

# Can a locally-tailored image improve return rates? Evidence from a community-specific study in California

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## Abstract

Envelope graphics tend to reduce response rates in mail surveys, but locally-iconic or neighborhood-relevant images may improve them by activating local affiliation and identification. We tested this hypothesis experimentally in 14 California communities. The response tasks were returning a household information form with a phone number, a screener interview by phone, and an extended phone interview. Within each community, addresses were randomly assigned to receive either a standard envelope with no image (other than the sponsor logo in the return address field), or an envelope that also had a locally-tailored image. Using Google image search, we chose images that we thought would be locally-iconic (e.g., notable building or landmark, train station, local landscape, or city sign). We also used community logos from a local health improvement program. Results show a statistically-significant negative effect of about 1 percentage point on household information form return rate when using the image/logo. While there was much variability in strength and direction of differences across communities, the overall negative effect may have been driven by a few individual communities. Our overall finding supports traditional advice that adorning mailing materials with images and logos can have negative effects on completion rates and should be avoided. However, we also find evidence of variability among communities and image type, warranting further experimentation.

**Key Words:** Mail survey, nonresponse, envelope design

## 1. Introduction

There is extensive evidence that adding graphics and messages to mail survey envelopes tends to reduce response rates (Dykema et al., 2012; Jans, Park, Rauch, Grant, & Edwards, 2015; Levin, 2015; Sherman Edwards, 2006), and this advice is found in popular survey design texts (Dillman, Smyth, & Christian, 2014; Fowler, 2014). It is thought that making an envelope look “too professional” suggests to the recipient that it contains marketing or fundraising requests.

However, some methods used to survey communities and local areas suggest (implicitly if not explicitly) that local tailoring should (or at least could) be part of the visual design of mailing materials. For example, while not experimentally-tested, several recent surveys of state, regional, or municipal areas have used locally-iconic images on mail and web materials with the intention of making the request appear more relevant to the respondent (i.e., distinguished from junk mail) and increase response (Edwards, 2013; Messer, 2009; Smyth, Dillman, Christian, & O’Neill, 2010). Dillman, Smyth, and Christian (2014) have

no clear recommendation on the use of images and logos, likely because experimental evidence of their effectiveness is so slim. This paper seeks to help fill that gap.

Specifically, we wanted to know whether:

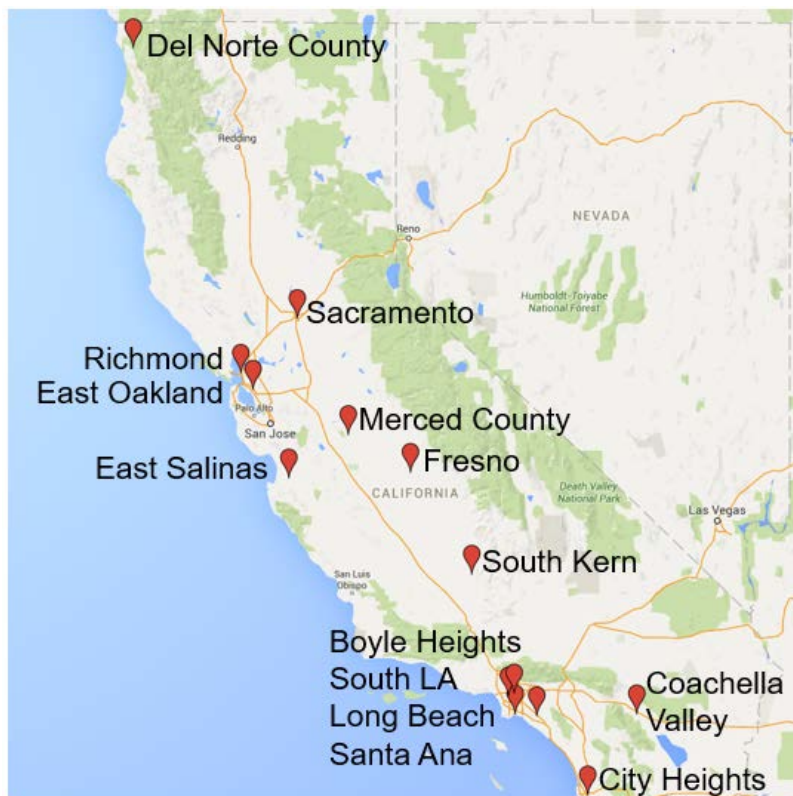
- 1) Adding an image could prime local affiliation and increase response
- 2) There would be any geographic variation in effect

