Do Voters Recognize Class? Visualizing the Descriptive Representation of Working Class Politicians

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Project Background: This paper is part of a larger book project on the descriptive and symbolic representation of the working class in Latin America. One paper has been published in *Political Research Quarterly* (Barnes and Saxton 2019), and several additional chapters have been presented at APSA (2018) and MPSA (2019). We hope to use the opportunity to present at SeLAB to present the results of one of three survey experiments we have conducted in Mexico and Argentina that are intended to help us identify the causal mechanisms that link the descriptive representation of the working class to perceived levels of representation among citizens.

Additionally, we are considering submitting some of the results from this experiment as a research note. We would appreciate any feedback on what results are most interesting and how we could better frame/pitch the results to make a big impact as a research note.

Introduction

Working-class citizens make up majorities or near majorities in nearly every society, yet working-class people are dramatically underrepresented in democratic governments (Carnes and Lupu 2015; Carnes 2013). This underrepresentation of the working class has profound implications for representation. Growing evidence indicates that legislators with working-class backgrounds do a better job representing working-class interests (Carnes 2013; Carnes and Lupu 2015; Micozzi 2018; O'Grady 2018). Likewise, higher levels of working-class legislative representation are associated with improved trust and confidence in legislatures and parties (Barnes and Saxton 2019; Barnes, Kerevel and Saxton 2018). Thus, the descriptive representation of the working class is associated with the increased substantive and symbolic representation of working-class interests. These findings parallel decades of research that suggests increasing the descriptive representation of women, and racial, ethnic and sexual minorities improves substantive and symbolic representation for these groups (e.g. Barnes and Burchard 2012; Clayton, Josefsson and Wang 2017; Crisp et al. 2018; Reynolds 2013; Schwindt-Bayer 2010; Tate 2004).

However, descriptive representation based on observable characteristics like gender, race, or ethnicity is commonly thought to be more easily visible to voters, than descriptive representation based on shared experiences, such as social class. In particular, for social class status of representatives to influence the attitudes of citizens towards their representatives, voters must be aware of a representative's social class. Recognizing an individual's class status may be difficult, as Mansbridge (2015) argues the social class status of individuals can change over the course of one's life. If class status can change, then working class individuals elected to public office may not be recognized as such after obtaining a middle/upper class occupation (Carnes 2013). In addition, while some social psychology research does suggest one's social class can be determined without any knowledge of the person's background (Bjornsdottir and Rule 2017), we do not know if these results

apply to elected representatives who disproportionately come from the upper class. Thus, if class is a mutable characteristic and is not as visibly pronounced as gender, race, or ethnicity, it may be the case voters have a hard time recognizing the class status of elected officials.

While Barnes and Saxton (2019) argue working class legislators are visible since politicians and parties have strong incentives to highlight their occupational and class backgrounds to attract voters, we lack compelling evidence that voters can easily identify the class backgrounds of politicians. Moreover, campaign rhetoric that highlights information about a politician's class status may be misleading (Carnes and Sadin 2015). Although information on the class status of representatives can be gathered from the media, speeches, and through campaigns, the informational burden placed on voters to identify class status may be much greater than asking voters to identify a politician's sex, race, or ethnicity.

We argue the social class status of politicians is more visible than commonly thought within the literature, and voters do not necessarily need to rely on campaign rhetoric, media coverage, or even become deeply engaged in politics to discern a representative's class. In line with recent social psychology research positing that the "persistent influence of class differences in people's lives could fashion lasting effects on their facial appearance" (Bjornsdottir and Rule 2017, 531), we argue voters can quickly identify the class backgrounds of politicians through subtle facial cues available in photographs. Given that a large number of countries include pictures of candidates on ballots and government websites, parties include candidates' pictures on widely distributed campaign imagery, and newspapers display photographs of candidates and politicians, even citizens with low levels of political interest and knowledge are likely exposed to politicians' facial images.

To test our argument, we carry out two nationally-representative survey experiments in Argentina and Mexico where participants are shown a series of photographs of elected officials and asked to classify each individual as upper class or working class. Using an original dataset on the

occupational backgrounds of Argentine and Mexican national deputies we first code each legislator's class status based on their occupation before entering into politics. Then, using real photographs of all deputies, we draw a sample of images that includes all working-class legislators and a paired sample of randomly selected upper-class legislators. We edited the images to remove the backgrounds and crop the images around the face. Finally, participants are shown a random series of photographs and asked to classify them. We find participants can correctly identify the class background of the individuals in the photographs at a rate significantly better than chance and at a rate consistent with other studies that ask participants to identify perceptually ambiguous characteristics (Tskhay and Rule 2013). The results are robust to both color and black and white images and the findings hold when we exclude individuals who report recognizing one of the images in the sample.

