

# Americans' Perceptions of Transgender People's Gender: Evidence from a National Survey Experiment

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**Abstract:** Drawing on the first national survey experiment of its kind ( $n = 3,922$ ), we examine the factors that underlie Americans' perceptions of transgender people's gender. In the experiment, we manipulate whether a transgender person identifies as a man or woman (gender identity), an adult or teenager (age), and whether others perceive them to be gender conforming. We ask participants whether they view the vignette character as male or female, and to explain their reasoning. Findings indicate that gender conformity, but not gender identity or age, affect perceptions of gender. By assessing the underlying factors that drive public perceptions of transgender people, we can better understand the issues that shape discourse surrounding transgender rights, as well as public attitudes about sex and gender.

**One Sentence Summary:** Americans are split in their perceptions of transgender people's gender; perceptions are shaped by gender conformity, not gender identity or age.

## Main Text

Recent estimates indicate that 0.6 percent of the United States adult population—or about 1.4 million adults—identify as transgender, or as people whose gender identity does not align with the sex they were assigned at birth (1). Although transgender people constitute a non-trivial segment of the population, the American public can be slow to accept those who defy traditional categories, including gender (2–6). This uncertainty toward transgender people has intensified in recent years, as policy-makers have considered issues such as which public restrooms transgender people should use (7), and how transgender people’s sex should be listed on their birth certificates (8). These debates ultimately reflect public uncertainty over how transgender people should be categorized—that is, consistent with the sex they were assigned at birth, or consistent with their gender identity. Several polls have assessed attitudes toward transgender people generally (9, 10), but no research has examined the underlying factors about a transgender person that determine how other people perceive their gender (11).

This article reports results from the first nationally representative survey experiment designed to assess public perceptions of transgender people’s gender, as well as the factors that affect those perceptions. The experiment focuses on three factors that could potentially affect perceptions of transgender people, and that have been mentioned frequently in policy debates, court cases, and other public discussions. These are:

1. *Gender identity*: First, we consider the issue of gender identity—whether the person is a transwoman (assigned male at birth but identifies as female) or a transman (assigned female at birth but identifies as male). The public image of transgender people is typically that of transwomen. In fact, a Google image search for the terms “transgender” or “transgender person” overwhelmingly returns images of transwomen. Public debates surrounding public

restrooms also center on transwomen, and whether cisgender women and girls are at risk when they must share a restroom with transwomen (6, 12). To the extent that transwomen are seen as physically threatening, the public may be less likely to perceive transwomen's gender congruent with their gender identity, as compared to transmen.

2. *Age*: Second, we consider whether the person is a teenager or an adult. Some members of the public have asked whether teenagers (and, in some cases, children) are mature enough to identify as transgender. These stakeholders have argued that teenagers tend to “experiment,” and are “finding themselves,” and thus are not capable of recognizing their transgender identity (13). Some courts have even taken this stance, and have held that teenagers who identify as transgender are not mature enough to change their names (14). This evidence suggests that the public may be less likely to perceive transgender teenagers' gender congruent with their gender identity, as compared to transgender adults.
3. *Physical appearance*: Finally, we consider the extent to which the person's physical appearance conforms with their gender identity. Some scholars contend that gender conformity, or a person's ability to “pass” consistent with their gender identity, is a determining factor in attitudes toward transgender people (15, 16). If this is the case, then the public may be less likely to perceive transgender people's gender congruent with their gender identity if they are non-conforming, as compared to conforming. In addition to these two statuses, we also gauge perceptions of transgender people whose level of conformity is either ambiguous (i.e., the person's gender is uncertain, and they do not clearly pass) or entirely unspecified. We include the unspecified status, in particular, because most national surveys on transgender issues do not indicate whether the transgender person passes or not (9, 10). We use these data to determine whether public perceptions of transgender people—with no

information about their level of gender conformity—are more similar to that of transgender people who pass or do not pass.

To examine these questions, we use data from a population-based survey experiment. The experiment was fielded through the National Opinion Research Center's (NORC's) Amerispeak panel as part of the Time-Sharing Experiments for the Social Sciences (TESS) program. Unlike other online survey companies that rely on samples of people who have opted-in to be surveyed, Amerispeak recruits a nationally representative sample through mail, telephone, and in-person recruiting methods. For this reason, Amerispeak and similar panels are considered the gold standard for survey research in the social sciences (17–19). We conducted two rounds of data collection—the first from 18 April to 26 May 2017, and the second from 24 July to 21 August 2017—with a total of 3,922 respondents.

