tract level. Specifically, we have estimated linear models where an indicator for returning the intake survey is separately regressed on census tract population shares for sex, race, age, and education (we obtain similar results when all population shares are included in the model at the same time), as well as recruitment time dummies to control for overall trends in participation rate. The results of these regressions are reported in Table 1. Figures 3-6 show differences in the likelihood of returning the intake survey by demographics over time.

Table 1:

Regressions: Intake Survey Response Rates of Census Tract Population Shares

<i>(I): gender</i>		<i>(II): race/ethnicity</i>		<i>(III): age</i>		<i>(IV): education</i>	
Female	0.351 (0.017)	White	0.392 (0.011)	18-24	0.297 (0.017)	HS or Less	0.181 (0.016)
Male	0.385 (0.017)	Black	0.281 (0.012)	25-34	0.273 (0.020)	Some College	0.387 (0.011)
R ²	0.276	Hispanic	0.279 (0.012)	35-64	0.377 (0.013)	Bachelors	0.439 (0.012)
		Asian	0.368 (0.014)	65+	0.452 (0.017)	R ²	0.274
		Other	0.343 (0.020)	R ²	0.273		
		R ²	0.276				

Recruitment time dummies are included. Robust standard errors are in parentheses. Statistical significance of differences between groups (***) $p < 0.01$, (**) $p < 0.05$, (*) $p < 0.1$): Female vs. Male, White vs. Black***, White vs. Hispanic***, White vs. Asian***, White vs. Other***, Black vs. Hispanic, Black vs. Asian***, Black vs. Other***, Hispanic vs. Asian***, Hispanic vs. Other***, Asian vs. Other, 18-24 vs. 25-34, 18-24 vs. 35-64***, 18-24 vs. 65+***, 25-34 vs. 35-64***, 25-34 vs. 65+***, 35-64 vs. 65+***, HS or Less vs. Some College***, HS or Less vs. Bachelors***, Some College vs. Bachelors. N=112,251.

Figure 3:

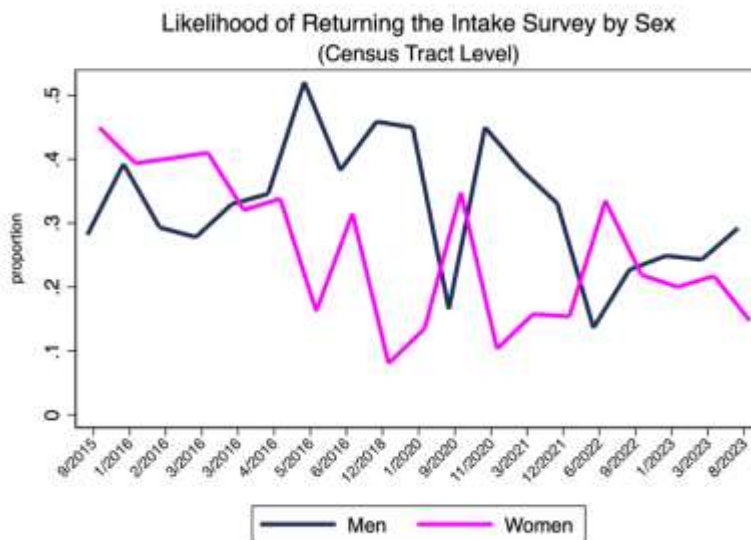


Figure 3 shows the relationship between the likelihood of returning the intake survey and sex across batches. Participation tends to be lower among women, although not significantly so. The estimated regression coefficient for the female population share in Table 1 indicates that the likelihood of returning the intake survey is 3 percentage points lower for women than for men, with a p-value of 0.199.

Figure 4 shows that the participation rate is significantly lower among Blacks and Hispanics relative to Whites. The estimated regression coefficients for the population shares of Blacks and Hispanics in Table 1 indicate that the likelihood of returning the intake survey is 11 percentage points lower among these two racial/ethnic groups than among Whites (p-values < 0.001). The likelihood of returning the intake survey is also slightly lower among Asians than Whites, although there is substantial variability across batches. The estimated coefficient for the population share of Asians in Table 1 indicates a 2 percentage-point lower probability of returning the intake survey for Asians compared to Whites (p-value = 0.008).

Figure 5 reports the breakdown by age. Consistently across batches, the likelihood of returning the intake survey is higher among middle-aged (35-64) and older (65+) individuals than among younger (18-34) individuals. The estimated regression coefficients in Table 1 reveal that, relative to individuals between 18 and 34 years of age, the likelihood of returning the intake survey is 8 and 16 percentage points higher among those aged 35-64 and 65+, respectively (p-values < 0.001).

As shown in Figure 6, there exists a steep education gradient in the likelihood of returning the intake survey. Specifically, the estimated regression coefficients in Table 1 reveal that, relative to

individuals with less than high school, those with a high school diploma and some college and those with at least a college degree are more than 20 percentage points more likely to return the intake survey (p-values<0.001).

Figure 4:

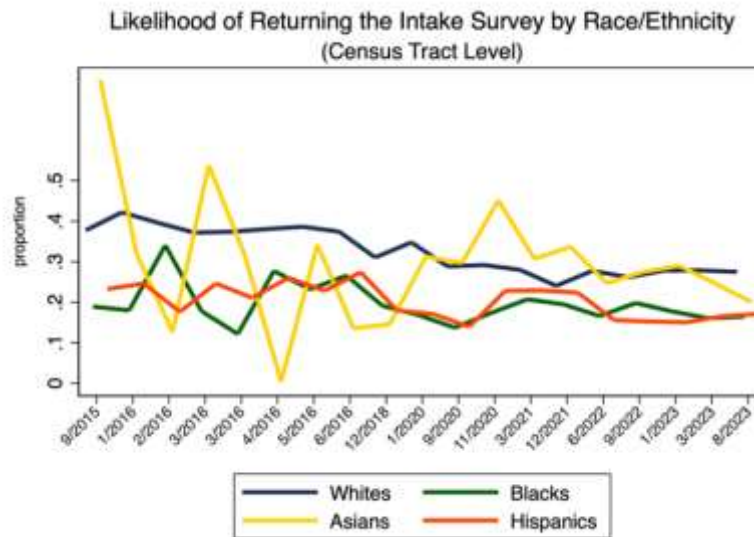


Figure 5:

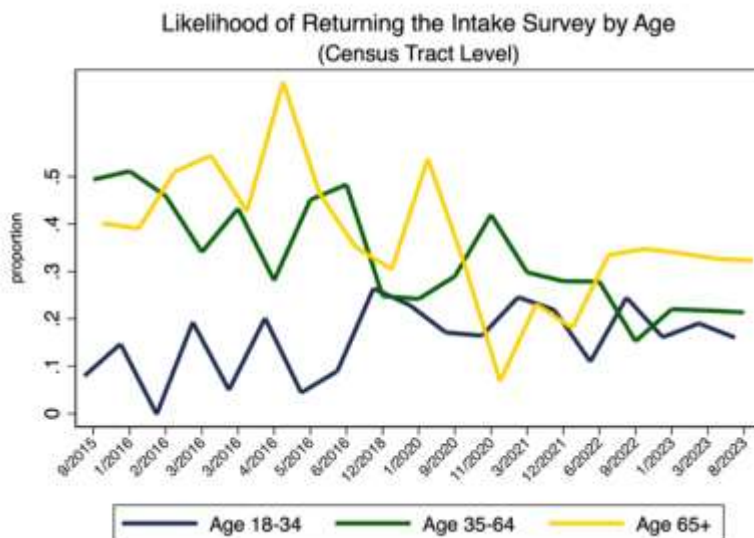
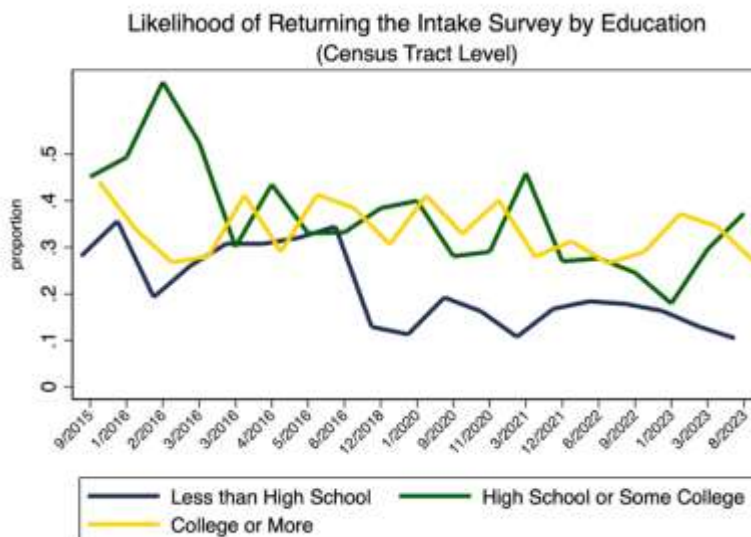


Figure 6:



RECRUITMENT EXPERIMENTS' EFFECT EVALUATION

Experiment: Resident Name or Current Resident vs. Resident Name

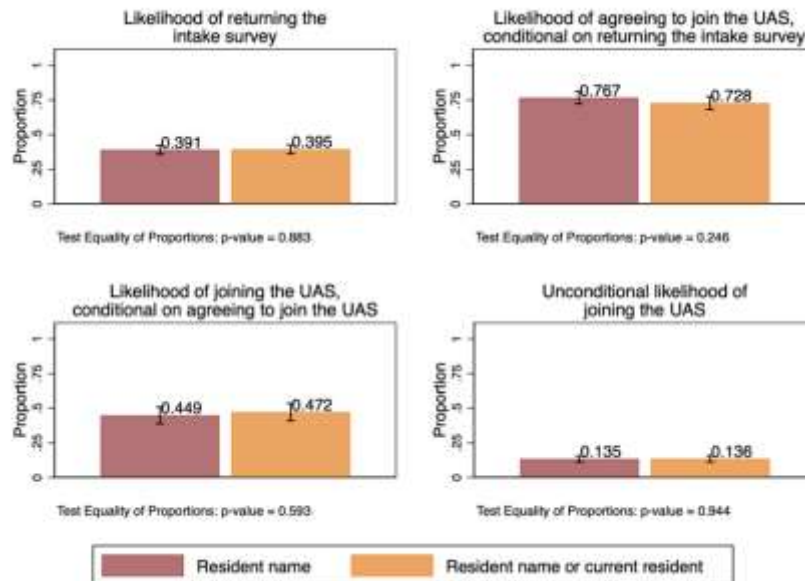
- Batch 5 (MSG1).
- Batch size: 2001.
- Initial mail-out date: 09/04/2015.
- Experiment identifier in the UAS Recruitment dataset: experiment37.
- Treatment: Received an envelope addressed to "Resident Name or Current Resident." Control: Received an envelope addressed to "Resident Name." This recruitment batch includes 247 addresses for which no name is available (experiment38=1) and, therefore, the letter could only be addressed to "Current Resident." Because of that, neither the treatment nor the control condition is effectively met. Hence, these addresses are excluded when evaluating this experiment (experiment37 is missing if experiment38=1). Note that in the UAS Recruitment dataset, the variable experiment38 does not indicate a recruitment experiment but flags addresses within batch 5 for which no name is available.
- Results: The likelihood of returning the intake survey is virtually the same for both the treatment and the control groups. The likelihood of agreeing to join the UAS after returning the intake survey is 4 percentage points higher within the control group, but the difference with the treatment group is not statistically significant. Conversely, the likelihood of joining the

UAS after agreeing to do so is 2 percentage points higher for the treatment than the control group, but, again, the difference is not statistically significant. Overall, the unconditional likelihood of joining the UAS is the same within the control and treatment groups.

