Appendix for Someone like you: False consensus among party members

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June 10, 2021

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1 Sample demographics

In Table 1 below, I compare the demographics of the nationally diverse survey sample to those of the US population. All population statistics are taken from the US Census Bureau (2019a,b), except party identification, which comes from the Pew Research Center (2019). The most noticeable difference is in respondents' race: 10% more respondents identified as White than in the general population, and fewer as Hispanic. Further, slightly fewer respondents (9%) than in the population had no education beyond high school. Finally, there were noticeably more true independents in the sample, likely because my partisanship question (in contrast to the Pew study) did not have a "Don't know" option.

Table 1: Demographic proportions in US population and in nationally diverse study sample.

Demographic	US population %	Sample %	Difference
Male	49	47	-2
Female	51	53	2
18 to 24 years	12	12	0
25 to 44 years	34	39	5
45 to 64 years	33	33	0
65 years and over	21	17	-4
Republicans (incl. lean)	39	38	-1
True independents (no lean)	7	15	8
Democrats (incl. lean)	48	45	-3
No high school	11	4	-7
High school graduate	28	26	-2
Some college, no degree	18	27	9
2-year college degree	10	12	2
4-year college degree	21	21	0
Postgraduate degree	12	9	-3
White, not hispanic	63	73	10
Black or Af. Am., not hispanic	13	13	0
Hispanic	17	10	-7

2 Sample demographics

Participants were asked their opinion about the following statements (seven-point agreement scale), as well as how many Democrats or Republicans would agree with the statements:

- Increase taxes for those making over $250,000 per year.
- Prohibit the use of affirmative action by state colleges and universities.
- Prohibit the EPA from regulating greenhouse gas emissions.
- Same-sex couples should be allowed to marry.
- Illegal immigrants should not be allowed to enroll in government food stamp programs.
- Allow doctors to prescribe marijuana to patients.
- The federal government should pay for medical care for the elderly.
- The US should contribute more funding and troops to UN peace-keeping missions.

3 Model specifications

For the main analysis (section 3.1), the R code for estimating the coefficient sizes of personal opinions on perceived agreement is:

```
plm(perception ~ opinion * politicians * outparty  +
        statement * politicians * Republicans,
        data=d, index=c("respondent"))
```

`plm` estimates a linear model, and the `index` argument adds a respondent fixed effect. `outparty` is 1 if the respondent was asked about their out-party (rather than their in-party), and `politicians` is 1 if they were asked about politicians (rather than citizens). `statement` is a factor indicating which policy statement this observation is for, and `Republicans` is 1 if the respondent was asked about Republicans. The three-way interaction `statement * politicians * Republicans` is mathematically equivalent to including a separate dummy control variable for each combination of statement, target group and party that the respondents might be asked about.

For the robustness check, I look at how feelings toward a party affect the connection between personal opinion and perceived opinions in that party. The model I use is identical, except that the binary `outparty` indicator is replaced by a continuous indicator for feelings toward the party (feeling thermometer, `feeling`, coded from -50 to 50 for interpretability reasons):

```
plm(perception ~ opinion * politicians * feeling +
    statement * politicians * Republicans,
    data=d, index=c("respondent"))
```

4   Regression tables

Table 2 below shows key coefficients for the main model. Note that the main text reports coefficients of personal opinion for different combinations of in-/out-party and target group (citizens/politicians). These condition-by-condition coefficients are constructed by summing the appropriate regression coefficients. For example, the coefficient of `opinion` in the table shows the strength of the association between personal opinions and perceptions of in-party citizens. The association strength for perceptions of out-party politicians is the sum of all coefficients in the table. Confidence intervals around such constructed coefficients can be calculated from the regression coefficients' variance-covariance matrix.[1]

The coefficient on `opinion` is positive and significant, showing that there is false consensus among in-party citizens. The coefficient on `opinion x politicians` is small but marginally significant, suggesting that this false consensus effect among the in-party is somewhat smaller for in-party politicians than it is for in-party citizens. The coefficient on `opinion x outparty` is large and significant, meaning that false consensus is much weaker among out-party than in-party citizens.

As all three-way interactions, the coefficient on `opinion x politicians x outparty` is difficult to interpret directly. It is the same size but the opposite sign of `opinion x politicians`. This indicates that among the out-party, in contrast to the in-party, there is no difference between citizens and politicians.