Respondents were randomly assigned to one of 16 vignette conditions. In each condition, respondents were presented with a short vignette about Casey, a transgender person. We selected the name “Casey” because it is among the most common unisex names in the United States (20), and it peaked in popularity between the 1970s and early 2000s, making it a plausible name for a transgender person in multiple age groups. The vignettes systematically varied Casey's gender identity (transman, transwoman), age (16—teenager, 36—adult), and gender conformity (conforming, non-conforming, ambiguous, unspecified) in a  $2 \times 2 \times 4$  full factorial design. As an illustration, the transman, adult, gender non-conforming condition read:

Casey is 36 years old and was born a female, but now identifies as a man. When meeting Casey for the first time, most people assume Casey is a woman.

In contrast, the transgirl, teenager, ambiguous condition read:

Casey is 16 years old and was born a male, but now identifies as a girl. When meeting Casey for the first time, most people are unsure whether Casey is a boy or a girl.

Following the vignette, respondents were asked: “Do you personally consider Casey to be a male or a female?” The response options were “male,” “female,” or “other”; those who chose “other” were asked to write a short explanation. To analyze responses, we sorted them according to their congruence with Casey’s gender identity. Responses were coded as *congruent* if perceived gender was the same as Casey’s gender identity; *non-congruent* if perceived gender was different from Casey’s gender identity; and *other* if the “other” category was chosen. In addition, respondents who participated in round two of data collection were asked to explain their answer to the question in a few sentences.

We first present a breakdown of respondents’ perceptions (congruent, non-congruent, other). Then, we show how a transgender person’s gender identity, age, and descriptions of their physical appearance affect these perceptions. We then present results from multivariate regressions, and discuss how perceptions varied across sociodemographic groups. Finally, we show how respondents’ perceptions of gender are implicated in key policy debates regarding transgender rights, such as the issue of transgender bathroom access.

## **Results and Discussion**

Fig. 1 shows how respondents, across all experimental conditions, answer the fundamental question of how they perceive of transgender people’s gender. More than half (53%) of respondents consider transgender people’s gender to be non-congruent with their gender identity. In other words, these respondents consider transmen to be female, and transwomen to be male, consistent with the sex they were assigned at birth. An additional two-fifths of respondents (38%) consider transgender people’s gender to be congruent with their gender identity. The

remaining respondents (10%) indicated the transgender person's gender was something "other" than male or female. Of these, 15% (or about 1% of respondents in total) consider transgender people to be "transgender," while the remaining respondents (about 8% of respondents in total) gave another explanation (21).

[Fig. 1]

Notwithstanding these overall patterns, respondents' perceptions of gender may also be shaped by the transgender person's other characteristics—namely, gender identity, age, and descriptions of their physical appearance. These results are shown in Fig. 2. This figure reports the proportion of respondents who consider transgender people's gender to be *non-congruent* with their gender identity, by each of the experimental manipulations. The left panel shows results for gender identity. Here we see that 52% of respondents in the transman conditions, and 53% of respondents in the transwoman conditions, consider the person's gender to be non-congruent with their gender identity. These proportions are not significantly different from each other. Put differently, regardless of whether they are presented a transman or a transwoman, respondents have similar perceptions of transgender people's gender.

[Fig. 2]

A comparable pattern emerges in the middle panel, which shows results for age. Respondents in the adult conditions perceive the person's gender to be non-congruent with their gender identity 52% of the time, versus 53% of those in the teenager conditions. These proportions, once again, are not significantly different from each other. This pattern indicates that Americans do not distinguish between transgender adults and teenagers when determining transgender people's gender. This result may be surprising, considering that some members of the public (not to mention policy-makers and judges) have argued that teenagers are not mature

enough to identify as transgender. To the contrary, these data demonstrate that Americans consider transgender people’s age irrelevant to perceptions of gender.

The right panel shows that of the three factors included in this study, physical appearance—and, more specifically, gender conformity—has by far the largest effect on Americans’ perceptions of transgender people’s gender. When a transgender person is described as gender conforming, only 41% of respondents consider the transgender person’s gender to be non-congruent with their gender identity. This figure jumps to 61% when the transgender person is described as gender non-conforming. The public, in other words, frequently relies on a transgender person’s level of gender conformity—or the person’s ability to “pass” consistent with their gender identity—when making determinations about that person’s gender.

In addition, 54% of respondents in both the ambiguous and unspecified conditions consider transgender people’s gender to be non-congruent with their gender identity. Put differently, Americans are about evenly split in their perceptions of gender when a transgender person’s gender is ambiguous, or when their appearance is entirely unspecified. As discussed earlier, the unspecified conditions are particularly salient because most national surveys on transgender issues ask about “transgender people” in the abstract, without specifying whether the person passes or not. We find that respondents’ perceptions in the unspecified conditions (54% non-congruent) are much more in line with those in the gender non-conforming conditions (61%) than with those in the gender conforming conditions (41%). We conclude, therefore, that Americans tend to think of transgender people as gender non-conforming, unless they are explicitly described as gender conforming.