Identifying class in facial features

Individuals can easily identify someone's age, sex or race when presented with another person's face. However, several recent studies in social psychology and political science also find that individuals are adept at identifying more ambiguous characteristics such as religious affiliation, political ideology, sexual orientation, class and the probability of electoral success through people's faces (Bjornsdottir and Rule 2017; Lawson et al. 2010; Tshkay and Rule 2013; Rule, McCrae and Ambady 2009). In addition, experimental subjects have also been able to identify an individual's socio-economic status through nonverbal cues after watching short 60-second videos (Kraus and Keltner 2009).

Kraus, Park and Tan (2017) argue signs of social class are communicated through one's body and physical appearance, linguistic cues and cultural preferences and choices. While it is likely a greater combination of social class signals may be helpful in communicating class, Bjornsdottir and Rule (2017) find simple pictures of individual faces are sufficient for people to identify an

individual's class status at a rate better than chance. Moreover, it appears class status is inferred rapidly, and the effect holds even when using very similar pictures with the same facial expressions across all images.

It is somewhat less clear how individuals determine class status through one's face.[1] Findings from Bjornsdottir and Rule (2017) suggest people use stereotypes and attractiveness to infer that someone is from a higher social class. These authors also speculate that the experiences of upper and lower class individuals become etched in people's faces over time, such that one can use the emotional expressions in people's faces to identify class status. The extent to which the experiences and behaviors of individuals systematically differ across classes may lead these differences to be reflected in differing health and wellbeing outcomes that are visible in a face.

Yet, it is still unclear whether citizens can also intuit information about legislators' class status from images they may encounter in their day-to-day lives. Individuals with high levels of political information are more likely to be able to draw upon multiple sources of information to infer a representative's class status, such as their dress or their speech. However, for those who are less attentive to politics, they are more likely to just be exposed to images of their representatives in campaign ads on billboards, street signs, social media, television, ballots and in newspapers. Can citizens use these facial images to learn about the diversity of representatives in office? To find out, we next turn to our original experiment.

Experiment

In early 2019, we administered online surveys with a series of embedded experiments in Argentina (February) and Mexico (July) using the survey firm Netquest. The samples in each country were drawn from a population of online panelists, and quotas were used to ensure that the

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[1] It is beyond the scope of this study to explain why class status can be judged from a face. We are more interested in whether or not it is possible.

samples were nationally representative to sex, age, and socioeconomic status (household income). 3,307 participants completed the online survey in Argentina, and 3,463 participants took the survey in Mexico.

To test our expectation about individuals' ability to recognize class status from facial features, we began by constructing an original data set of the occupational backgrounds of Argentine and Mexican deputies. In Argentina, we drew on data compiled by the *Directorio Legislativo* – a nongovernmental organization which began cataloguing national deputies' self-reported professional backgrounds in 2000 (Carnes and Lupu 2015; Franceschet and Piscopo 2008). Specifically, legislators are asked to report their prior political offices, professional occupations, party experience, and educational background along with some personal information (e.g., birth date, number of children, marital status).

In Mexico, we relied upon information from the *Sistema de Información Legislativa*—a government website maintained by the Interior Ministry, which archives legislative profiles for national deputies. For Mexico, these data were originally compiled in 2010 and have been maintained since (Kerevel 2015; 2019). The website reports deputies previous political, public, and private careers, educational attainment, and some personal information including their birthday. For both Argentina and Mexico, we also relied upon other published biographies and publicly available data when there was no other information recorded for a given deputy.

After compiling this dataset of legislative profiles for Argentina and Mexico, we next coded whether or not each legislator had a working-class background. Although there are a number of ways to conceptualize and operationalize which legislators come from the working-class, we chose to rely solely on legislators' occupational status (rather than relying on income or some other measure of socioeconomic status). Although most legislators would be coded as belonging to the same (elite) class if we relied on income-based measures of class, the reality is that people with

different occupational backgrounds have different life experiences, opportunities, social circles, and economic and political interests (Carnes 2013; Hout, Manza, and Brooks 1995; Mood 2017; Stephens, Markus and Phillips 2014; Weeden and Grusky 2005). Following this increasingly accepted convention for conceptualizing and operationalizing class (Barnes and Saxton 2019; Best 2007; Best and Cotta 2000; Carnes 2013; 2019; Carnes and Lupu 2015; 2016; Grumbach 2015; Manza and Brooks 2008), we code legislators as belonging to the working class if they previously earned a living working in labor, the service industry, or as a union officer prior to entering politics. Further, because we have a record of legislators' career trajectory, we do not have to rely exclusively on the job they held immediately prior to running for office. Instead, we use information from the course of a legislator's career.

After coding each legislator's occupation-based social class, we identified all deputies that came from a working-class background, and we randomly drew a paired sample of upper-class legislators from the same time period. Using this sample, we next created a dataset of facial images. Specifically, we used legislators' professional headshots, cropped the images around the face (removing all clothing) and edited the images to remove the background. For each legislator in the dataset of images, we saved a color photograph as well as a black and white version of the image. We hold the sex of the individuals depicted in the images constant by only using images of men.