Table 1: Resident Name or Current Resident vs. Resident Name

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Resident Name	877	.391	.016	.883
	T: Resident Name or Current Resident	877	.395	.017	
	Difference (T-C)		.003	.023	
Agree Return	C: Resident Name	343	.767	.023	.246
	T: Resident Name or Current Resident	346	.728	.024	
	Difference (T-C)		-.038	.033	
Join Agree	C: Resident Name	263	.449	.031	.593
	T: Resident Name or Current Resident	252	.472	.032	
	Difference (T-C)		.024	.044	
Join	C: Resident Name	877	.135	.012	.944
	T: Resident Name or Current Resident	877	.136	.012	
	Difference (T-C)		.001	.016	

Figure 1: Resident Name or Current Resident vs. Resident Name



- Action: Continue to address correspondence to the named addressee when possible or to “Current Resident” when a name is not available.

Note:

Beginning with batch 17, recruited in December of 2018, all correspondence was addressed to “Family living at [address].” This change in the salutation was not experimentally tested.

The last recruitment batch targeting the entire national territory and adopting the old salutation “Resident name” was batch 12. However, a comparison of recruitment rates between batches 17 and 12 does not identify the effect of the change in the invitation letter’s salutation because of other differences between these two batches.

Batch 12 – Invitation Letter	Batch 17 – Invitation Letter
 <p>The image shows the Batch 12 invitation letter. It is from USC Dornsife, Center for Understanding American Society. The letter is addressed to a resident at a specific address. It includes a salutation, a welcome message, and details about the survey. The letter is signed by Anne Kaptein, Director of Understanding America Study. The footer includes the university's name, address, and contact information.</p>	 <p>The image shows the Batch 17 invitation letter. It is from USC Dornsife, Center for Understanding American Society. The letter is addressed to a family living at a specific address. It includes a salutation, a welcome message, and details about the survey. The letter is signed by Anne Kaptein, Director of Understanding America Study. The footer includes the university's name, address, and contact information.</p>

First, batch 17 was recruited in December 2018, while batch 12 was recruited in June 2016. In view of this relatively long time span, a comparison of recruitment rates between these two batches would plausibly reflect changes over time in the likelihood of returning the intake survey and joining the UAS due to the presence of existing general recruitment trends.

Second, these two batches were recruited using a different sampling procedure. In batch 12, a fixed number of addresses was randomly drawn from each selected zip code. In batch 17, the

number of addresses randomly drawn within each selected zip code was proportional to the population of that zip code.

Third, the default completion mode of the intake survey changed between batch 12 and batch 17. Households selected within batch 12 received the invitation letter (see figure on the left below) and a paper version of the intake survey. They were then asked to fill in the intake survey and use a pre-paid envelope to send it back to the UAS. Starting with batch 17, selected households were asked to complete the intake survey online. The link to access and fill in the intake survey was provided on the invitation letter (see figure on the right below). Those who could not or did not want to complete the survey online were encouraged to send back an enclosed postcard to request the intake survey in paper format.

Table 2: Batch 17 vs. Batch 12

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	Batch 12	4067	.349	.007	
	Batch 17	5006	.264	.006	
	Difference (17-12)		-.085	.010	.000
Agree Return	Batch 12	1421	.753	.011	
	Batch 17	1322	.746	.012	
	Difference (17-12)		-.007	.017	.666
Join Agree	Batch 12	1070	.485	.015	
	Batch 17	986	.728	.014	
	Difference (17-12)		.243	.021	.000
Join	Batch 12	4067	.128	.005	
	Batch 17	5006	.143	.005	
	Difference (17-12)		.016	.007	.029

The top panel of Table 3 compares the likelihood of returning the intake survey between batches 12 and 17. As can be seen, the probability that a selected household returns the intake survey is about 9 percentage points lower in batch 17 relative to batch 12. At the same time, the third panel of Table 3 shows that, conditional on agreeing to join the UAS, the likelihood of joining the UAS is 24 percentage points higher in batch 17 than in batch 12. The net effect on the likelihood of joining the UAS is about 2 percentage points higher in batch 17 relative to batch 12, a difference significant at the 5% level (p-value=0.029). It is worth noting that, because of the multiple differences between these two batches described above, the results in Tables 3 do not identify the effect of any specific change that happened between batches 12 and 17 on recruitment rates.

Experiment: Colorful UAS Label vs. No UAS Label

- Batch 5 (MSG1).
- Batch size: 2001.
- Initial mail-out date: 09/04/2015
- Experiment identifier in the UAS Recruitment dataset: *experiment39*.
- Treatment: Received an envelope with a colorful UAS label above the address. Control: No UAS label above the address.



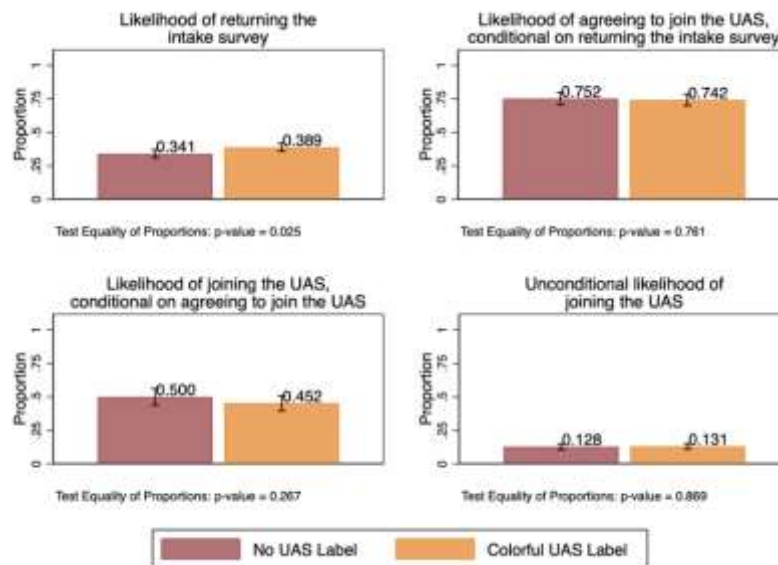
- Results: Relative to not having a UAS label on the envelope, the presence of a colorful UAS label on the invitation letter's envelope increases the rate of return of the intake survey by 5 percentage points. This difference is significant at the 5% level ($p\text{-value}=0.025$). The presence of the colorful UAS label on the invitation letter's envelope has no significant effect on the likelihood of agreeing to join the UAS among those who returned the recruitment survey or on the likelihood of joining the UAS among those who agreed to do so. The unconditional likelihood of joining the UAS is virtually the same for the control and treatment groups.

Note that two different experiments were implemented within the same recruitment batch, namely the salutation experiment ("resident name or current resident" vs. "resident name") and the colorful UAS label experiment. Hence, it is possible to evaluate the effect of different combinations of letter salutation and presence of the colorful UAS label on the envelope. This exercise does not reveal the presence of interaction effects on any of the outcomes of interest.

Table 3: Colorful UAS Label vs. No UAS Label

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: No UAS Label	983	.341	.015	
	T: Colorful UAS Label	1018	.389	.015	
	Difference (T-C)		.048	.022	.025
Agree Return	C: No UAS Label	335	.752	.024	
	T: Colorful UAS Label	396	.742	.022	
	Difference (T-C)		-.01	.032	.761
Join Agree	C: No UAS Label	252	.5	.032	
	T: Colorful UAS Label	294	.452	.029	
	Difference (T-C)		-.048	.043	.267
Join	C: No UAS Label	983	.128	.011	
	T: Colorful UAS Label	1018	.131	.011	
	Difference (T-C)		.002	.015	.869

Figure 2: Colorful UAS Label vs. No UAS Label



- Action: Use a colorful UAS label on the invitation letter's envelope for all subsequent recruitment batches.

Experiment: Online Direct Sign-up Option on Intake Survey vs. Follow-up to Sign-up

- Batch 6 (MSG2).
- Batch size: 3705.
- Initial mail-out date: 01/26/2016.
- Experiment identifier in the UAS Recruitment dataset: *experiment43*.
- Treatment: Received a link to sign-up with the UAS at the end of the (paper-based) intake survey. Control: Did not receive the sign-up link at the end of the (paper-based) intake survey; the link to join the UAS would follow for all those who expressed an interest to be contacted for other surveys.

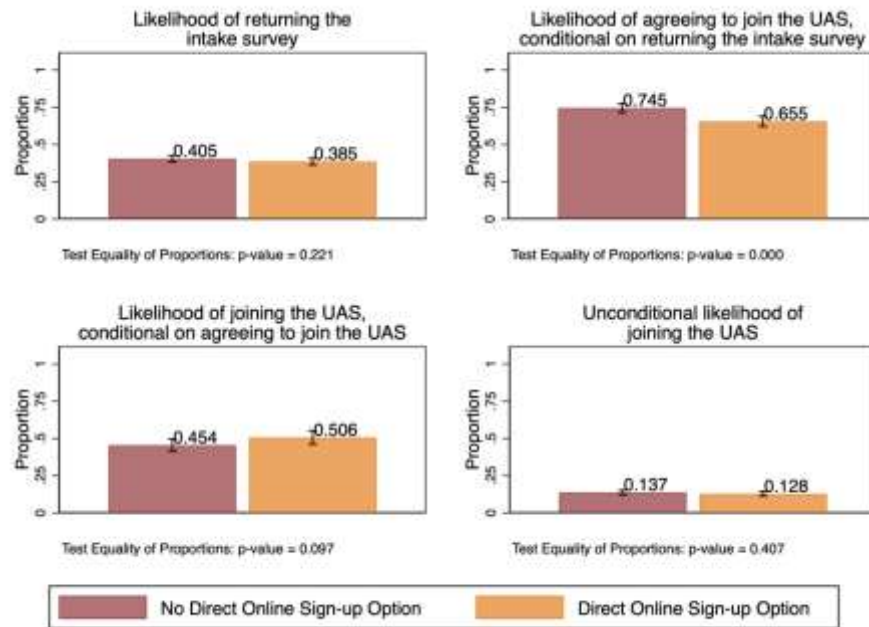
Control: no online direct sign-up option	Treatment: online direct sign-up option

- Results: Providing respondents with a sign-up link at the end of the intake survey has no effect on the likelihood of returning the intake survey (as expected). Specifically, the likelihood of returning the intake survey is slightly lower within the treatment than the control group (by 2 percentage points), but this difference is not statistically significant ($p\text{-value}=0.221$). The likelihood of agreeing to join the UAS, conditional on returning the intake survey, is 9 percentage points lower within the treatment group than the control group, a difference significant at the 1% level ($p\text{-value}<0.001$). On the other hand, conditional on agreeing to join the UAS, the treatment group is 5 percentage points more likely than the control group to eventually join the panel, a difference significant at the 10% level ($p\text{-value}=0.097$). Overall, the likelihood of joining the UAS is very similar in the control and treatment group.