Fig. 3 shows perceptions of gender across a range of demographic groups. Consistent with the figures shown earlier, Fig. 3 reports the predicted probability that a respondent in a

given demographic group considered the transgender person's gender to be *non-congruent* with their gender identity. Statistically significant demographic factors are shown in this figure; full multivariate regression models are included in table S2 in the appendix materials. These predicted probabilities show a clear overall pattern in perceptions of gender. Sexual minorities, college-educated respondents, younger respondents, and women, to name a few groups, are significantly less likely than their counterparts to classify a transgender person's gender as non-congruent with their gender identity. These respondents, in other words, tend to privilege the transgender person's gender identity when making judgments about their gender, which is often considered a progressive stance. Evangelicals are more likely to give non-congruent responses than those with other religious beliefs. In addition, compared to non-voters and those who voted for third-party candidates in the 2016 election, Republican voters are more likely to give non-congruent responses, while Democratic voters are more likely to give congruent responses. This pattern is consistent with prior research on political affiliation and attitudes toward transgender people broadly (9). Respondents who know a transgender person are more likely to give congruent responses, compared to those who have had no contact with transgender people.

[Fig. 3]

Further analyses show that transgender people's level of gender conformity—but not their gender identity or age—affects public perceptions of gender across a range of sociodemographic groups. Fig. 4, for example, compares the effects of the experimental manipulations between Democratic voters and Republican voters (results for non-voters, and those who voted for third-party candidates, are shown in table S3 in the appendix materials). As evidenced by the disparate proportions shown in the top and bottom panels, there is a wide gulf between these two groups in terms of perceptions of gender. However, in both panels, physical



appearance is the only experimental manipulation that significantly affects respondents' perceptions. Supplemental analyses show that no subgroups made significant distinctions between transmen and transwomen, or between adults and teenagers, in their perceptions of gender (see table S4 in the appendix materials). Perhaps more importantly to our point, *all* the subgroups in our data made a significant distinction between transgender people who were described as gender conforming versus gender non-conforming (see table S5 in the appendix materials). Overall, then, the tendency to emphasize gender conformity transcends social status when it comes to perceptions of transgender people's gender.

[Fig. 4]

The open-ended data help to explain how respondents perceive of transgender people's gender. Those who gave congruent responses (i.e., those who perceive transgender people's gender consistent with their gender identity) typically believe it is a person's right to determine their gender identity, and it would be improper (or, occasionally, "rude") to go against that determination. Some of these respondents explained that they rely on a person's physical appearance to determine their gender because this is usually the only information they have about a person they are interacting with—although this explanation was not as common as the closed-ended data would suggest, given the large effects of physical appearance in the closed-ended data. Those who gave non-congruent responses often said sex is biologically determined, or fixed, at birth. A surprising number of people explained the transgender person's gender in terms of the presence or absence of a penis—as in, people born with a penis are male, and people born without a penis are female, with the vagina and other sex organs being mentioned far less frequently. As noted earlier, those who selected "other" frequently described the transgender person as "transgender" rather than male or female. The more inclusive respondents in this

category explained that the transgender person could classify themselves in any way they wish, while others made derogatory comments about transgender people.

[Fig. 5]

In addition to advancing knowledge about perceptions of sex and gender, these data also provide an important window into key public debates surrounding transgender rights—one of the most visible debates centering on the issue of transgender bathroom access. Respondents who participated in round one of data collection were asked to indicate which bathroom Casey should use while in public (men’s, women’s, or “other”), as well as their determination of Casey’s gender. Fig. 5 shows that these two sets of responses are very much aligned. Overwhelmingly, when respondents perceive a transgender person’s gender as non-congruent with their gender identity, they also indicate that person should use a bathroom that is not consistent with their gender identity. A parallel pattern emerges for those with congruent views toward gender and, to a lesser extent, those who selected “other” for gender. We also found similar results when assessing attitudes toward two other issues involving transgender people—namely, employment discrimination (see Fig. S2) and denial of service (see Fig. 3). In summary, these data suggest that perceptions of gender are a major factor that underlie attitudes toward transgender rights more broadly.

## **Conclusions**

Using data from the first national survey experiment of its type, we show that Americans are about evenly split as to whether they perceive a transgender person’s gender consistent with the sex they were assigned at birth, or consistent with their gender identity. We further show that a transgender person’s level of gender conformity—but not their gender identity or age—affects how other people perceive of their gender. These findings help clarify which factors do (and do

not) matter in shaping public perceptions of transgender people. Although some members of the public have suggested that transwomen pose a physical threat to cisgender women, or that teenagers are not mature enough to identify as transgender, these issues are clearly subordinate to matters of gender conformity—or “passing”—when it comes to how transgender people are perceived. Perceptions of gender, in turn, are intertwined with attitudes toward transgender rights more broadly, including the fundamental question of transgender bathroom access. Overall, these findings demonstrate that the public relies on traditional categories when conceptualizing transgender people, and that many Americans are resistant to those who defy categorization. As the number of people who identify as transgender continues to grow, further research will be needed to understand the extent to which public attitudes change to make space for these individuals.