In Argentina, our final sample consisted of 27 working-class legislators who served between 2006 and 2016, as well as a paired sample of randomly selected upper-class legislators from the same period (54 legislators in total). In Mexico, where workers have a greater presence in the National Congress, our sample consisted of 80 working-class legislators who served between 2009 and 2018, as well as a paired sample of 80 upper-class legislators.

In the survey, participants were told:

We are going to show you a series of pictures of people's faces. For each picture, say whether it is more likely that this person is a member of the upper class or the working class,

based only on their image. We are interested in your initial impression of each photograph. You don't need to devote much time to each photo. There are no right or wrong answers.

Then participants were randomly assigned to see a selection of all color photographs or black and white photographs, essentially creating two different experiments. Once assigned to participate in either the color or black and white experiment, participants were then shown a random selection of facial images, and for each image, participants were asked if they thought the person was a member of the working class or the upper class. Participants in Argentina rated 10 images each, and because of the larger legislator sample size in Mexico (there are more working-class legislators in Mexico than Argentina, therefore the paired sample was larger as well), participants there rated 20 images each. Figure 1 shows an example of what Argentine participants assigned to the color picture experiment might have seen.

Figure 1. Example from Color Picture Experiment in Argentina
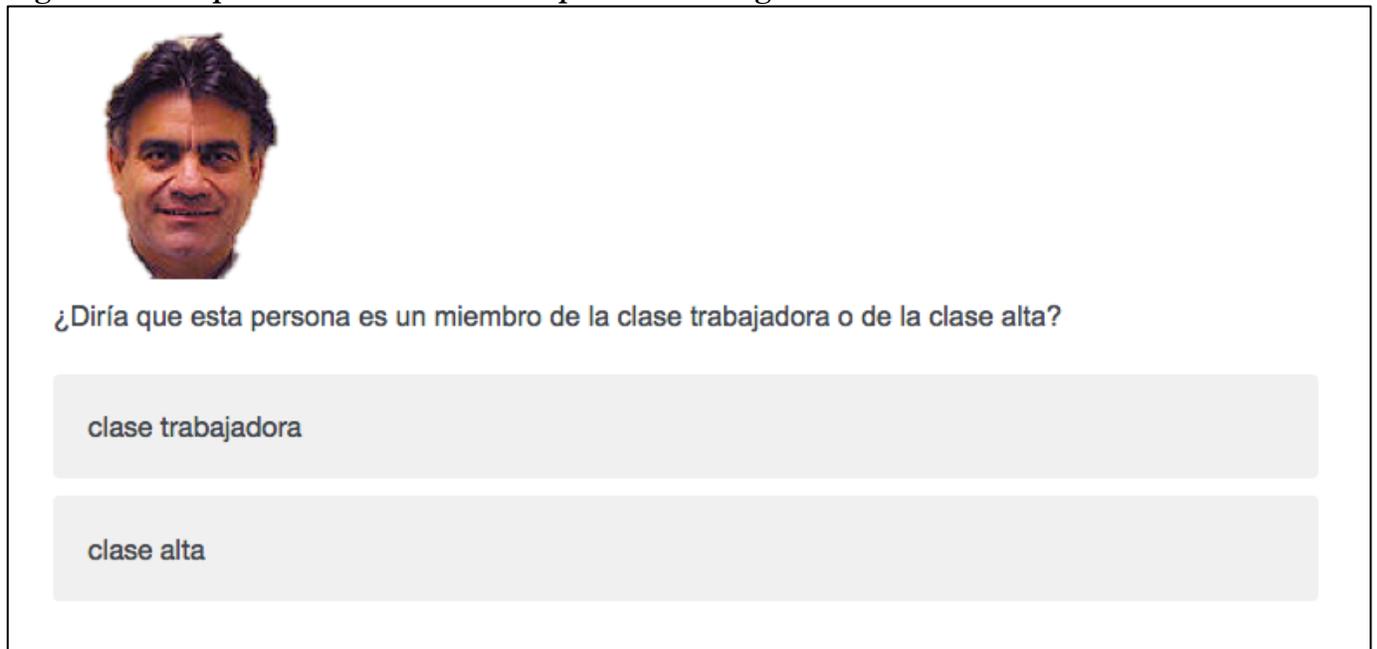
¿Diría que esta persona es un miembro de la clase trabajadora o de la clase alta?

clase trabajadora

clase alta

Results

Overall, 3,037 participants in Argentina rated 108 images (54 color and 54 black and white) for a total of 30,640 responses.[2] In Mexico, 3,463 participants rated 320 images (160 color and 160 black and white) for a total of 71,271 responses. Since images were randomly assigned to participants some images appear in the dataset more than others. On average, each image was classified 223 times in Argentina (min=236; max= 455[3]; median=282; standard deviation=22), and 187 times in Mexico (min=178; max= 265; median= 223; standard deviation=14). To visualize the frequency and correctness with which pictures were classified and participants' classification of the pictures, we create a picture-level measure that calculates the percentage of times that each image was correctly classified. A value of 0 indicates a picture was never classified correctly and 100 indicates that a picture was always classified correctly. Figure 2 provides histograms of this data for both countries by picture type. The y-axis represents the frequency with which each photo appeared in the sample and the x-axis depicts the percentage of time each photo was classified correctly.