Table 4: Online Direct Sign-up Option vs. No Online Direct Sign-up Option

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: No Direct Online Sign-up Option	1852	.405	.011	
	T: Direct Online Sign-up Option	1853	.385	.011	
	Difference (T-C)		-.020	.016	.221
Agree Return	C: No Direct Online Sign-up Option	750	.745	.016	
	T: Direct Online Sign-up Option	714	.655	.018	
	Difference (T-C)		-.090	.024	.000
Join Agree	C: No Direct Online Sign-up Option	559	.454	.021	
	T: Direct Online Sign-up Option	468	.506	.023	
	Difference (T-C)		.052	.031	.097
Join	C: No Direct Online Sign-up Option	1852	.137	.008	
	T: Direct Online Sign-up Option	1853	.128	.008	
	Difference (T-C)		-.009	.011	.407

Figure 3: Online Direct Sign-up Option vs. No Online Direct Sign-up Option

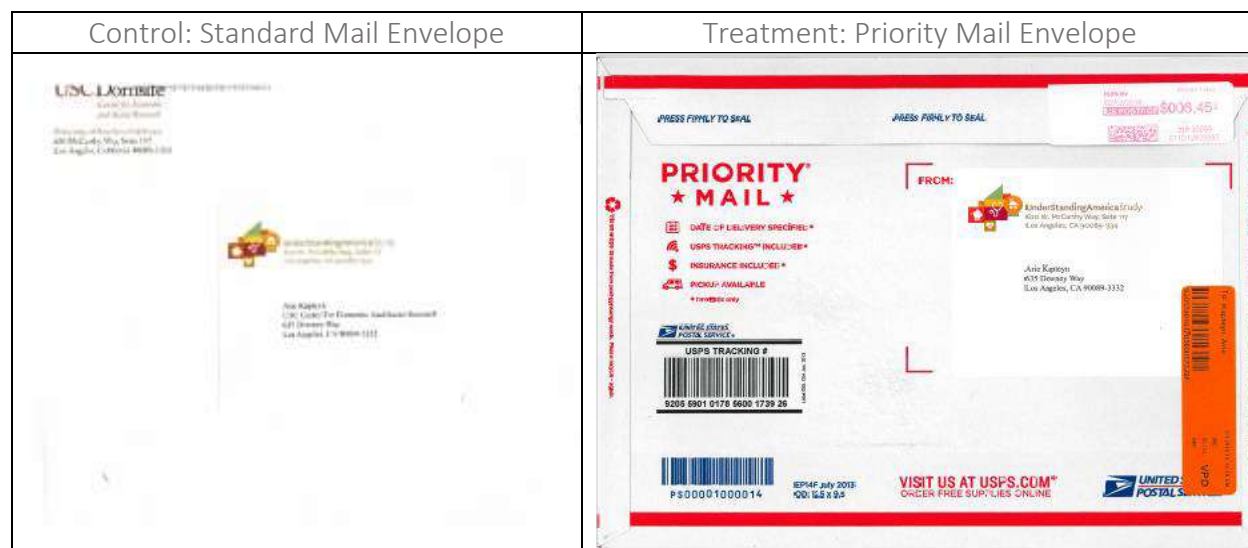


- Action: Provide a direct online sign-up link at the end of the intake survey.

Experiment: Priority Mail vs. Standard Mail

- Batch 8 (MSG4).
- Batch size: 3840.

- Initial mail-out date: 03/01/2016.
- Experiment identifier in the UAS Recruitment dataset: *experiment46*.
- Treatment: Received the invitation package (including the invitation letter and a paper copy of the intake survey) in a USPS priority mail envelope. Control: Received the invitation package (including the invitation letter and a paper copy of the intake survey) in a standard US mail envelope.

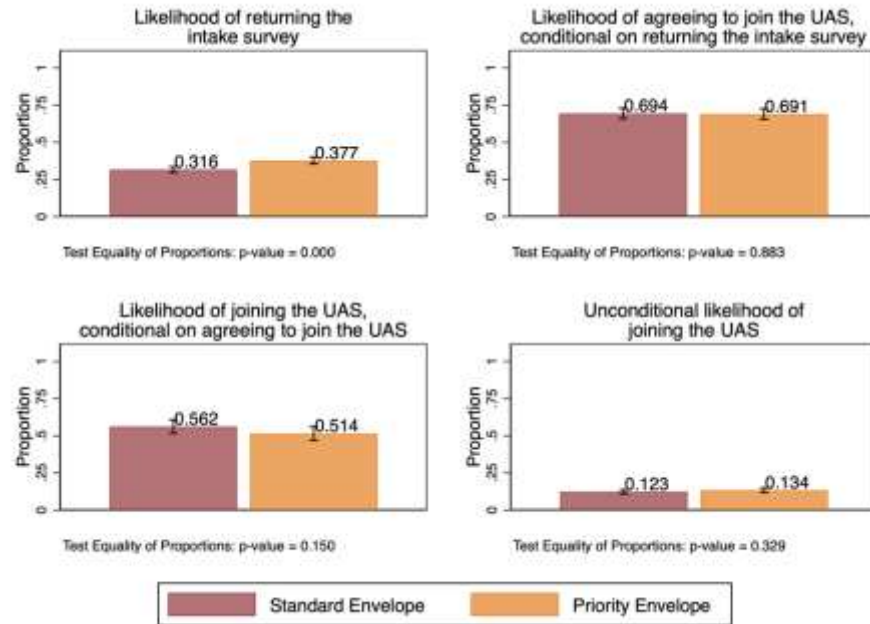


- Results: Using a priority mail envelope increases the rate of return of the intake survey by about 6 percentage points ($p\text{-value} < 0.001$). The likelihood of joining the UAS conditional on agreeing to do so is about 5 percentage points lower in the treatment than in the control group, although this difference is not statistically significant ($p\text{-value} = 0.150$). There is no effect on the unconditional likelihood of joining the panel.

Table 5: Priority Mail Envelope vs. Standard Mail Envelope

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Standard Mail Envelope	2100	.316	.01	
	T: Priority Mail Envelope	1740	.377	.012	
	Difference (T-C)		.061	.015	.000
Agree Return	C: Standard Mail Envelope	664	.694	.018	
	T: Priority Mail Envelope	656	.691	.018	
	Difference (T-C)		-.004	.025	.883
Join Agree	C: Standard Mail Envelope	461	.562	.023	
	T: Priority Mail Envelope	453	.514	.024	
	Difference (T-C)		-.047	.033	.150
Join	C: Standard Mail Envelope	2100	.123	.007	
	T: Priority Mail Envelope	1740	.134	.008	
	Difference (T-C)		.011	.011	.329

Figure 4: Priority Mail Envelope vs. Standard Mail Envelope



- Action: Use a priority mail envelope for the invitation package.

Experiment: Pre-notification Card Mentioning a \$5 Bill Included with the Intake Survey vs. Pre-notification Card Mentioning a Small Token of Appreciation Included with the Intake Survey

- Batch 9 (MSG5).
- Batch size: 4002.
- Recruitment date: 05/15/2016.
- Experiment identifier in the UAS Recruitment dataset: *experiment49*.
- Treatment: The selected household received a pre-notification card, informing that a survey (intake survey) will be sent to that specific address in the subsequent days. The pre-notification card featured a highlighted box mentioning that a \$5 bill will be included with the intake survey. Control: The selected household received a pre-notification card, informing that a survey (intake survey) will be sent to that specific address in the subsequent days. The pre-notification card featured a highlighted box mentioning that a “small token of appreciation” will be included with the intake survey.

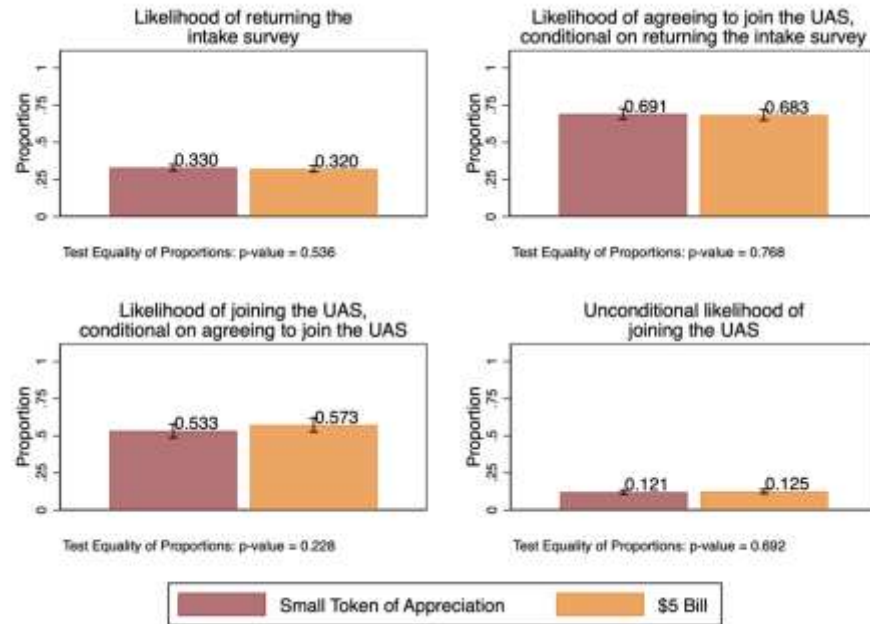
Control: Mention of “Small Token of Appreciation” on Pre-notification Card	Treatment: Mention of \$5 Bill on Pre-notification Card
<p>In a few days, you will get a brief survey in the mail, as part of an important study we are doing at the University of Southern California. We would like to find out how households are getting by these days.</p> <p>This study is important because it helps public agencies and researchers to take into account the needs and opinions of individuals and families.</p> <p>Filling out the survey takes no more than 15 minutes and we include a small token of appreciation with the survey.</p> <p>Thank you for your time and consideration. It is only with the help of people like you that our research can be successful!</p> <p>Understanding America Study University of Southern California PO Box 77902 Los Angeles, CA 90007-9983</p>	<p>In a few days, you will get a brief survey in the mail, as part of an important study we are doing at the University of Southern California. We would like to find out how households are getting by these days.</p> <p>This study is important because it helps public agencies and researchers to take into account the needs and opinions of individuals and families.</p> <p>Filling out the survey takes no more than 15 minutes and we include a \$5 bill with the survey.</p> <p>Thank you for your time and consideration. It is only with the help of people like you that our research can be successful!</p> <p>Understanding America Study University of Southern California PO Box 77902 Los Angeles, CA 90007-9983</p>

- Results: Mentioning on the pre-notification card that a \$5 bill as opposed to a “small token of appreciation” is included with the intake survey has no effect on the likelihood of returning the intake survey. Within the treatment group, the likelihood of joining the UAS conditional on agreeing to do so appears to be slightly higher than within the control group. However, this difference is not statistically significant (p-value=0.228).