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11. We use the term “gender” in this article rather than “sex” because we focus on social perceptions of transgender people. Although we asked respondents to indicate whether a transgender person was “male” or “female”—which are typically understood as categories of sex—most members of the public do not distinguish between sex and gender in practice.
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21. Those who selected “other” and did not write-in “transgender” gave a range of responses. About half gave some iteration of “I don’t know,” one-fifth said they would leave it up to the transgender person’s judgement, and about 10% made disparaging comments about transgender people. Perhaps surprisingly, very few respondents used terms such as “non-binary” or “genderqueer” that are common among gender scholars.

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### **Supplementary Materials:**

Materials and methods.

Sensitivity checks and additional analyses.

Table S1. Sample means by experimental condition.

Table S2. Effects of experimental manipulations on perceived sex views.

Table S3. Effects of experimental manipulations by ideology measures.

Table S4. Proportion of gender noncongruent views by identity and age for subgroups.

Table S5. Proportion of gender noncongruent views by appearance for subgroups.

Table S6. Effects of response option order.

Table S7. Effects of experimental manipulations and other factors on perceived sex without survey weights.

Figure S1. Percent of respondents who hold gender noncongruent views by experimental manipulations without survey weights.

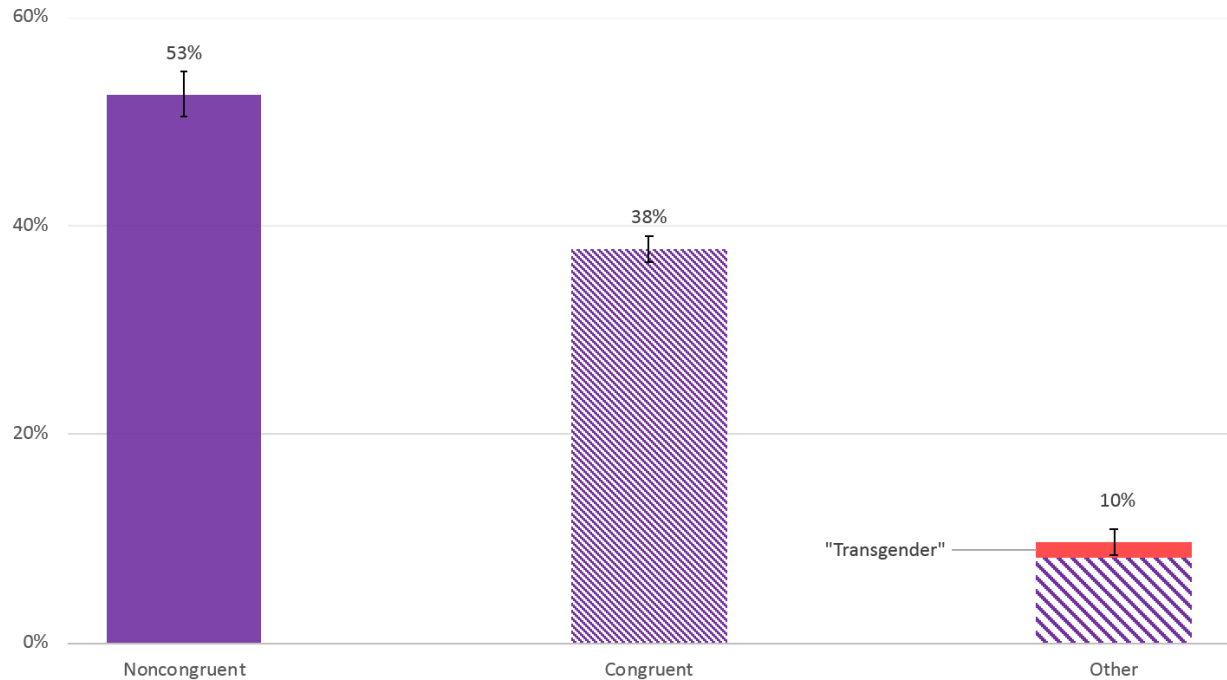
Figure S2. Average marginal effect of experimental condition and significant demographic factors on probability of selecting gender non-congruent bathroom.

Figure S3. Average marginal effect of experimental condition and significant demographic factors on probability of approving employment discrimination.

Figure S4. Average marginal effect of experimental condition and significant demographic factors on probability of approving denial of service.

Appendix S1. Vignette text.