It is clear from Figure 2 that although some pictures are correctly classified less than half of the time, a larger number of pictures are correctly classified more than half of the time. On average, Argentine participants classified the images correctly 57.8 percent of the time and Mexican participants classified images correctly 58.9 percent of the time. Using a one-sample t-test, participants in both Argentina and Mexico correctly classified the images at a rate better than random. Regardless of whether participants were shown color or black and white images, they consistently perform better than chance.

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[2] The first 181 participants during the soft open saw 11 pictures each with one image appearing each time and the other 10 images randomly selected, due to programing error. The results are robust when we exclude these participants from the sample. As responses were not forced (i.e., participants could advance without answering every question) 29 participants classified only 9 images, 3 classified 8 and 1 person classified 7, 6, 4, and 3.

[3] Recall there is one outlier in Argentina due to a programing error.

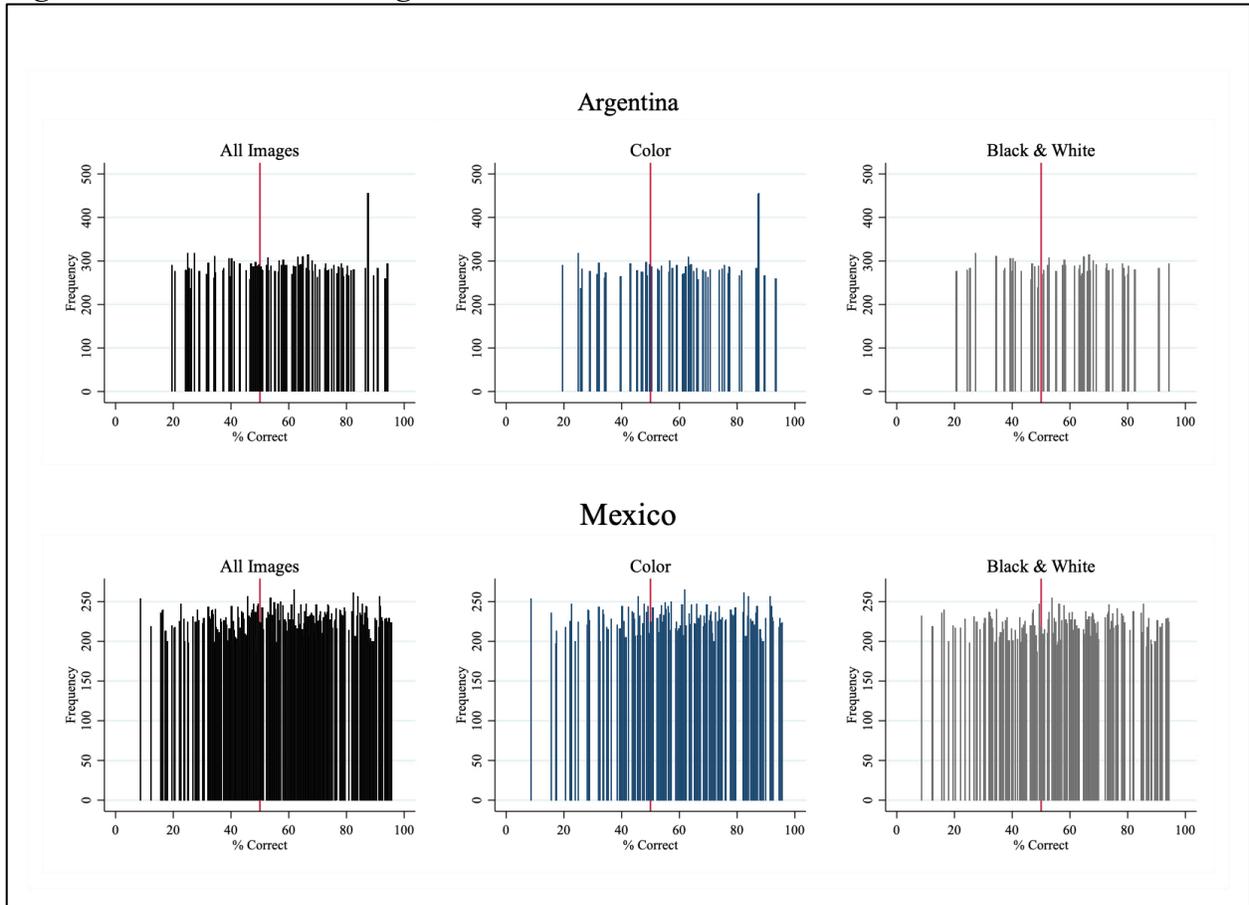**Figure 2: Distribution of Image Classification**

Figure 3 depicts results from a one-sample t-test. The gray bars in Figure 3 represent the percentage of times that participants correctly classified the class status of images. This is bench marked against 50%, the rate that we would expect participants to correctly classify images if they were randomly choosing. The capped bars depict 95% confidence intervals around the mean correct response rate.