## 2. Methods

We tested these questions experimentally in 14 California communities that were part of the Building Health Communities (BHC) program sponsored by The California Endowment (TCE).<sup>1</sup> The UCLA Center for Health Policy Research (CHPR) and California Health Interview Survey (CHIS) have collaborated with TCE on this project for several years. RTI International was the data collector contracted for this facet of the project.

### 2.1 Sample

Figure 1 shows the 14 communities that were purposively selected by TCE. They were not intended to be a representative sample of California, but were selected to meet TCE's programmatic goals. Nevertheless, the selected communities were geographically diverse, including northern, southern, urban and rural communities. They also were highly ethnically/racially, and linguistically diverse communities.



**Figure 1:** BHC Communities Selected by The California Endowment

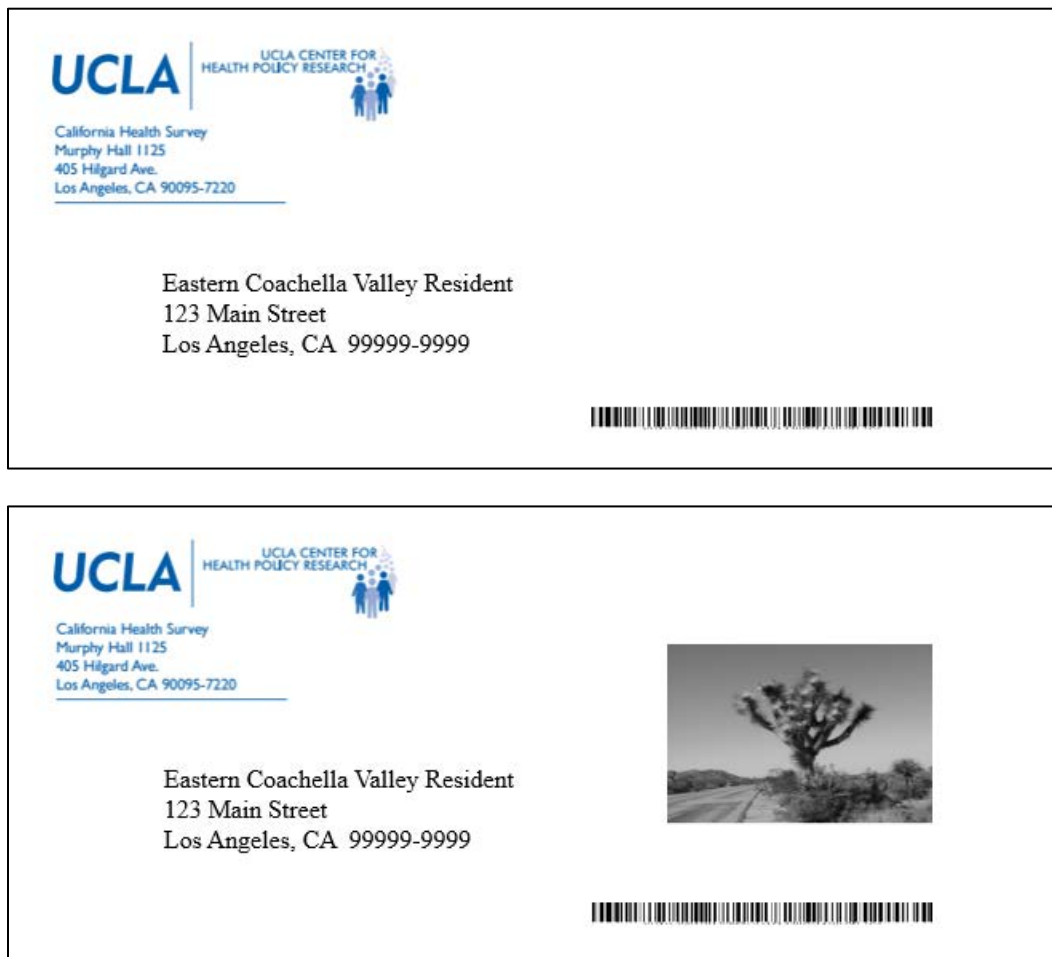
<sup>1</sup> <http://www.calendow.org/building-healthy-communities/>

In total, about 28,500 Delivery Sequence File addresses were selected (about 2,000 per community).