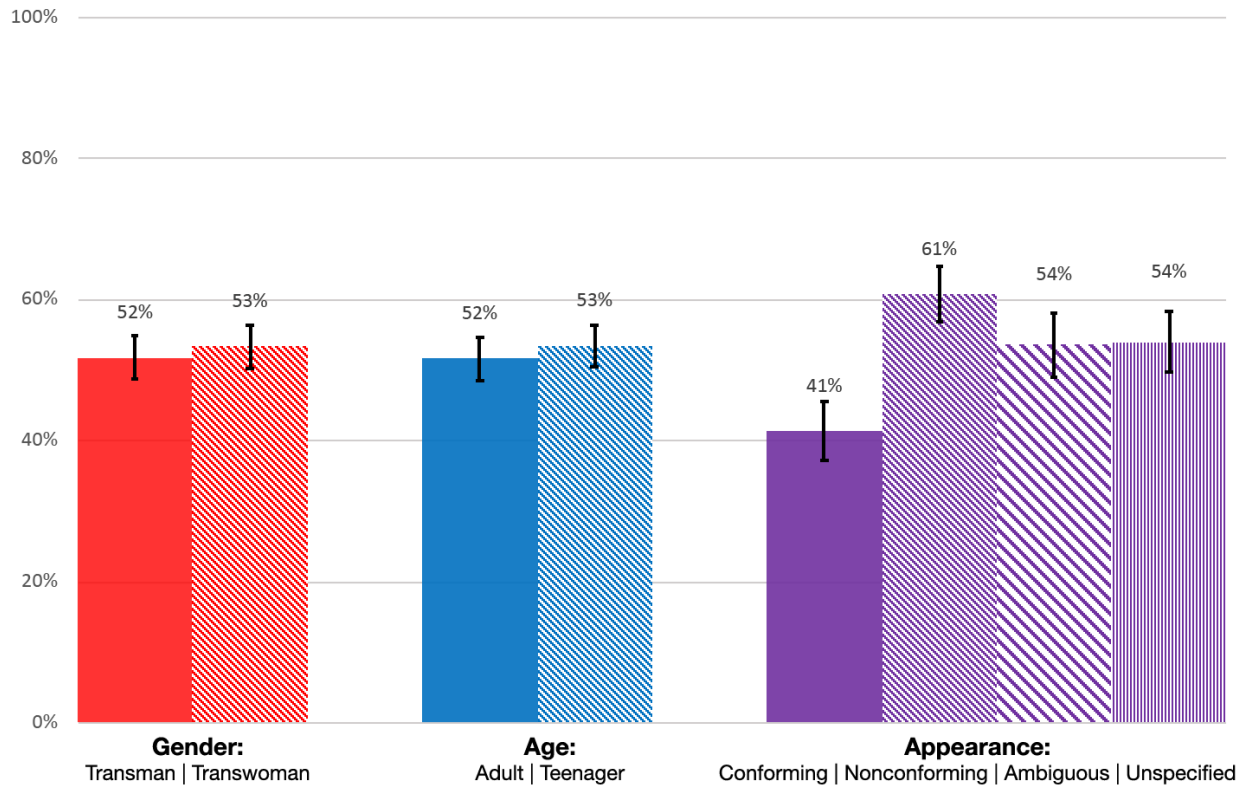
Appendix S2. Vignette-based questions.