Although our results demonstrate that on average, participants in both Argentina and Mexico classify the images at a rate better than random, it is possible that participants are better at classifying one type of image than another. For example, it is possible that upper class legislators look more like upper class citizens, but there is more noise associated with the classification of working-class legislators—after all the images are of national deputies. Thus, even if deputies come

from a working-class background it is likely that they are better off than the average working-class citizen in their country.

Figure 3: One Sample T-Test, Correctly Classified Facial Images
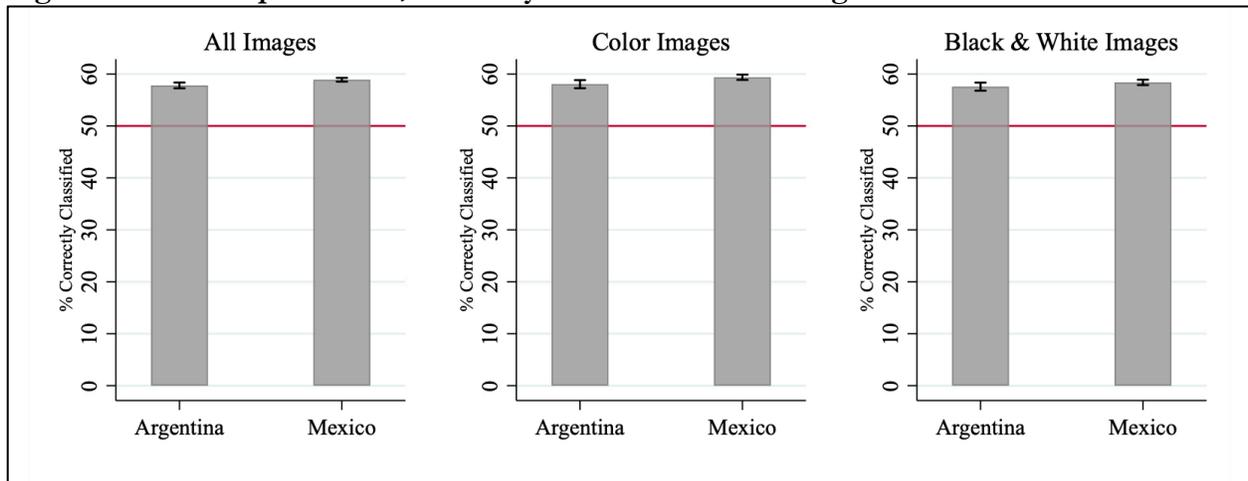
To assess whether participants are better at classifying upper class or working-class images, we next evaluate the rate that citizens classified the images as working class (as opposed to upper class). We compare this to the actual class status of each image. This is best thought of as the average treatment effect for having been shown an image of a working-class deputy (the treatment group), where an image of an upper-class deputy is the control group. In Argentina, when shown a picture of an upper-class deputy, the control group classifies this image as working class only 39 percentage of the time. That is, only 39 percent of respondents guess that the upper-class image is working class—put differently, participants guess correctly 61 percent of the time. The treatment group (those shown images of a working-class deputy) by contrast, are 16 percentage points more likely than the control group to say that the image is working class. On average, the treatment group classifies the image as working-class 55 percentage of the time. The difference between participants shown a working-class image and those shown an upper-class image is significant at the p<.001 level using a two-tailed t-test.