Table 6: Mention of \$5 Bill vs. Small Token of Appreciation on Pre-notification Card

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Small Token of Appreciation	2002	.330	.011	
	T: \$5 Bill	2000	.321	.010	
	Difference (T-C)		-.009	.015	.536
Agree Return	C: Small Token of Appreciation	660	.691	.018	
	T: \$5 Bill	641	.683	.018	
	Difference (T-C)		-.008	.026	.768
Join Agree	C: Small Token of Appreciation	456	.533	.023	
	T: \$5 Bill	438	.573	.024	
	Difference (T-C)		.04	.033	.228
Join	C: Small Token of Appreciation	2002	.121	.007	
	T: \$5 Bill	2000	.126	.007	
	Difference (T-C)		.004	.010	.692

Figure 5: Mention of \$5 Bill vs. Small Token of Appreciation on Pre-notification Card




- Action: Mention that a \$5 bill is included with the intake survey on the pre-notification card.

Experiment: Personalized vs. Non-Personalized Pre-notification Card

- Batch 10 (MSG6).
- Batch size: 4008.
- Initial mail-out date: 04/22/2016.
- Experiment identifier in the UAS Recruitment dataset: *experiment51*.
- Treatment: Received a personalized pre-notification card, with the following two features. On the front, it mentioned the name of the selected person, if available. On the back, it mentioned the specific place where the selected person lives. Control: Received a non-personalized version of the pre-notification card.

Control: Non-Personalized Pre-notification Card (front)	Treatment: Personalized Pre-notification Card (front)
<p>UnderStandingAmericaStudy</p> 	<p>Hello David! From the UnderStandingAmericaStudy</p> 

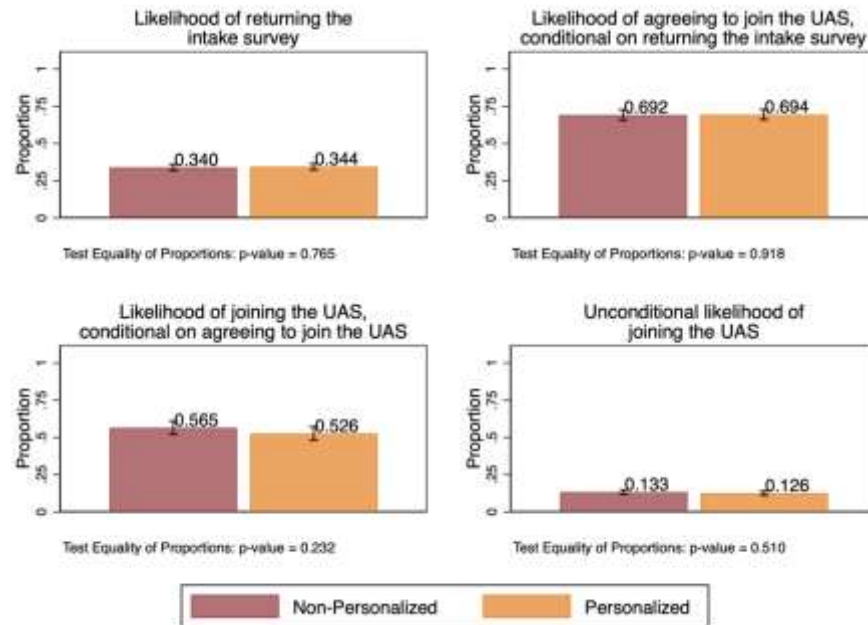
Control: Non-Personalized Pre-notification Card (back)	Treatment: Personalized Pre-notification Card (back)
<p>In a few days, you will get a brief survey in the mail, as part of an important study we are doing at the University of Southern California. We would like to find out how households are getting by these days.</p> <p>This study is important because it helps public agencies and researchers to take time account the needs and opinions of individuals and families.</p> <p>Filling out the survey takes no more than 15 minutes and we include a \$5 bill with the survey.</p> <p>Thank you for your time and consideration. It is only with the help of people like you that our research can be successful!</p> <p>En unos pocos días, recibirá una encuesta breve por correo, como parte de un estudio importante que estamos realizando en la Universidad del Sur de California (University of Southern California). Nos gustaría averiguar cómo va la vida en los hogares de familia hoy en día.</p> <p>Este estudio es importante porque ayuda a las agencias públicas y a los investigadores a tomar en cuenta las necesidades y opiniones de los individuos y las familias.</p> <p>Completar la encuesta no le toma más de 15 minutos y se incluye un billete de \$5 con la encuesta.</p> <p>Gracias por su tiempo y consideración. (El éxito de nuestra investigación depende de la ayuda de personas como usted!)</p> <p>Understanding America Study University of Southern California PO Box 77902 Los Angeles, CA 90097-9902</p>	<p>In a few days, you will get a brief survey in the mail, as part of an important study we are doing at the University of Southern California. We would like to find out how households are getting by these days, especially in Rose, Arkansas, where you live.</p> <p>This study is important because it helps public agencies and researchers to take time account the needs and opinions of individuals and families.</p> <p>Filling out the survey takes no more than 15 minutes and we include a \$5 bill with the survey. Don't forget to sign the survey!</p> <p>Thank you for your time and consideration. It is only with the help of people like you that our research can be successful!</p> <p>En unos pocos días, recibirá una encuesta breve por correo, como parte de un estudio importante que estamos realizando en la Universidad del Sur de California (University of Southern California). Nos gustaría averiguar cómo va la vida en los hogares de familia hoy en día, especialmente en Rose, Arkansas, donde usted vive.</p> <p>Este estudio es importante porque ayuda a las agencias públicas y a los investigadores a tomar en cuenta las necesidades y opiniones de los individuos y las familias.</p> <p>Completar la encuesta no le toma más de 15 minutos y se incluye un billete de \$5 con la encuesta. No olvide firmar la encuesta!</p> <p>Gracias por su tiempo y consideración. (El éxito de nuestra investigación depende de la ayuda de personas como usted!)</p> <p>Understanding America Study University of Southern California PO Box 77902 Los Angeles, CA 90097-9902</p> <p>First Class Permit PSN Permit No. 303 San Diego, CA</p> <p>*****4470**M000-AM0C-950 1 2 0402 DAVID</p> 

- Results: A personalized pre-notification card has no detectable effect either on the likelihood of returning the intake survey or on the likelihood of joining the UAS.

Table 7: Personalized vs. Non-Personalized Pre-notification Card

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Non-Personalized Pre-notif. Card	2004	.340	.011	
	T: Personalized Pre-notif. Card	2004	.344	.011	
	Difference (T-C)		.004	.015	.765
Agree Return	C: Non-Personalized Pre-notif. Card	681	.692	.018	
	T: Personalized Pre-notif. Card	690	.694	.018	
	Difference (T-C)		.003	.025	.918
Join Agree	C: Non-Personalized Pre-notif. Card	471	.565	.023	
	T: Personalized Pre-notif. Card	479	.526	.023	
	Difference (T-C)		-.039	.032	.232
Join	C: Non-Personalized Pre-notif. Card	2004	.133	.008	
	T: Personalized Pre-notif. Card	2004	.126	.007	
	Difference (T-C)		-.007	.011	.510

Figure 6: Personalized vs. Non-Personalized Pre-notification Card



- Action: Keep using a non-personalized pre-notification card.

Experiment: Original vs. Simplified Pre-notification Card

- Batches 11 (MSG7) and 12 (MSG8).
- Batch size: 4033 (MSG7); 4067 (MSG8).
- Initial mail-out date: 05/16/2016 (MSG7) and 06/27/2016 (MSG8).
- Experiment identifier in the UAS Recruitment dataset: *experiment55* and *experiment56*.
- Treatment: Received a simplified (non-personalized) pre-notification card with less text and larger font. Control: Received the original (non-personalized) pre-notification card.

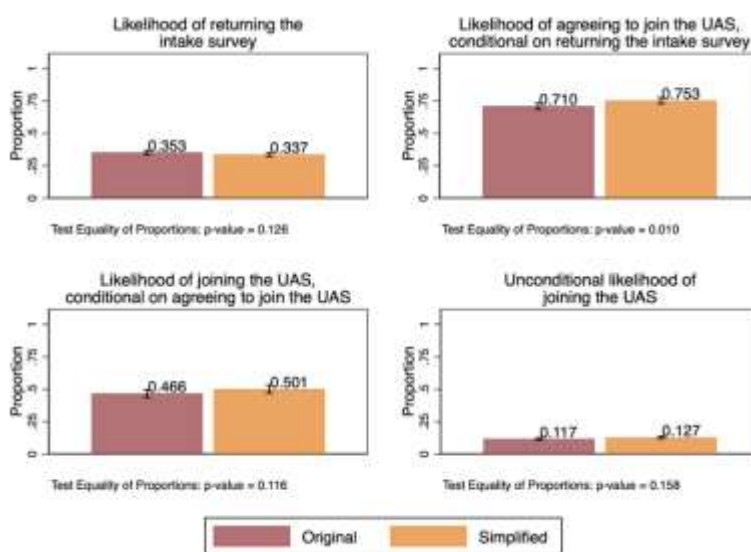
Control: Original Pre-notification Card	Treatment: Simplified Pre-notification Card
<p>In a few days, you will get a brief survey in the mail, as part of an important study we are doing at the University of Southern California. We would like to find out how households are getting by these days.</p> <p>This study is important because it helps public agencies and researchers to take into account the needs and opinions of individuals and families.</p> <p>Filling out the survey takes no more than 15 minutes and we include a \$5 bill with the survey.</p> <p>Thank you for your time and consideration. It is only with the help of people like you that our research can be successful!</p> <p>En unos pocos días, recibirá una encuesta breve por correo, como parte de un estudio importante que estamos realizando en la Universidad del Sur de California (University of Southern California). Nos gustaría averiguar cómo se la vida en los hogares de familia hoy en día.</p> <p>Este estudio es importante porque ayuda a las agencias públicas y a los investigadores a tomar en cuenta las necesidades y opiniones de los individuos y las familias.</p> <p>Completar la encuesta no le toma más de 15 minutos y se incluye un billete de \$5 con la encuesta.</p> <p>Gracias por su tiempo y consideración.</p> <p>El éxito de nuestro investigación depende de la ayuda de personas como usted.</p> <p>Understanding America Study University of Southern California PO Box 77962 Los Angeles, CA 90007-9962</p>	<p>In a few days, you will get an envelope with a survey and a \$5 bill in the mail. The survey is from researchers at the University of Southern California (USC). We would like to find out how households like yours are getting by these days.</p> <p>Keep the \$5 bill and we will send \$15 more when you fill out and return the short survey.</p> <p>You will also be able to sign up to be paid to take more surveys if you wish. The information you provide will help us understand the needs and opinions of individuals and families.</p> <p>Thank you for your time! Watch your mail for a large priority mail envelope.</p> <p>Quedese con el billete de \$5 y le enviaremos \$15 más cuando usted complete y envíe de regreso la encuesta. Ella puede ser contestada en Inglés o Español.</p> <p>Understanding America Study University of Southern California PO Box 77962 Los Angeles, CA 90007-9962</p>

- Results: Compared to the control group, the treatment group is about 2 percentage points less likely to return the intake survey (a non-statistically significant difference, p-value=0.126); 4 percentage points more likely to agree to join the UAS conditional on returning the intake survey (a difference significant at the 1% level, p-value=0.010); 3 percentage points more likely to join the UAS conditional on agreeing to do so (a non-statistically significant difference, p-value=0.116).