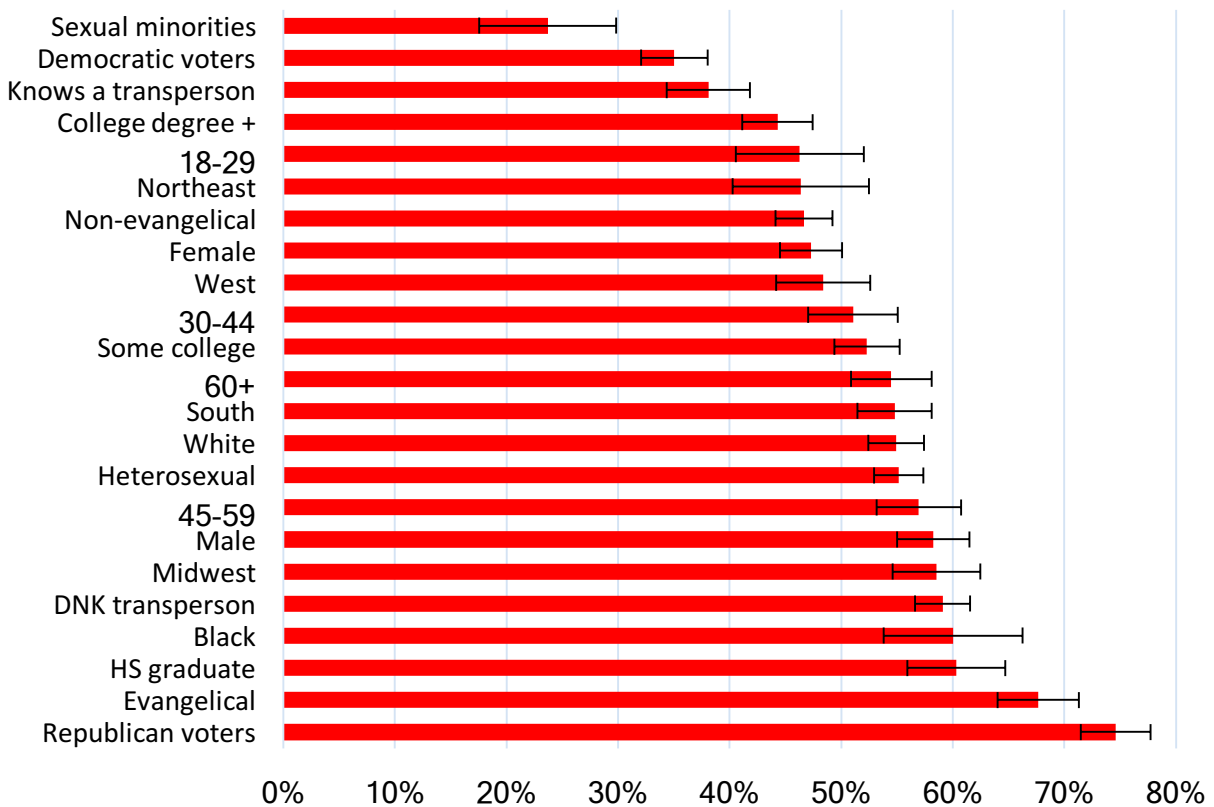
**Fig. 1. Proportion of respondents who consider transgender people’s gender to be noncongruent with their gender identity, congruent with their gender identity, or other.**

Respondents were asked whether they personally believed a transgender person to be male or female (with “other” as a third response option). These responses were sorted according to their congruence with the transgender person’s gender identity. Of those who indicated “other,” about 15% of them (or 1% of the total respondents) volunteered that the person was “transgender.” Error bars indicate 95% confidence intervals (CIs).  $n = 3,922$ .