Figure 4: Average Treatment Effect of Seeing a Working-Class Picture
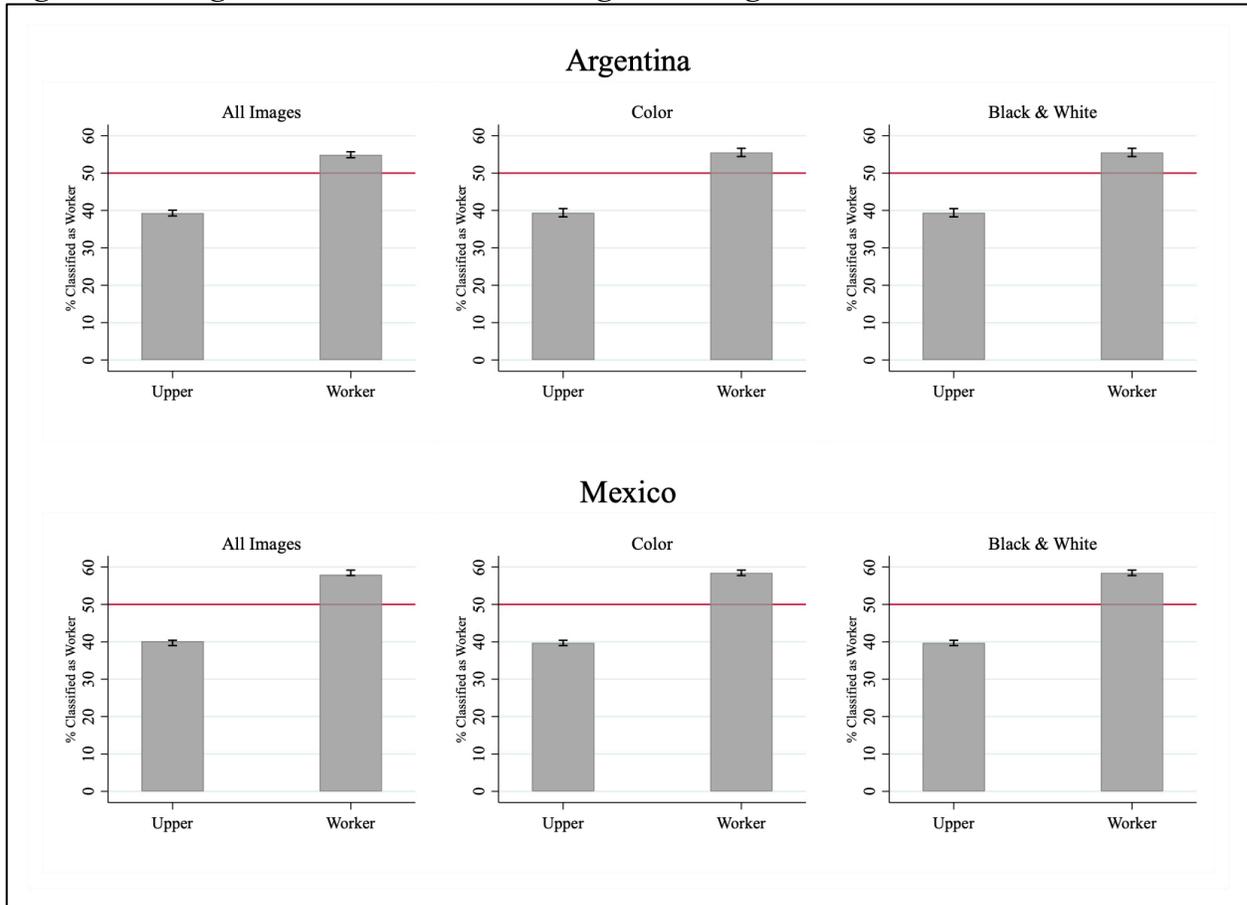
The same pattern (albeit slightly larger) holds in Mexico. Here, the control group classifies upper class images as working class only 40 percent of the time, contrasted with 58 percent among the treatment group—a difference of 18 percentage points. Again, the difference is significant at the $p < .001$ level using a two-tailed t-test. Thus, not only do participants classify the images correctly at rates better than random, but the differences in how they perceive working class and upper-class images are even more pronounced when we compare the classification outcome of each image type. Importantly, these same trends are remarkably consistent regardless of whether the image is color or black and white. Figure 4 depicts the average treatment effect for having been shown an image of an

upper-class deputy for all images, color images and black and white images for both countries.[4] The x-axis depicts the two categories of pictures, upper class and workers, and the y-axis shows the percentage of time each image type was classified as a worker.

Heterogeneous Effects by Respondent

It is clear from the above results that participants are able to classify images at a rate better than random. And yet, there is substantial variation around their ability to do so. What explains this variation? There is reason to believe that both differences in respondent characteristics and differences in the images themselves may help explain this variation. In this section we consider these heterogeneous treatment effects by respondent characteristics. Then, we discuss future plans to examine image characteristics.

I Know that Face

First, given that we are using real images of national deputies, it is possible that some of the participants in our survey recognize some of the images. If a participant recognizes an image and has some information about the individual deputy in the photo, we should expect that they will be more likely to classify the images correctly. To account for this, we gave participants a follow up question in which they were asked to indicate whether they recognized any of the pictures. In Argentina 35.23 percent of participants indicated they recognized at least one of the images and 13.11 percent did so in Mexico.

Using a difference in means test we assess whether participants claiming to recognize an image classify images correctly more frequently than those who do not recognize an image. In Argentina, participants who recognize an image classify pictures correctly 59 percentage of the time compared to 57 percent among those who do not recognize an image. This 2-percentage point

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[4] Results are robust to a series of model decisions including regression models using fixed effects for respondents, fixed effects for images, clustered standard errors for respondents and clustered standard errors for images.

difference is significant at the p<.001 level. This relationship holds among respondents classifying colored images, but it is smaller and weaker among participants classifying black and white images (difference = 1.4%, p=0.098).

The same relationship does not hold among respondents in Mexico. In Mexico, respondents classify images correctly 58% of the time regardless of whether they report recognizing an image or not. There are likewise no differences between those who do and do not recognize an image when considering colored or black and white images. Instead, the two groups correctly classify images at a statistically indistinguishable rate.

Regardless of whether participants who report recognizing an image are more likely to correctly classify images, both groups still classify the images correctly at a rate better than random. This is important because it provides clear evidence that even when an individual does not know or recognize the person in an image, they still have some intuition about class status.