Table 8: Simplified vs. Original Pre-notification Card

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Original Pre-notif. Card	4077	.353	.007	
	T: Simplified Pre-notif. Card	4023	.337	.007	
	Difference (T-C)		-.016	.011	.126
Agree Return	C: Original Pre-notif. Card	1438	.710	.012	
	T: Simplified Pre-notif. Card	1354	.753	.012	
	Difference (T-C)		.043	.017	.010
Join Agree	C: Original Pre-notif. Card	1021	.466	.016	
	T: Simplified Pre-notif. Card	1020	.501	.016	
	Difference (T-C)		.035	.022	.116
Join	C: Original Pre-notif. Card	4077	.117	.005	
	T: Simplified Pre-notif. Card	4023	.127	.005	
	Difference (T-C)		.010	.007	.158







Figure 7: Simplified vs. Original Pre-notification Card



- Action: Keep the original pre-notification card for subsequent batches.

Experiment: Paper vs. Online Intake Survey

- Batches 24 and 25 (MSG15 & MSG16).
- Batch size: 2523 (per batch).
- Initial mail-out date: 12/10/2021.
- Experiment identifier in the UAS Recruitment dataset: treatment group is *batch = 24*; control group is *batch = 25*.
- The two batches (24 and 25) involved in this experiment were recruited at the same time. Compared to previous recruitment batches in the UAS, batches 24 and 25 adopted a new adaptive sampling method with households as primary sampling units rather than zip codes. The same recruitment materials were used for both batches, with the exception of the default administration mode for the intake survey. The treatment group is batch 24. Within this batch, individuals were asked to complete the intake survey on paper and send it back to the UAS using a pre-paid envelope (both a paper copy of the intake survey and a pre-paid envelope for returning it were included in the invitation package). The option to fill in the intake survey online was provided as an alternative. The control group is batch 25. Within this batch, individuals were asked to complete the intake survey online. For those who expressed a preference for filling in the intake survey on paper, the option to receive a paper version of the intake survey via follow-up mailing was provided as an alternative.

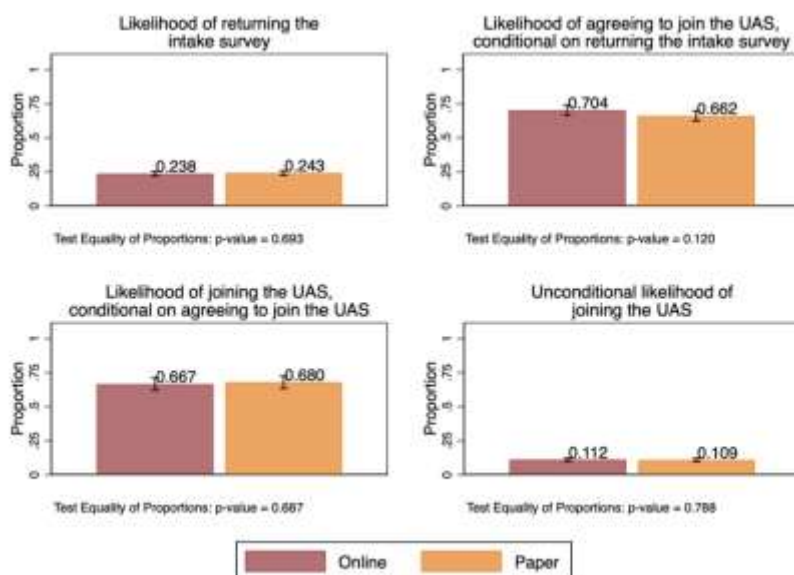
Control: Online Intake Survey as Default	Treatment: Paper Intake Survey as Default
 <p>Center for Research and Social Research Dr. Kaprielian, Director</p> <p><address1>, <address2> <city>, <state> <zip></p> <p>To the family living at <address1>:</p> <p>Welcome to the Understanding America Study! I am writing to invite you to take part in an exciting project being conducted by the University of Southern California, one of the world's leading private research universities.</p> <p>Your household was selected to participate in this important project. Your opinions will help us inform public agencies and researchers about how people experience their daily lives across the country. Question? Watch our short video at www.usc.edu/uas.</p> <p>I have enclosed \$5, which is yours to keep as my thanks for reading this letter. When you take our 10 minute online survey, we will send you a pre-paid card for \$25.</p> <p>Please take our short survey today. Go to www.usc.edu/uas and enter this code: <code>. Any adult (18 or older) who lives at your address can take the survey.</p> <p>DON'T WANT TO, OR CAN'T DO AN ONLINE SURVEY? JUST LET US KNOW! Fill out the enclosed postcard and drop it in the mail to us right away.</p> <p>Your participation in this study is voluntary and critical to the success of our study. You decide if you want to take part, and you can also skip any questions you do not wish to answer. We'll keep all of your personal information confidential and your survey answers will be anonymous.</p> <p>NOT INTERESTED IN PARTICIPATING? I NEED YOUR HELP TO UNDERSTAND WHY. I would appreciate it very much if you could take one minute to fill out the enclosed pre-paid postcard and drop it in the mail. That would be a big help to me, and I won't bother you again.</p> <p>If you have any questions, send an email to uscdornsife@usc.edu or call us toll-free at 1-855-872-8673. Thank you for your help!</p> <p>Sincerely,  Aris Kaprielian Director, Understanding America Study</p> <p>University of Southern California 1101 East 77th Street, Los Angeles, California 90089-1101 Tel: 213.771.1000 Fax: 213.771.1001 Email: uscdornsife@usc.edu</p> 	 <p>Center for Research and Social Research Dr. Kaprielian, Director</p> <p><address1>, <address2> <city>, <state> <zip></p> <p>To the family living at <address1>:</p> <p>Welcome to the Understanding America Study! I am writing to invite you to take part in an exciting project being conducted by the University of Southern California, one of the world's leading private research universities.</p> <p>Your household was selected to participate in this important project. Your opinions will help us inform public agencies and researchers about how people experience their daily lives across the country. Question? Watch our short video at www.usc.edu/uas.</p> <p>I have enclosed \$5, which is yours to keep as my thanks for reading this letter. When you take our 10 minute survey, we will send you a pre-paid card for \$25.</p> <p>Please take our short survey today. You can fill out and return the paper survey in this packet, using the postage paid envelope, or you can fill it out online.</p> <p>To fill out the survey online, go to www.usc.edu/uas and enter this code: <code>.</p> <p>Any adult (18 or older) who lives at your address can fill out the paper survey, or take the survey online!</p> <p>Your participation in this study is voluntary and critical to the success of our study. You decide if you want to take part, and you can also skip any questions you do not wish to answer. We'll keep all of your personal information confidential and your survey answers will be anonymous.</p> <p>NOT INTERESTED IN DOING OUR SURVEY? I NEED YOUR HELP TO UNDERSTAND WHY. I would appreciate it very much if you could take one minute to fill out the enclosed pre-paid postcard and drop it in the mail. That would be a big help to me, and I won't bother you again.</p> <p>If you have any questions, send an email to uscdornsife@usc.edu or call us toll-free at 1-855-872-8673. Thank you for your help!</p> <p>Sincerely,  Aris Kaprielian Director, Understanding America Study</p> <p>University of Southern California 1101 East 77th Street, Los Angeles, California 90089-1101 Tel: 213.771.1000 Fax: 213.771.1001 Email: uscdornsife@usc.edu</p> 

- Results: Changing the default option to complete the intake survey from online to paper has no detectable effect on the likelihood of returning the intake survey nor on the likelihood of joining the UAS.

Table 9: Paper vs. Online Intake Survey

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Online Intake Survey	2523	.238	.008	.693
	T: Paper Intake Survey	2523	.243	.009	
	Difference (T-C)		.005	.012	
Agree Return	C: Online Intake Survey	601	.704	.019	.120
	T: Paper Intake Survey	613	.662	.019	
	Difference (T-C)		-.042	.027	
Join Agree	C: Online Intake Survey	423	.667	.023	.687
	T: Paper Intake Survey	406	.680	.023	
	Difference (T-C)		.013	.033	
Join	C: Online Intake Survey	2523	.112	.006	.788
	T: Paper Intake Survey	2523	.109	.006	
	Difference (T-C)		-.002	.009	

Figure 8: Paper vs. Online Intake Survey



- Action: Continue to adopt the online mode as the default administration mode for the intake survey and offer a paper survey as an alternative.

Note about the effect of different sampling strategies:

Batches 20 and 21 were the last two batches to be recruited using an adaptive sampling algorithm targeting zip codes. A comparison of recruitment rates between these two batches and batch 25 – the first batch to use the new adaptive sampling algorithm targeting households directly (while featuring the same recruitment materials as batches 20 and 21) – can inform about differences in recruitment rates stemming from the switch from a zip code-level to a household-level adaptive sampling algorithm. Clearly, this comparison is subject to the caveat that the three batches involved in the exercise were recruited at different points in time (batch 20 in January 2020, batch 21 in September 2020, and batch 25 in late 2022).

We observe that the likelihood of returning the intake survey is 4 percentage points lower in batch 25 than in batches 20 and 21 combined (24% vs. 28%), a difference significant at the 1% level ($p\text{-value}=0.010$). The likelihood of agreeing to join the UAS conditional on returning the intake survey is 3 percentage points lower in batch 25 than in batches 20 and 21 combined (70% vs. 73%), although this difference is not statistically significant ($p\text{-value}=0.194$). Similarly, the likelihood of joining the UAS conditional on agreeing to do so is 7 percentage points lower in batch 25 than in batches 20 and 21 combined (67% vs. 74%), a difference significant at the 1% level ($p\text{-value}=0.005$). Altogether, the unconditional likelihood of joining the UAS is 4 percentage points lower in batch 25 than in batches 20 and 21 combined (11% vs. 15%), a difference significant at the 1% level ($p\text{-value}<0.001$).

Batches 22 and 23 were recruited using simple random sampling. Hence, a comparison of recruitment rates between these two batches and batch 25 can inform about differences in recruitment rates stemming from replacing simple random sampling with a household-level adaptive sampling algorithm. Again, this comparison is subject to the caveat that the three batches involved in the exercise were recruited at different points in time (batch 22 in November 2020, batch 23 in March 2021, and batch 25 in late 2022).