Table 3 shows coefficients for the robustness check model. This time, the `opinion` coefficient relates to a party that the respondent feels lukewarm about (neutral feeling thermometer score). It shows the estimated association between opinion and perceptions of citizens in that party—in other words, false consensus. The `opinion x politicians` coefficient shows that false consensus is slightly (but not significantly) weaker for politicians in this "lukewarm" party. More interestingly, the significant and positive coefficient on `opinion x feeling` shows how false consensus among citizens would increase with each one-point step up in thermometer warmth.

The `opinion x politicians x feeling` coefficient is negligible, showing that the way false consensus increases with warmth is no different for politicians than for citizens. Linear combinations of coefficients in the table can be used to calculate false consensus coefficients for different groups with different levels of thermometer warmth.

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[1]The relevant formula is: $var(\hat{\beta}_1 + \hat{\beta}_2) = var(\hat{\beta}_1) + var(\hat{\beta}_2) + 2\,cov(\hat{\beta}_1, \hat{\beta}_2)$

Table 2: Coefficients of personal opinion and its interactions with in/out-party status and target group in a model of party perceptions.

	Dependent variable:
	Perceived policy agreement
opinion	6.914***
	(0.448)
opinion x politicians	−1.060*
	(0.623)
opinion x outparty	−5.605***
	(0.706)
opinion x politicians x outparty	0.997
	(1.009)
Observations	7,929
R²	0.214
Note:	*p<0.1; **p<0.05; ***p<0.01

Table 3: Coefficients of personal opinion and its interactions with feeling thermometer scores and target groups in a model of party perceptions.

	Dependent variable:
	Perceived policy agreement
opinion	3.111***
	(0.366)
opinion x politicians	−0.224
	(0.495)
opinion x feeling	0.084***
	(0.012)
opinion x politicians x feeling	−0.007
	(0.016)
Observations	7,097
R^2	0.279
Note:	*p<0.1; **p<0.05; ***p<0.01

5 Out-group homogeneity bias

I find neither strong assimilation, nor contrast, between perceptions of the out-party and personal opinions. One consideration might be that this is due to out-group homogeneity bias: the perception that out-group members are "all the same", while in-group members are diverse. If that is the case, then the out-party might always be perceived as agreeing nearly 100% (or disagreeing nearly 100%) with the statements, according to its its ideology. For example, if I am not a Republican, I might think that all Republicans are against taxing the rich.[2] This bias may be stronger than any tendency to adjust my perceptions of the out-party to match or contrast with my own opinions.

As we can see from Figure 1 (main text), this is not the case. Regardless of respondents' own opinions, their average perceptions of out-party agreement hover around 50% for most issues. A 50% estimate, of course, means the out-party is seen as totally divided—as heterogeneous as can be. In other words, there is not a general tendency to see the out-party as united in favor of some policies (close to 100% agreement), and united against others (close to 0% agreement). Out-group homogeneity bias does not explain the absence of strong false consensus or contrast with the out-party.

6 Perception errors and real opinion trends

The main text analyses reveal large variation in respondents' guesses of partisan policy stances, but also systematic errors. That is, *average* perceived agreement is often quite different from *actual* measurements of partisan agreement with the policy. Here, I examine whether this could be due to the fact that "real" agreement measurements were taken in 2013, whereas respondents' perceptions come from a 2019 survey. I start from respondents' perceptions of citizens' opinions, and compare the errors they make to real trends in comparable poll questions. If the directions of the errors correspond to the trends, then the errors are likely due to the mismatch in timing.

Table 4 shows the errors in people's average estimates of how many ordinary Democrats and Republicans agree with each policy. Table 5 shows trends in related poll questions between approximately 2013 and 2019. Comparing the tables reveals two distinct patterns. Perceived agreement is typically more conservative,

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[2]This would not be correct: 90% of Republican politicians, and only 50% of ordinary Republicans are against higher taxes on incomes over $250,000 per year (Broockman, 2016). In fact, I made sure that for each party and target group, the list of eight policies included statements that had attracted strong agreement (or strong disagreement), but also ones that had split the group roughly evenly.

Table 4: Real and average perceived agreement with policy statements among ordinary (mass) partisans. Real agreement from 2013 survey (Broockman, 2016), perceptions from 2019 survey.