## 2.2 Response Task, Mailing Materials and Experimental Manipulation

For the purposes of this paper, we only analyze the first response task of the overall survey design, which was to return a one-page household information form with a phone number at which the household could be reached for a phone interview. In the survey as a whole, a screener interview and one or more extended interviews were completed by phone.

Within each community, addresses were randomly assigned to receive either a standard envelope with no image (other than the sponsor logo in the return address field), or an envelope that also had a locally-tailored image (see Figure 2). The image was not included on any materials included in the envelope.



**Figure 2:** Plain and Imaged Envelopes Randomly-assigned to Sampled Addresses




## 2.3 Selection of the Experimental Images

Using Google image search, we chose images that we thought would be locally-iconic (e.g., notable building or landmark, train station, local landscape, or city sign). If needed, we identified the location of the landmark to be sure it was within the boundaries of the

BHC community. In all cases, we attempted to select an image that we thought everyone in the community would recognize, either because it had the community name on it, because it was historically or culturally-iconic, or because it was a visually-prominent landmark. When requested, or when we couldn't find a sufficient local image online, we used a community logo that community liaisons from the BHC sites provided. Table 1 shows the images used. All images were black-and-white to reduce printing costs, and to reduce the risk of looking like marketing or fundraising (Jans et al., 2015). Although a more professional-looking envelope could have been developed, we saw the rougher look as benefit given past research on this topic.

Local photographic images were used in 9 communities and the logo was used in 5 communities. Of the 9 photographic images, 2 were city signs, 5 were landmarks, and 2 were landscapes.

**Table 1:** Images Used on the Envelope in each BHC Community

Community	Image Type	Image Used
Boyle Heights	BHC program logo	
Central, Southeast, and Southwest Fresno	City sign	
Central Santa Ana	Landmark	