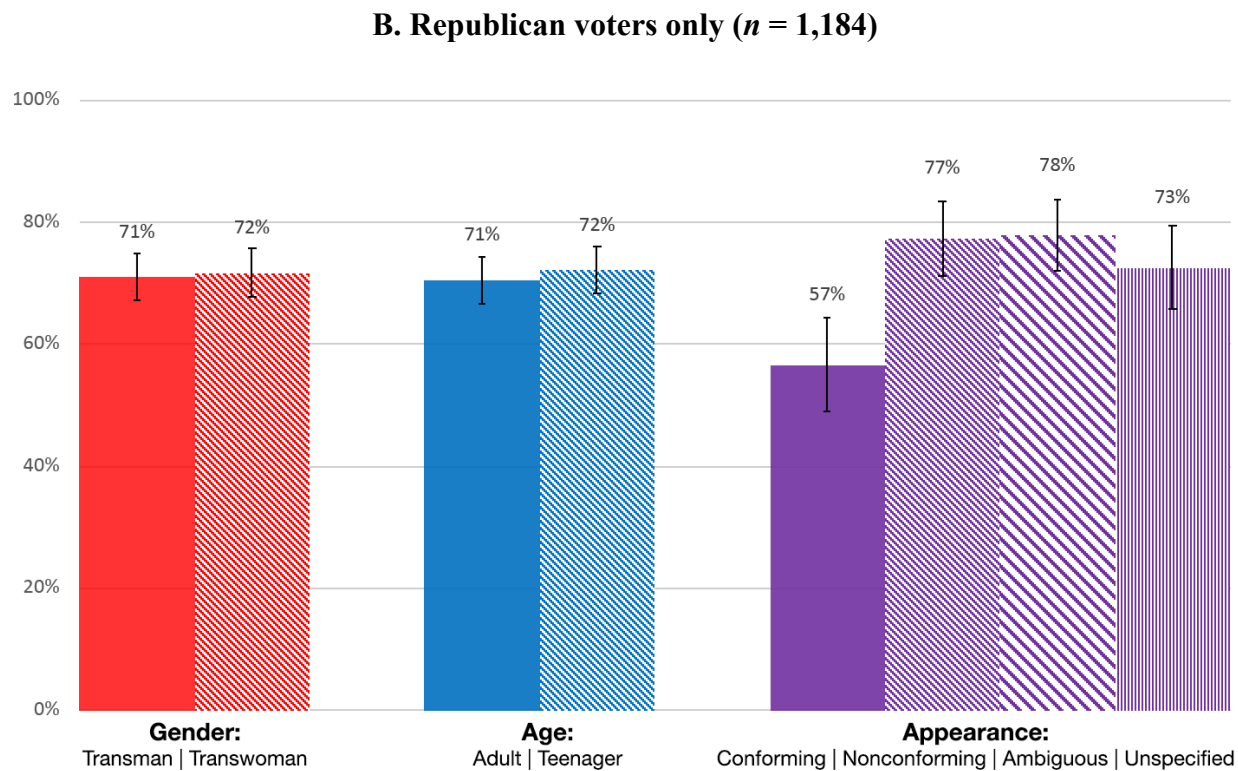
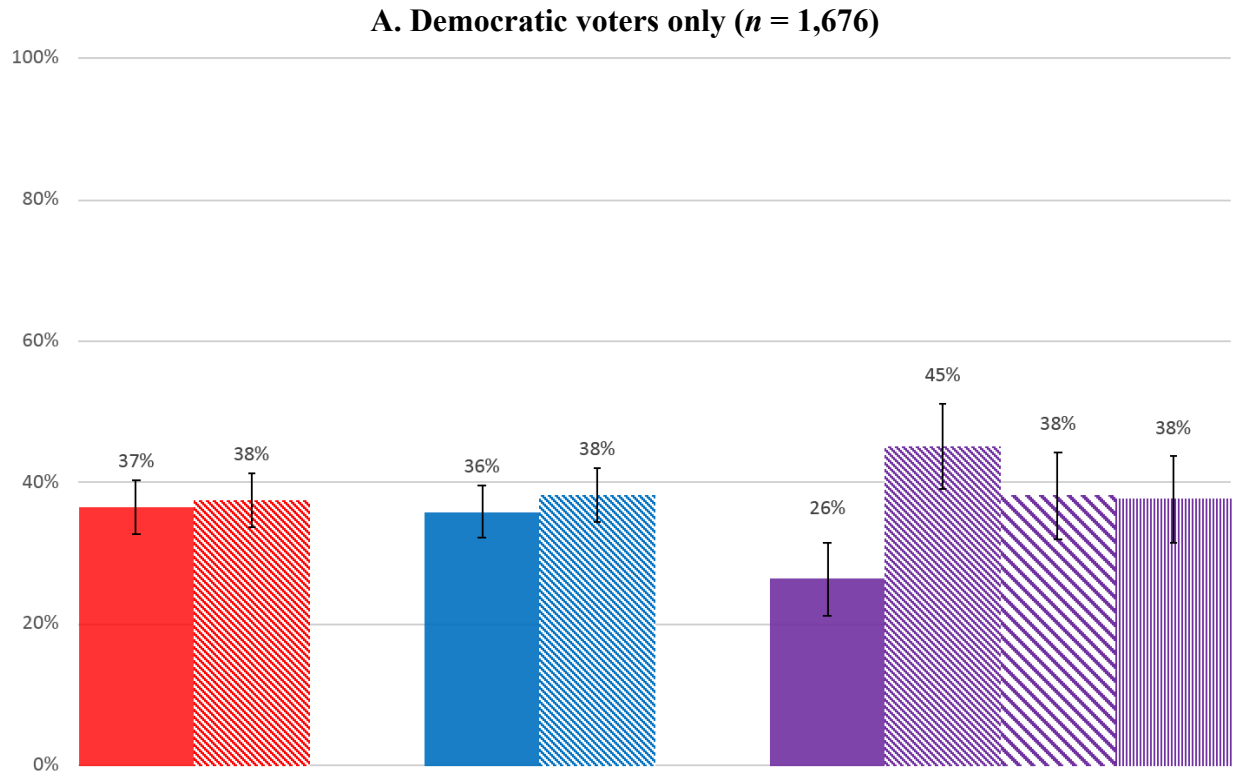




**Fig. 2. Proportion of respondents who consider transgender people’s gender to be non-congruent with their gender identity, by experimental manipulations.** Respondents were asked whether they personally believed a transgender person to be male or female (with “other” as a third response option). These responses were sorted according to their congruence with the transgender person’s gender identity; responses that were deemed non-congruent are shown. Vignettes manipulated (1) gender identity (transman or transwoman), (2) age (adult or teenager), and (3) appearance (gender conforming, gender nonconforming, ambiguous, or unspecified). Error bars indicate 95% confidence intervals (CIs).  $n = 3,922$ .