The results from Argentina suggest that perhaps people actually know something about their legislators. That is, perhaps those individuals who say they recognized an image may also be somewhat familiar with the backgrounds of national deputies such that they can recall their class status. This explanation would suggest that when national deputies' class status is made known through other means—e.g., newspapers, campaign material, government websites, ballots (see Barnes and Saxton 2019)—citizens acquire this information and are thus aware of the class backgrounds of some deputies. This is particularly likely given that participants are more likely to recognize the images of more famous deputies. The more famous the deputy is, the more likely it is that citizens know something about their class status.

An alternative explanation for this finding is that participants who report recognizing an image classify images better than those who do not recognize an image. In other words, the finding could simply indicate that people with stronger facial recognition skills (those who report

recognizing a picture) also have brains that are wired to pick up on the nuances of facial images that are needed to classify the class status of the legislators in the pictures. Given that the results do not hold in Mexico, and we have no reason to believe that this explanation would apply differently to Argentina than Mexico, this interpretation is less likely than the former.

Instead, it is more likely that recognizing one of ten images (as would be the case in Argentina) improves the response rate more than recognizing one of 20 images (as would be the case in Mexico) and thus we observe statistically different responses in Argentina and not in Mexico. Regardless of the actual reason underlying this relationship, the results indicate that a subset of citizens are particularly well positioned to identify the class status of representatives.

Who Sees Class?

Second, even though on average citizens are able to correctly classify the class status of legislators' images at rates better than random, it is possible that some citizens are better at recognizing class status than others. To begin with, some research finds socio-economic status is important for accurately perceiving characteristics from photographs. Bjornsdottir, Alaei and Rule (2017) find those with lower SES are better at judging sexual orientation from faces compared to those with higher SES. In addition, other research suggests that the respondent's sex may matter. Bjornsdottir and Rule (2017) find women are more accurate at classifying class based on facial images compared to men, while Mast and Hall (2004) do not find any sex differences in the ability to perceive social status through photographs. Others find that men and women generally have similar facial recognition skills with respect to people's emotional state, but, when it comes to subtle facial emotions, women are better able to recognize differences (Hoffman et al. 2010).

In this section we assess whether women and citizens with different SES are better able to assess differences in facial images. To do this, we examine the likelihood of classifying an image correctly. Here the dependent variable is coded 1 if the image is classified correctly and 0 if it is

classified incorrectly. We use a question that asked participants what class they identified with. Class is coded on a five-point scale (0=lower, 1=lower-middle, 2=middle, 3=upper-middle, 4=upper). Then we account for the sex of the participant where participants are coded 1 if they report they are a woman and 0 if they report they are a man. Lastly, we control for whether the image is color or not. This allows us to evaluate whether respondents are better at classifying color or black and white images. To evaluate the likelihood of classifying pictures correctly we use a logistic regression and cluster on participants since participants appear in our data multiple times. Given that each participant appears in the dataset multiple times (recall each participant classified multiple images) we use clustered standard errors to account for correlation between responses from the same participant. The results for this analysis are reported in Table 1.

Table 1: Heterogeneous Effects by Class and Sex

	Argentina			Mexico		
	All Images	Color	Black & White	All Images	Color	Black & White
Class	0.041*	0.017	0.062**	0.025*	0.018	0.033^
	(0.017)	(0.024)	(0.023)	(0.012)	(0.017)	(0.017)
Woman	0.041^	0.052	0.031	0.052**	0.031	0.073**
	(0.023)	(0.032)	(0.033)	(0.016)	(0.023)	(0.023)
Color Image	0.019	--	--	0.040*	--	--
	(0.023)			(0.016)		
Constant	0.221***	0.272***	0.193***	0.267***	0.331***	0.243***
	(0.033)	(0.045)	(0.043)	(0.025)	(0.033)	(0.035)
N Responses	30,476	15,204	15,272	69,260	35,100	34,160
N Participants	3,037	1,508	1,529	3,463	1,755	1,708

Clustered standard errors in parentheses. ^ p<.1, * p<.05, ** p<.01, *** p<.001

First, turning to the class of the participants, the results provide some support for the idea that upper-class, as opposed to lower-class participants are better at classifying the images. As the class variable increases from 0 to 4 the probability of correctly classifying the image increases. This result holds at the .05 level for all pictures in Argentina, and the .01 level for black and white pictures in Argentina. There is no difference for colored pictures. The results are slightly weaker in Mexico. In the full sample of Mexican images, the coefficient for class is positive and significant at the .05 level, it does not attain conventional levels of significance for colored images, and is only

significant at the .10 level for black and white images. Although the results for colored images do not attain conventional levels of significance in Argentina or Mexico the relationship trends in the positive direction.