City Heights

Landmark



Del Norte County and  
Adjacent Tribal Lands

Landmark



East Oakland

Landmark



East Salinas/Alisal

Landscape



Eastern Coachella Valley

Landscape



Long Beach

BHC program logo



Richmond

City sign



South Kern

BHC program logo



South Los Angeles

BHC program logo



South Los Angeles

Sacramento

Landmark



Southwest Merced and East Merced County

BHC program logo

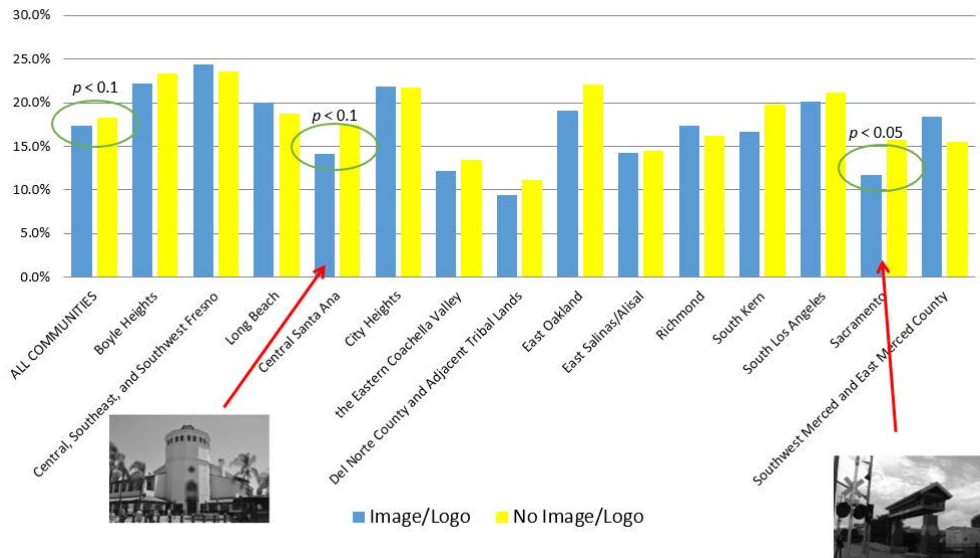


### 3. Results

Figure 3 shows the effect of the experimental envelope with an image on info sheet returns overall and by community.<sup>2</sup> Significant differences at  $\alpha = 0.1$  and  $\alpha = 0.05$  are circled, and their respective experimental images are displayed.

There was an overall negative effect of about 1 percentage point in household info sheet return, and significant negative effects in Central Santa Ana and Sacramento. Both of these communities used a landmark image, specifically, an image related transportation. It is interesting to observe that, while the overall effect was negative, some communities had a higher info sheet return rate (though nonsignificant) when the experimental envelope was used (e.g., Fresno, Long Beach, City Heights, Richmond, and Merced). Fresno (0.8% difference) and Richmond (1.1% difference) were the only two communities that had an image with a city sign. Long Beach (1.3% difference) and Merced (2.9% difference) both used BHC community logos that were provided by the communities, and which prominently featured the community name. City Heights used a local landmark, but its difference (at 0.1%) is hardly substantively interesting, even if it was significant.

The effect of the image/logo on phone screener completion or extended phone interview completion was not tested.



**Figure 3:** Effect of the Image on Info Sheet Returns Overall and by Community

### 4. Discussion

Our findings support traditional advice that adorning mailing materials with images and logos can have negative effects on completion rates and should be avoided unless their effects can be tested beforehand. We saw an overall lower information sheet return rate

<sup>2</sup> Differences were tested using a two-tailed  $z$ -test for differences in proportions.

when an image or logo was placed on the delivery envelope used to contact residents in 14 communities in California. The negative impact of about 1 percentage point is similar to findings from other experiments on this topic (Jans et al., 2015).

Considering the mechanism of the effect is difficult because, while the presence of an image or logo was randomly assigned, the images themselves were not experimentally design. That is, they were not selected or created to highlight specific community features or have a specific psychological effect on sampled households. However, from our *post hoc* categorization of the image types, it is interesting to note that the only two negative effects seen in individual communities were in communities where a transportation station was featured in the image. Perhaps householders thought that the envelope was fundraising for or a survey about public transportation. If so, a person who does not use public transportation would likely find the image irrelevant and not respond (Groves, Stanley Presser, & Sarah Dipko, 2004). Further, four nonsignificant positive (and substantively interesting) “effects” of the image were observed (excluding City Heights). Two of the communities with such findings (Fresno and Richmond) used a public city sign, which may have primed community affiliation. The other two substantively-interesting positive “effects” were in Merced and Long Beach, both of which used a BHC community logo that prominently displayed the community name and had little or no TCE-specific branding. However, Boyle Heights, South Kern, and South Los Angeles also used BHC logos, but saw lower returns with their use.

#### **4.1 Extensions and Next Steps**

Our initial analyses open new questions into the effect of images and logos on mailings. There may be more at work than a blanket negative effect of their use, despite the overall reduction in form returns we saw. First, we need to explore the effect that the image has on survey interview completion. After accounting for differences in information sheet return rates, and the characteristics of those households that returned it, is there any remaining effect on phone contact, screener interview, or extended interview? Second, what role do community characteristics play in return rates, and (possibly) on the effect of the image itself? We know that some communities are harder to survey than others in general, but it may also be the case that response propensity can be influenced by an image in some communities but not in others. Further, certain *types* of images may work in some communities and not others. The third, and most important area for future research involves creating images explicitly designed to experimentally test the image characteristics into which we have *post hoc* categorized our stimuli (e.g., landmark v. city sign v. logo v. landscape). Only with an experimental design that randomizes type of image, not just presence of one, can we begin to understand the true effects of these design features on response.

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