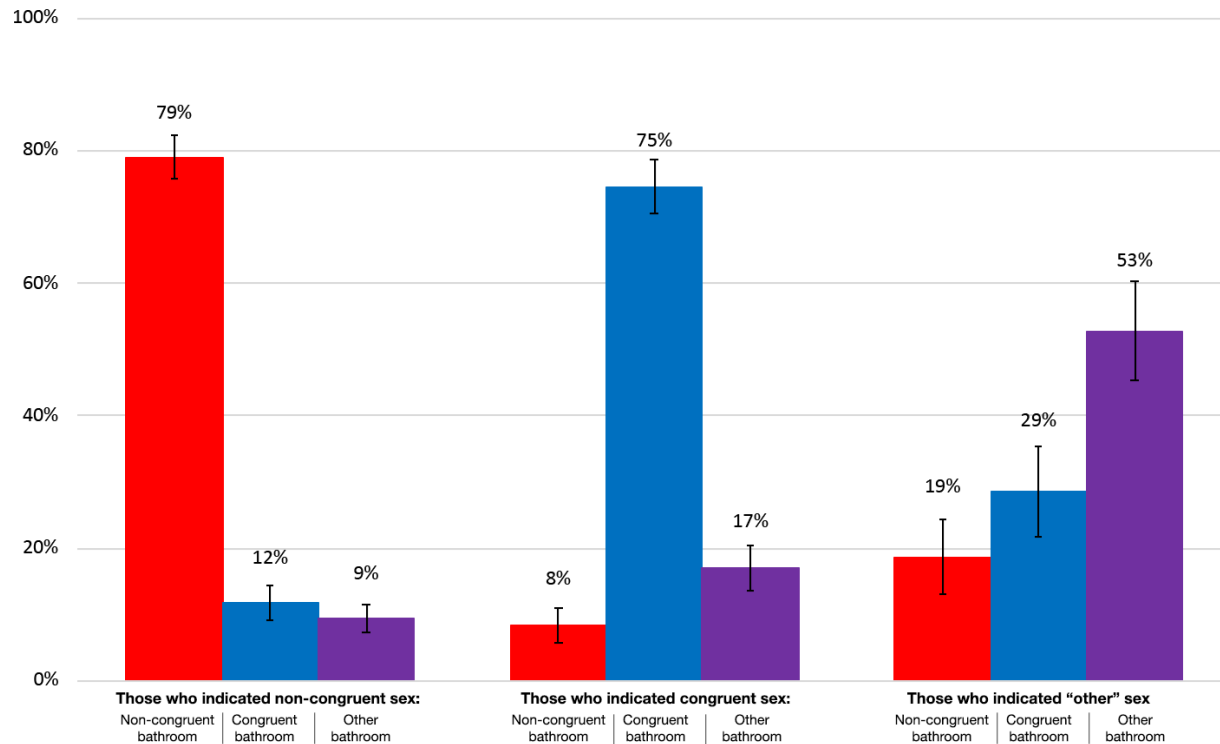


**Fig. 3. Proportion of respondents who consider transgender people’s gender to be non-congruent with their gender identity, by demographic subgroup.** Respondents were asked whether they personally believed a transgender person to be male or female (with “other” as a third response option). These responses were sorted according to their congruence with the transgender person’s gender identity; predicted probability of giving a non-congruent response shown. All models control for experimental condition and individual demographic factors. Error bars indicate 95% confidence intervals (CIs).  $n = 3,922$ .



**Fig. 4. Proportion of respondents who consider transgender people's gender to be non-congruent with their gender identity, by voting behavior. Respondents were asked whether**

they personally believed a transgender person to be male or female (with “other” as a third response option). These responses were sorted according to their congruence with the transgender person’s gender identity; responses that were deemed non-congruent are shown. Vignettes manipulated (1) gender identity (transman or transwoman), (2) age (adult or teenager), and (3) appearance (gender conforming, gender nonconforming, ambiguous, or unspecified). Respondents were also asked whether (A) they voted for Clinton, the Democratic candidate, in the 2016 election or (B) they voted for Trump, the Republican candidate, in the 2016 election. Error bars indicate 95% confidence intervals (CIs).  $n = 2,860$ .



**Fig. 5. Respondents’ stated preferences toward transgender bathroom use, by their perceptions of transgender people’s gender.** In round 1 of data collection, respondents were asked whether they personally believed a transgender person should use the men’s or women’s bathroom (with “other” as a third response option). These responses were sorted according to their congruence with the transgender person’s gender identity. Respondents also were asked whether they personally believed a transgender person to be male or female (with “other” as a third response option). These responses were sorted according to their congruence with the transgender person’s gender identity. Here, respondents’ bathroom and perceived gender responses are combined to assess the extent to which they align. Vignettes manipulated (1) gender identity (transman or transwoman), (2) age (adult or teenager), and (3) appearance (gender conforming, gender nonconforming, ambiguous, or unspecified). Error bars indicate 95% confidence intervals (CIs).  $n = 1,971$ .