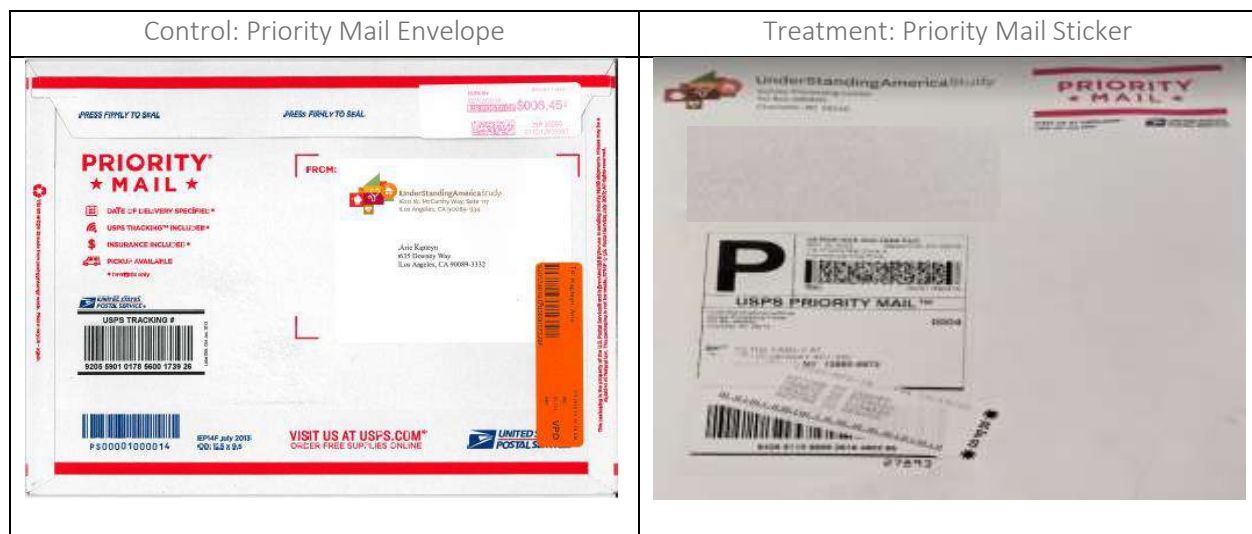
We observe that the likelihood of returning the intake survey is 3 percentage points lower in batch 25 than in batches 22 and 23 combined (24% vs. 27%), a difference significant at the 1% level ($p\text{-value}=0.02$). While there is no difference in the likelihood of agreeing to join the UAS conditional on returning the intake survey, the likelihood of joining the UAS conditional on agreeing to do so is 7 percentage points lower in batch 25 than in batches 22 and 23 combined (67% vs. 74%), a difference significant at the 5% level ($p\text{-value}=0.003$). Altogether, the unconditional likelihood of joining the UAS is 3 percentage points lower in batch 25 than in batches 22 and 23 combined (11% vs. 14%), a difference significant at the 1% level ($p\text{-value}<0.001$). There are no detectable

differences either in the likelihood of returning the intake survey or in the likelihood of joining the UAS between the zip-code level adaptive sampling algorithm and simple random sampling (batches 20 and 21 combined vs. batches 22 and 23 combined).

Aside from possible time effects, the observed drop in recruitment rates associated with the new household-level adaptive sampling algorithm is plausibly due to a more aggressive oversampling of under-represented and hard-to-reach groups implied by this algorithm relative to previous sampling strategies.

Experiment: Priority Mail Sticker vs. Priority Mail Envelope

- Batches 26 and 27 (MSG17).
- Batch size: 2500 (per batch).
- Initial mail-out date: 06/07/2022.
- Experiment identifier in the UAS Recruitment dataset: treatment group is *batch* = 26; control group is *batch* = 27.
- The two batches (26 and 27) involved in this experiment were recruited at the same time. The same sampling methodology and recruitment materials were used for both batches, with the exception of the envelope containing the invitation package. The treatment group is batch 26. This batch received the invitation package in a standard envelope with a priority mail sticker. The control group is batch 27. This batch received the invitation package in the default priority mail envelope. This experiment precedes and is auxiliary to a subsequent experiment with visible cash. The rationale for implementing it is that the default priority mail envelope used until batch 26 is a non-window envelope. As such, it cannot be used to make cash visible. In contrast, a standard window envelope with a priority sticker allows to show cash. Thus, before implementing the experiment with visible cash it was appropriate to test the absence of differential effects on recruitment between using a standard envelope with a priority sticker and the default priority mail envelope.

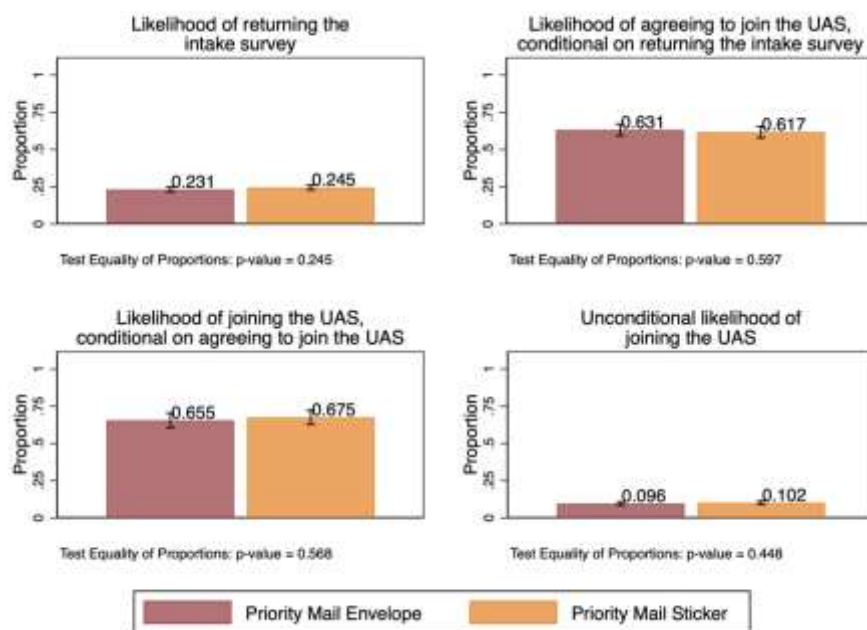


- Results: Using a standard envelope with a priority mail sticker as opposed to a priority mail envelope has no detectable effect on the likelihood of returning the intake survey nor on the likelihood of joining the UAS.

Table 10: Priority Mail Sticker vs. Priority Mail Envelope

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Priority Mail Envelope	2500	.23	.008	
	T: Priority Mail Sticker	2500	.245	.009	
	Difference (T-C)		.014	.012	.232
Agree Return	C: Priority Mail Envelope	576	.634	.02	
	T: Priority Mail Sticker	612	.616	.02	
	Difference (T-C)		-.018	.028	.530
Join Agree	C: Priority Mail Envelope	365	.655	.025	
	T: Priority Mail Sticker	377	.671	.024	
	Difference (T-C)		.016	.035	.639
Join	C: Priority Mail Envelope	2500	.096	.006	
	T: Priority Mail Sticker	2500	.101	.006	
	Difference (T-C)		.006	.008	.506

Figure 9: Priority Mail Sticker vs. Priority Mail Envelope



- Action: The subsequent experiment with visible cash was implemented using a standard envelope with a priority mail sticker.

Experiment: Visible Cash vs. Non-Visible Cash

- Batches 26 (MSG 17), 28 (MSG18).
- Batch size: 2500 (batch 26), 5000 (batch 28).
- Initial mail-out date: 06/07/2022 (batch 26), 06/07/2022 (batch 28).
- Experiment identifier in the UAS Recruitment dataset: *experiment187* (treatment group is *batch = 28*; control group is *batch = 26*).
- The treatment group is batch 28. Individuals selected within this batch received the invitation package in a standard envelope with a priority mail sticker and visible cash (\$5 bill). The control group is batch 26. Individuals selected within this batch received the invitation package in a standard envelope with a priority mail sticker but no visible cash.



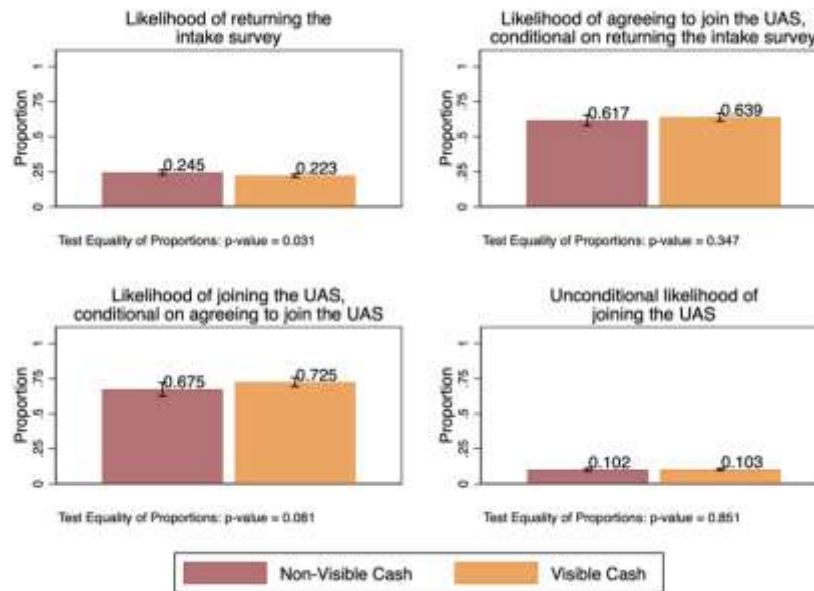
- Results: The results indicate that visible cash has a negative effect on the likelihood of returning the intake survey. Specifically, those who received an envelope with visible cash were 2 percentage points less likely to return the intake survey compared to those who received an envelope with no visible cash. This difference is statistically significant (p -value=0.031). On the other hand, the likelihood of agreeing to join the UAS conditional on returning the intake survey is 2.5 percentage points higher within the treatment than the control group, although this difference is not statistically significant (p -value=0.311). Also, the likelihood of joining the UAS conditional on agreeing to do so is 5 percentage points higher within the treatment than the control group. However, this difference is only marginally significant (p -value=0.087). The net effect is an identical, unconditional likelihood of joining the panel for those who received an envelope with visible cash and for those who received an envelope with no visible cash.

As indicated above, the initial mail-out for batch 26 (control group) occurred in June 2022, while the one for batch 28 (treatment group) occurred in September 2022. As such, the results of this experiment could be confounded by possible seasonality effects in recruitment.

Table 11: Visible Cash vs. Non-Visible Cash

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Non-Visible Cash	2500	.245	.009	
	T: Visible Cash	5000	.223	.006	
	Difference (T-C)		-.022	.01	.031
Agree Return	C: Non-Visible Cash	612	.617	.02	
	T: Visible Cash	1113	.639	.014	
	Difference (T-C)		.023	.024	.347
Join Agree	C: Non-Visible Cash	377	.675	.024	
	T: Visible Cash	713	.725	.017	
	Difference (T-C)		.051	.029	.081
Join	C: Non-Visible Cash	2500	.102	.006	
	T: Visible Cash	5000	.103	.004	
	Difference (T-C)		.001	.007	.851

Figure 10: Visible Cash vs. Non-Visible Cash



- Action: Do not use visible cash in future correspondence. All subsequent batches will receive the invitation package in a priority mail envelope (with no visible cash).

Experiment: New vs. Old Recruitment Letter

- Batches 30 (MSG20).
- Batch size: 5000.
- Initial mail-out date: 01/17/2023.
- Experiment identifier in the UAS Recruitment dataset: *experiment185*.
- Treatment: half of this recruitment batch received a newly revised invitation letter. Control: the other half of this recruitment batch received the old invitation letter.