Next, turning to the sex of the participant the results provide some support for the idea that women classify images better than men. In Argentina there is very little support for this. In the model that includes all images the coefficient for woman is positive and significant at the .10 level. This is not particularly strong given that there are over 3000 respondents in this model. The coefficient is insignificant in the models for colored and black and white images. Thus, we find very little support for this relationship in Argentina. In Mexico, by contrast the relationship is more pervasive. In the sample of all Mexican images and of black and white Mexican images women are more likely to correctly classify the image (p<.05). The same does not hold for color images, where, although the coefficient is positive, it does not attain conventional levels of statistical significance.

Finally, it is worth pointing out that in Mexico participants classify colored images correctly at a higher rate than black and white images. The same does not hold for Argentina. It is possible that colored images are more informative in Mexico where race and ethnicity provide some information about the class status of the image. In Argentina, by contrast, the population is more homogenous, and skin tone is therefore a less useful cue. This is the focus of the next section.

Differences in the Images—Please Advise

With respect to differences in the image itself, previous research suggests that skin tone, age, and attractiveness may explain why some individuals are classified as working class (Bjornsdottir and Rule 2017; Weeks 2019). Age is unlikely to be sufficient to explain the variation observed in our sample because the age varies across both upper class and working-class deputies. However, if it is the case that social class status becomes more apparent in one's face as one ages, as suggested by Bjornsdottir and Rule (2017), classification accuracy may increase for pictures of older politicians.

Subjective evaluations of attractiveness and skin tone (particularly in Mexico where the population is more diverse) may co-vary with class status. Still, it is not straightforward how to evaluate variation in skin color and attractiveness across our photographs. Research on classifying skin color in large surveys highlights problems of low inter-coder reliability (Hannon and Defina 2016; Bueno and Dunning 2017), although some of these measurement issues may be mitigated in our case by allowing coders to compare a skin-color scale directly to the photograph. Inter-coder reliability for skin color somewhat increases on same-race respondents in the United States (Hannon and Delfina 2016), yet it is less clear how well these results travel outside the United States. Bueno and Dunning (2017) use Brazilian respondents to classify the race of Brazilian politicians and find substantial levels of disagreement. Other work finds high levels of cross-cultural agreement in assessing traits from photographs (Lawson et al. 2010; Rule et al. 2010), although it is not clear these findings extend to skin color.

With respect to attractiveness, for example, participants may see someone as less attractive and therefore suspect they are working class—or—they may perceive them to be working class and thus find them less attractive (Shin, Suh and Jang 2018). Other work finds that more attractive individuals are generally more successful in occupational settings (Zebrowitz 1997). Research generally finds cross-cultural consensus on attractiveness, although agreement is higher among those of the same race, and when rating the attractiveness of men, there is higher agreement among female raters compared to male raters (Zebrowitz 1997).

In the next phase of the project we would like to account for differences in skin color and attractiveness across our images. Any suggestions for best practices would be appreciated.

Conclusions and Implications

We find average individuals can identify the social class background of politicians solely through an image of their face at a rate significantly greater than chance. These results are remarkably robust,

hold across two countries, hold regardless of whether or not survey participants recognize any of the politicians, and are similar for color and black and white versions of the photographs. We also find some evidence that upper-class individuals and women are slightly better at accurately identifying class status.

These results lend further evidence to previous studies that suggest people can perceive social class from another person's face (Bjornsdottir and Rule 2017). However, unlike previous studies, we use photos of actual politicians that are more similar to what the average citizen is likely to encounter. Thus, our results have high external validity in terms of claiming that voters can infer social class by looking at their elected representatives. Even more remarkable is that we are using a sample of working class individuals that is unlikely to be visually representative of the larger working class population in each country given that they have succeeded in winning a legislative seat. This bias towards the elite among our working class sample might lead one to expect we would have a harder time finding any significant differences in correctly classifying working and upper class deputies, yet our results suggest this is not the case.

Our findings have important implications. First, since we find class is visible through facial cues, then previous arguments suggesting that class is a mutable characteristic unlike gender or race (Mansbridge 2015) are less compelling. These findings not only reinforce other studies that find class can be easily inferred from one's face, bodily appearance and non-verbal behaviors, but also contribute to arguments that class represents a social identity which is apparent to others (Kraus, Piff and Keltner 2011). If an individual's class background can be inferred from one's appearance, it is likely to have long-term consequences for their individual well-being (Bjornsdottir and Rule 2017), their social interactions with others (Bjornsdottir, Alaei and Rule 2017), and influence their behavior long after being elected to office (Carnes 2013).

In addition, elected politicians from the working class are unlikely to be able to easily assimilate into political institutions dominated by the upper-class since a politician's class status is likely to be readily apparent to all. In societies highly stratified by class, such as those in Latin America, working-class legislators be marginalized by their upper class colleagues similar to the experiences of other marginalized groups (Barnes 2016; Erikson and Josefsson 2019)

Second, the ability of voters to recognize the class backgrounds of politicians has important implications for how voters perceive the credibility of campaign promises from politicians, especially those who do not appear to be from the working class. As previous research has found that campaign rhetoric can be misleading regarding a candidate's background (Carnes and Sadin 2015), voters who can recognize a politician's class through their appearance may interpret their rhetoric as more or less credible.

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