Issue	Party	Real agreement (2013)	Average guess (2019)	Error direction
Tax 250k	Democrat	92	69	too conservative
Tax 250k	Republican	50	43	too conservative
No affirmative action	Democrat	43	43	none
No affirmative action	Republican	70	53	too liberal
No EPA greenhouse rules	Democrat	16	42	too conservative
No EPA greenhouse rules	Republican	39	52	too conservative
Gay marriage	Democrat	76	70	too conservative
Gay marriage	Republican	37	37	none
Illegal, no food stamps	Democrat	68	47	too liberal
Illegal, no food stamps	Republican	90	71	too liberal
Medical marijuana	Democrat	79	71	too conservative
Medical marijuana	Republican	59	46	too conservative
Medicare	Democrat	89	70	too conservative
Medicare	Republican	72	55	too conservative
UN peacekeeping	Democrat	45	55	too liberal
UN peacekeeping	Republican	30	44	too liberal

and occasionally more liberal than real agreement (as measured in 2013). Real agreement, on the other hand, almost always moved towards the liberal side. In other words, real shifts in public opinion are likely not a major cause of the errors we see in people's perceptions. If it had been, respondents' average guesses would have had to be "too liberal" in almost all cases.

Table 5: Trends in agreement with policy statements among ordinary (mass) partisans.

Source	Issue	Related policy	Party	Start	End	Pct. start	Pct. end	Trend
GSS	Government should reduce income differences	Tax 250k	Democrat	2012	2018	86	88	more liberal
GSS	Government should reduce income differences	Tax 250k	Republican	2012	2018	23	21	more conservative
CCES	Blacks should work way up without help	Affirmative Action	Democrat	2014	2018	41	27	more liberal
CCES	Blacks should work way up without help	Affirmative Action	Republican	2014	2018	85	83	more liberal
CCES	Blacks held back by slavery and discrimination	Affirmative Act.	Democrat	2013	2018	53	72	more liberal
CCES	Blacks held back by slavery and discrimination	Affirmative Act.	Republican	2013	2018	11	17	more liberal
CCES	Renewable fuel requirement	EPA	Democrat	2014	2018	77	82	more liberal
CCES	Renewable fuel requirement	EPA	Republican	2014	2018	38	38	none
CCES	Strengthen Clean Air Act at cost of jobs	EPA	Democrat	2014	2018	69	83	more liberal
CCES	Strengthen Clean Air Act at cost of jobs	EPA	Republican	2014	2018	23	26	more liberal
CCES	Give legal status to long-term immigrants	Illegal immigrants	Democrat	2013	2017	62	75	more liberal
CCES	Give legal status to long-term immigrants	Illegal immigrants	Republican	2013	2017	21	32	more liberal
CCES	Legalize gay marriage	Gay marriage	Democrat	2013	2016	70	76	more liberal
CCES	Legalize gay marriage	Gay marriage	Republican	2013	2016	31	38	more liberal
GSS	Legalize gay marriage	Gay marriage	Democrat	2012	2018	58	74	more liberal
GSS	Legalize gay marriage	Gay marriage	Republican	2012	2018	28	54	more liberal
GSS	Legalize marijuana	Medical marijuana	Democrat	2012	2018	30	46	more liberal
GSS	Legalize marijuana	Medical marijuana	Republican	2012	2018	22	27	more liberal
Pew	Discontinue Medicare/ Medicaid	Medicare	Democrat	2014	2019	2	2	none
Pew	Discontinue Medicare/ Medicaid	Medicare	Republican	2014	2019	13	11	more liberal
CCES	Repeal Affordable Care Act	Medicare	Democrat	2013	2018	28	16	more liberal
CCES	Repeal Affordable Care Act	Medicare	Republican	2013	2018	86	77	more liberal

Sources: General Social Survey (Smith et al., 2018); Cooperative Congressional Election Study (Kuriwaki, 2020); Pew polls (Pew Research Center, 2014; Jones, 2020).

7 Perceptions, opinions and reality

In this section, I lay out the methodology behind the perception–opinion and perception–reality correlations in main text Section 3.3. Correlations are helpful because they are unit-free, meaning we can compare the strengths of the two connections. However, it is important to understand what these correlations mean. To do this, I start by proposing a simplified but useful causal model, as shown in Figure 1.

In the model, I start from the assumption that every policy has a number of characteristics, such as its popularity or cost, which feed into real agreement with the policy in each party. These characteristics might also feed into respondents' own opinions about the policy. Next, real policy agreement in the parties gives rise to perceptions of the parties. Finally, party perceptions may feed into opinions (partisan cueing, a.k.a. persuasion), but opinions may also shape perceptions of parties (egocentric bias, a.k.a. projection). Together, these two causal pathways create a correlation between perceptions and opinions (false consensus).

7.1 The perception–opinion connection

First, the model makes clear that the correlation between perceptions and opinions is quite complex to understand. That is not just because they are part of a loop, with both feeding into one another. It is also because characteristics of the policy can influence both. Take, for example, Medicare. This is a very popular program that the vast majority of Americans come to benefit from once they reach old age. For that reason, agreement that Medicare should be kept might be very high in both parties. And for the very same reason, respondents might feel very positively about the policy.