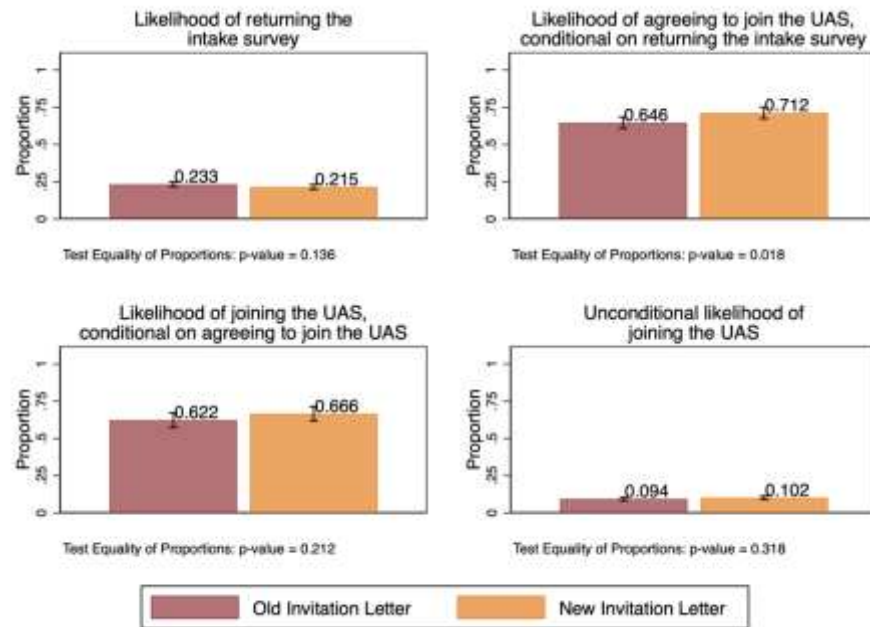
Control: Old Invitation Letter	Treatment: New Invitation Letter
 <p>The image shows the 'Control: Old Invitation Letter' from USC Dornsife. It is a letter from David Dornish, Director of the Understanding America Study. The letter is dated 01/17/2023 and is addressed to a resident of a family living in California. The letter welcomes the recipient to the Understanding America Study, which is a long-term project of the University of Southern California. It explains that the study aims to understand the lives of people across the country and that the recipient's participation is important. The letter includes a link to the survey and a QR code. It also mentions that the survey is confidential and that the recipient's participation is voluntary. The letter is signed by David Dornish, Director of the Understanding America Study.</p>	 <p>The image shows the 'Treatment: New Invitation Letter' from USC University of Southern California. It is a letter from David Dornish, Director of the Understanding America Study. The letter is dated 01/17/2023 and is addressed to a resident of a family living in California. The letter welcomes the recipient to the Understanding America Study, which is a long-term project of the University of Southern California. It explains that the study aims to understand the lives of people across the country and that the recipient's participation is important. The letter includes a link to the survey and a QR code. It also mentions that the survey is confidential and that the recipient's participation is voluntary. The letter is signed by David Dornish, Director of the Understanding America Study.</p>

- Results: The new invitation letter has no significant effect on the likelihood of returning the intake survey, although the treatment group is slightly less likely to return the intake survey. We observe a relatively large and significant effect on the likelihood of agreeing to join the UAS conditional on returning the intake survey, as those who received the new invitation letter are about 7 percentage points more likely to agree to join the UAS after returning the intake survey. This effect is statistically significant at the 5% level (p-value=0.015). The treatment group is also more likely to join the UAS conditional on agreeing to do so by 4 percentage points, although this difference is not statistically significant (p-value=238). Overall, the new invitation letter has not significant impact on the unconditional likelihood of joining the UAS.

Table 12: New vs. Old Invitation Letter

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Old Invitation Letter	2500	.233	.008	
	T: New Invitation Letter	2500	.215	.008	
	Difference (T-C)		-.018	.012	.136
Agree Return	C: Old Invitation Letter	582	.646	.020	
	T: New Invitation Letter	538	.712	.020	
	Difference (T-C)		.066	.028	.018
Join Agree	C: Old Invitation Letter	374	.622	.025	
	T: New Invitation Letter	384	.666	.024	
	Difference (T-C)		.043	.035	.212
Join	C: Old Invitation Letter	2500	.094	.006	
	T: New Invitation Letter	2500	.102	.006	
	Difference (T-C)		.008	.008	.318

Figure 11: New vs. Old Invitation Letter



- Action: Use the new invitation letter in all subsequent batches.

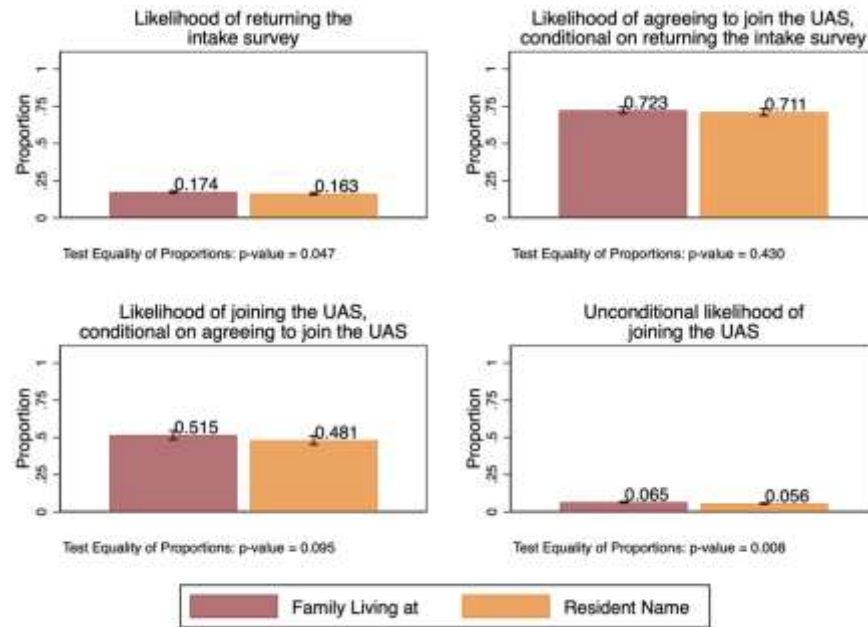
Experiment: Name or Current Resident vs. Family Living At

- Batches 34 (MSG23).
- Batch size: 19115
- Initial mail-out date: 01/16/2024.
- Experiment identifier in the UAS Recruitment dataset: *experiment197*.
- Treatment: half of this recruitment batch received an envelope addressed to Name or “Current Resident”. Control: the other half of this recruitment batch received an envelope addressed to “The Family Living At.”
- Results: Addressing the envelope to Name or “Current Resident” (treatment) reduces the likelihood of returning the intake survey by 11 percentage points compared to the control (The Family Living At). The treatment had no significant impact on the probability of agreeing to more surveys (conditional on returning the intake survey) and has only a marginally significant negative impact on the probability of joining the UAS conditional on agreeing to future surveys. Overall, the treatment reduces the unconditional probability of joining the UAS by 0.9 percentage points compared to the way the recruitment envelope is addressed currently (Family Living At).

Table 13: Name or “Current Resident” vs. “The Family Living At”

	Group	Obs.	Mean	Std.Err.	Difference (T-C)=0 p-val
Return	C: Family Living At	9557	.174	.004	
	T: Name or Current Resident	9557	.163	.004	
	Difference (T-C)		-.011	.005	.047
Agree Return	C: Family Living At	1661	.723	.011	
	T: Name or Current Resident	1558	.711	.011	
	Difference (T-C)		-.013	.016	.430
Join Agree	C: Family Living At	1201	.515	.014	
	T: Name or Current Resident	1107	.481	.015	
	Difference (T-C)		-.035	.021	.095
Join	C: Family Living At	9557	.065	.003	
	T: Name or Current Resident	9557	.056	.002	
	Difference (T-C)		-.009	.003	.008

Figure 12: Name or “Current Resident” vs. “The Family Living At”



INVESTIGATING POTENTIAL EXPERIMENTS’ HETEROGENEOUS EFFECTS

In this section, we investigate potential experiments’ heterogeneous effects across demographic groups. Specifically, we restrict the analysis to the sample of individuals who returned the intake survey and for whom demographic information is available. We then focus on three outcomes: 1) the likelihood of agreeing to join the UAS conditional on returning the intake survey; 2) the likelihood of joining the UAS conditional on agreeing to do so; and 3) the likelihood of joining the UAS conditional on returning the intake survey.

We proceed by estimating separate linear probability models for each of these three outcomes above and each experiment (we exclude the priority sticker vs. priority envelope experiment which was auxiliary to the implementation of the visible cash experiment). For all the estimated models, the outcome variable of interest is regressed on 1) the treatment indicator, 2) either race group indicators (Whites/Non-Whites) or education category indicators (High School or Less/Some College/Bachelor or More), and 3) the interaction between the treatment indicator and either the race group or education category indicators.

Across the board, we find no evidence of heterogeneous treatment effects by race or education for any of the implemented experiments.

Heterogeneous Effects of the Experiment

Resident Name or Current Resident vs. Resident Name

Table 13: Resident Name or Current Resident vs. Resident Name:

Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	-0.037 (0.036)	0.045 (0.047)	0.015 (0.038)
Non-White	0.161*** (0.051)	0.078 (0.087)	0.141* (0.081)
Treatment × Non-White	0.042 (0.075)	-0.138 (0.129)	-0.098 (0.119)
Constant	0.746*** (0.025)	0.435*** (0.033)	0.324*** (0.027)
Observations	688	514	688

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 14: Resident Name or Current Resident vs. Resident Name:

Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	-0.002 (0.058)	-0.016 (0.071)	-0.012 (0.055)
Some College	0.109** (0.051)	0.140** (0.068)	0.152*** (0.057)
Bachelor or More	0.029 (0.064)	0.246*** (0.082)	0.194*** (0.068)
Treatment × Some College	-0.104 (0.077)	0.076 (0.100)	0.005 (0.082)
Treatment × Bachelor or More	0.007 (0.088)	-0.004 (0.113)	-0.000 (0.093)
Constant	0.721*** (0.040)	0.333*** (0.049)	0.240*** (0.038)
Observations	683	513	683

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment

Colorful UAS Label vs. no UAS Label

Table 15: Colorful UAS Label vs. no UAS Label:
Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	-0.005 (0.036)	-0.040 (0.047)	-0.031 (0.038)
Non-White	0.203*** (0.048)	0.048 (0.087)	0.144* (0.082)
Treatment × Non-White	-0.012 (0.068)	-0.035 (0.121)	-0.046 (0.113)
Constant	0.726*** (0.026)	0.491*** (0.034)	0.356*** (0.028)
Observations	730	545	730

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 16: Colorful UAS Label vs. no UAS Label:
Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	0.023 (0.056)	-0.013 (0.071)	-0.001 (0.055)
Some College	0.071 (0.056)	0.133* (0.074)	0.129** (0.059)
Bachelor or More	0.095 (0.061)	0.280*** (0.080)	0.259*** (0.068)
Treatment × Some College	-0.018 (0.076)	0.026 (0.099)	0.014 (0.081)
Treatment × Bachelor or More	-0.103 (0.084)	-0.135 (0.109)	-0.157* (0.091)
Constant	0.705*** (0.043)	0.367*** (0.055)	0.259*** (0.042)
Observations	724	544	724

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment

Online Direct Sign-up Option on Intake Survey vs. Follow-up to Sign-up

Table 17: Online Direct Sign-up Option on Intake Survey vs. Follow-up to Sign-up:
Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	-0.090*** (0.025)	0.032 (0.033)	-0.021 (0.026)
Non-White	0.164*** (0.046)	-0.097 (0.076)	-0.012 (0.069)
Treatment × Non-White	-0.040 (0.075)	0.209* (0.109)	0.159 (0.098)
Constant	0.734*** (0.017)	0.461*** (0.022)	0.339*** (0.018)
Observations	1,460	1,023	1,460

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 18: Online Direct Sign-up Option on Intake Survey vs. Follow-up to Sign-up:
Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	-0.144*** (0.038)	-0.002 (0.048)	-0.052 (0.034)
Some College	0.058 (0.035)	0.118** (0.047)	0.114*** (0.039)
Bachelor or More	-0.020 (0.043)	0.265*** (0.054)	0.183*** (0.046)
Treatment × Some College	0.066 (0.055)	0.072 (0.071)	0.066 (0.056)
Treatment × Bachelor or More	0.114* (0.062)	0.036 (0.078)	0.057 (0.064)
Constant	0.737*** (0.024)	0.357*** (0.031)	0.263*** (0.024)
Observations	1,441	1,018	1,441

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment

Priority Mail vs. Standard Mail

Table 19: Priority Mail vs. Standard Mail:
Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	-0.014 (0.027)	-0.053 (0.035)	-0.044 (0.028)
Non-White	0.031 (0.054)	-0.039 (0.071)	-0.011 (0.058)
Treatment × Non-White	0.073 (0.075)	0.000 (0.100)	0.034 (0.084)
Constant	0.690*** (0.019)	0.566*** (0.025)	0.390*** (0.020)
Observations	1,313	907	1,313

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 20: Priority Mail vs. Standard Mail:
Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	0.009 (0.041)	-0.054 (0.052)	-0.032 (0.038)
Some College	0.060 (0.044)	0.177*** (0.057)	0.151*** (0.046)
Bachelor or More	0.076* (0.042)	0.296*** (0.053)	0.248*** (0.044)
Treatment × Some College	-0.041 (0.062)	0.059 (0.079)	0.016 (0.063)
Treatment × Bachelor or More	0.011 (0.061)	-0.045 (0.077)	-0.028 (0.064)
Constant	0.654*** (0.029)	0.416*** (0.037)	0.272*** (0.027)
Observations	1,301	902	1,301

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment
Mention of \$5 Bill vs. Small Token of Appreciation on Pre-notification Card

Table 21: Mention of \$5 Bill vs. Small Token of Appreciation on Pre-notification Card:

Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	-0.010 (0.028)	0.031 (0.036)	0.015 (0.029)
Non-White	0.127*** (0.047)	-0.053 (0.064)	0.026 (0.055)
Treatment × Non-White	0.058 (0.067)	0.055 (0.096)	0.081 (0.085)
Constant	0.673*** (0.020)	0.539*** (0.026)	0.363*** (0.020)
Observations	1,296	889	1,296

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 22: Mention of \$5 Bill vs. Small Token of Appreciation on Pre-notification Card:

Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	0.056 (0.042)	0.068 (0.055)	0.069* (0.040)
Some College	0.158*** (0.042)	0.155*** (0.056)	0.185*** (0.044)
Bachelor or More	0.115** (0.045)	0.216*** (0.057)	0.204*** (0.046)
Treatment × Some College	-0.100* (0.060)	-0.042 (0.079)	-0.075 (0.063)
Treatment × Bachelor or More	-0.107* (0.065)	-0.026 (0.082)	-0.072 (0.066)
Constant	0.611*** (0.030)	0.414*** (0.039)	0.253*** (0.027)
Observations	1,282	886	1,282

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment

Personalized vs. Non-Personalized Pre-notification Card

Table 23: Personalized vs. Non-Personalized Pre-notification Card:

Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	-0.000 (0.028)	-0.045 (0.036)	-0.030 (0.028)
Non-White	0.126*** (0.044)	0.010 (0.059)	0.078 (0.052)
Treatment × Non-White	0.029 (0.061)	0.040 (0.084)	0.042 (0.074)
Constant	0.670*** (0.020)	0.560*** (0.025)	0.375*** (0.020)
Observations	1,366	945	1,366

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 24: Personalized vs. Non-Personalized Pre-notification Card:

Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	0.019 (0.040)	-0.070 (0.051)	-0.039 (0.039)
Some College	0.045 (0.042)	0.103* (0.055)	0.095** (0.044)
Bachelor or More	0.037 (0.044)	0.182*** (0.056)	0.146*** (0.046)
Treatment × Some College	-0.009 (0.059)	0.090 (0.076)	0.060 (0.062)
Treatment × Bachelor or More	-0.030 (0.062)	0.037 (0.079)	0.009 (0.065)
Constant	0.668*** (0.029)	0.475*** (0.038)	0.317*** (0.029)
Observations	1,352	942	1,352

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment Simplified vs. Original Pre-notification Card

Table 25: Simplified vs. Original Pre-notification Card:
Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	0.045** (0.018)	0.037 (0.024)	0.048** (0.020)
Non-White	0.090*** (0.031)	-0.025 (0.042)	0.022 (0.036)
Treatment × Non-White	-0.012 (0.043)	-0.013 (0.060)	-0.014 (0.052)
Constant	0.696*** (0.013)	0.468*** (0.017)	0.325*** (0.013)
Observations	2,782	2,031	2,782

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 26: Simplified vs. Original Pre-notification Card:
Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	0.066** (0.026)	0.010 (0.034)	0.033 (0.026)
Some College	0.055* (0.028)	0.109*** (0.037)	0.102*** (0.029)
Bachelor or More	0.040 (0.029)	0.190*** (0.038)	0.154*** (0.031)
Treatment × Some College	-0.036 (0.039)	0.040 (0.052)	0.021 (0.042)
Treatment × Bachelor or More	-0.055 (0.042)	0.058 (0.054)	0.023 (0.045)
Constant	0.688*** (0.019)	0.377*** (0.024)	0.259*** (0.018)
Observations	2,753	2,023	2,753

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment Paper vs. Online Intake Survey

Table 27: Paper vs. Online Intake Survey:
Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	-0.064* (0.033)	0.018 (0.040)	-0.032 (0.036)
Non-White	-0.065 (0.040)	-0.065 (0.050)	-0.087** (0.043)
Treatment × Non-White	0.070 (0.057)	-0.002 (0.070)	0.046 (0.060)
Constant	0.725*** (0.022)	0.686*** (0.027)	0.497*** (0.025)
Observations	1,213	828	1,213

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 28: Paper vs. Online Intake Survey:
Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	-0.038 (0.055)	0.027 (0.072)	-0.004 (0.054)
Some College	0.106** (0.051)	0.141** (0.065)	0.162*** (0.055)
Bachelor or More	0.064 (0.047)	0.207*** (0.058)	0.182*** (0.048)
Treatment × Some College	-0.056 (0.074)	-0.038 (0.095)	-0.067 (0.077)
Treatment × Bachelor or More	0.023 (0.067)	-0.015 (0.084)	0.001 (0.069)
Constant	0.650*** (0.038)	0.529*** (0.049)	0.344*** (0.038)
Observations	1,204	828	1,204

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment

Visible Cash vs. Non-Visible Cash

Table 29: Visible Cash vs. Non-Visible Cash:
Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	0.022 (0.031)	0.065* (0.037)	0.055* (0.031)
Non-White	0.027 (0.041)	0.035 (0.050)	0.040 (0.042)
Treatment × Non-White	0.001 (0.051)	-0.038 (0.061)	-0.022 (0.052)
Constant	0.607*** (0.024)	0.661*** (0.030)	0.401*** (0.025)
Observations	1,727	1,090	1,727

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 30: Visible Cash vs. Non-Visible Cash:
Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	0.074 (0.052)	-0.016 (0.070)	0.041 (0.049)
Some College	0.189*** (0.059)	-0.051 (0.078)	0.093 (0.058)
Bachelor or More	0.176*** (0.052)	0.025 (0.069)	0.135*** (0.050)
Treatment × Some College	-0.063 (0.070)	0.130 (0.090)	0.043 (0.069)
Treatment × Bachelor or More	-0.017 (0.063)	0.085 (0.081)	0.048 (0.061)
Constant	0.475*** (0.045)	0.672*** (0.062)	0.320*** (0.042)
Observations	1,706	1,086	1,706

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment New vs. Old Recruitment Letter

Table 31: New vs. Old Recruitment Letter:
Heterogeneous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	0.076** (0.037)	0.021 (0.045)	0.064 (0.040)
Non-White	-0.013 (0.041)	-0.070 (0.051)	-0.053 (0.041)
Treatment × Non-White	-0.023 (0.057)	0.058 (0.071)	0.023 (0.060)
Constant	0.651*** (0.026)	0.650*** (0.032)	0.424*** (0.027)
Observations	1,120	759	1,120

Omitted race group: White. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 32: New vs. Old Recruitment Letter:
Heterogeneous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	0.098* (0.056)	0.088 (0.074)	0.107* (0.055)
Some College	0.080 (0.056)	0.145** (0.072)	0.135** (0.055)
Bachelor or More	0.099** (0.048)	0.216*** (0.062)	0.195*** (0.047)
Treatment × Some College	-0.060 (0.080)	-0.005 (0.101)	-0.025 (0.082)
Treatment × Bachelor or More	-0.045 (0.068)	-0.093 (0.087)	-0.074 (0.070)
Constant	0.584*** (0.039)	0.479*** (0.052)	0.280*** (0.035)
Observations	1,110	756	1,110

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Heterogeneous Effects of the Experiment

Name or Current Resident vs. Family Living At

Table 33: Name or Current Resident vs. Family Living At
Heterogenous Effects by Race

	Agree Return	Join Agree	Join Return
Treatment	0.007 (0.020)	-0.030 (0.027)	-0.018 (0.022)
Non-White	0.026 (0.022)	-0.050* (0.029)	-0.023 (0.024)
Treatment × Non-White	-0.049 (0.033)	-0.018 (0.043)	-0.036 (0.034)
Constant	0.712*** (0.014)	0.535*** (0.019)	0.381*** (0.015)
Observations	3,218	2,307	3,218

Table 34: Name or Current Resident vs. Family Living At
Heterogenous Effects by Education

	Agree Return	Join Agree	Join Return
Treatment	-0.046 (0.029)	-0.031 (0.038)	-0.039 (0.027)
Some College	0.072** (0.029)	0.113*** (0.038)	0.116*** (0.031)
Bachelor or More	0.063** (0.026)	0.149*** (0.034)	0.137*** (0.027)
Treatment × Some College	0.037 (0.042)	0.008 (0.055)	0.017 (0.044)
Treatment × Bachelor or More	0.063* (0.038)	-0.014 (0.049)	0.015 (0.039)
Constant	0.681*** (0.020)	0.422*** (0.026)	0.287*** (0.020)
Observations	3,192	2,299	3,192

Omitted education category: High School or Less. Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1