In order to separate out false consensus from this connection created by real policy characteristics, I calculate the correlation between opinions and perception separately for each combination of policy statement, target group (citizens/politicians) and target party (Republican/Democrat). For example, I might look at the correlation between respondents' opinions about Medicare, and their perceptions of Republican politicians' stances on Medicare. Within this set of observations, there is no more variation in real issue characteristics or real partisan agreement, leaving the model in Figure 2. I then average over all 32 (8 policy statements x 2 target groups x 2 parties) combinations to get an overall measure of the opinion–reality connection.

Once again, I calculate this measure separately for respondents who were asked about their in-party and their out-party. Both cueing/persuasion and egocentric bias/projection are thought to be much weaker for out-parties.
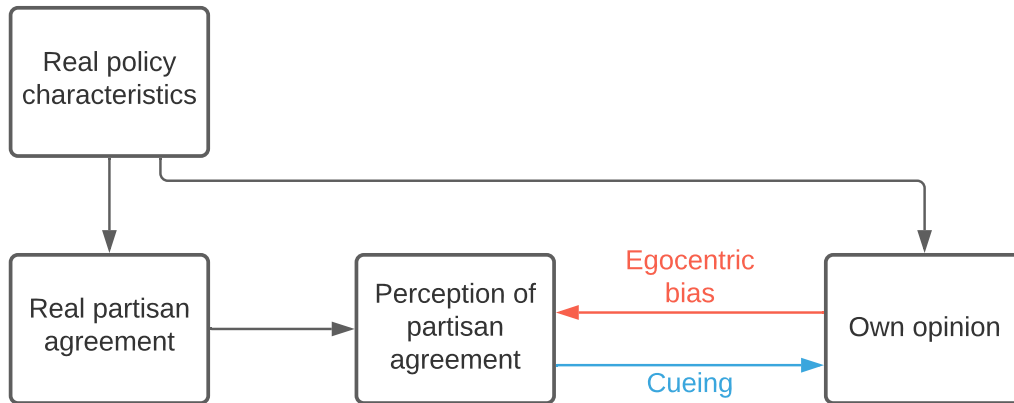
Figure 1: Causal model connecting partisan agreement with a policy to perceptions of partisan agreement, and to respondents' own opinion about the policy. The red arrow from opinions to party perceptions would be the causal effect of egocentric bias in perceptions. The blue arrow from perceptions of parties to personal opinions is known as partisan cueing.
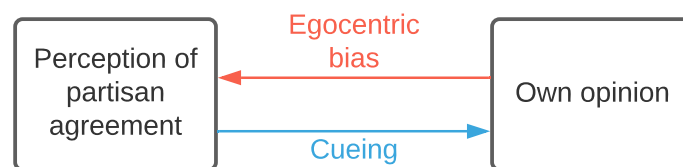

Figure 2: Causal model connecting perceptions of partisan agreement to respondents' own opinion about the policy, *within one combination of policy statement, target group and party*. Policy characteristics, and real partisan agreement with the policy, disappear from the model as they are constant.

7.2 The perception–reality connection

The model in Figure 1 also shows why estimates of the causal connection between perceptions and reality are likely to be upward biased. According to the model, the correlation between real partisan agreement and perceptions is the product of two possible pathways.

The first pathway—the one we are interested in here—is the causal effect of reality on perceptions. The second, backdoor pathway goes through real policy characteristics. That is, a policy like Medicare might have high real partisan agreement, simply because it is a generally popular program. For the same reason, individual participants might personally be in favor of Medicare. Next, due to egocentric bias, they might infer from their own opinion that other partisans must also be in favor of the program. In other words, even if a participant had no information whatsoever about real partisan agreement, this pathway could create correlation between real partisan agreement and their perception of it.

For that reason, the correlation between real agreement and perceived agreement is a likely overestimate of the causal effect of reality on perceptions. In this case, we cannot apply the strategy used above for the perception–opinion connection. The reason is that within combinations of policy statement, target group (citizens/politicians) and target party, there is no variation in real partisan agreement. Therefore, we can only calculate the correlation between reality and perceptions, pooling all respondents and all statement–target group–party combinations; this is a biased estimator.

I calculate the reality–perception correlation separately for respondents who were asked about their in-party and respondents who were asked about their out-party, because it might be easier to get an accurate picture of one's in-party than of one's out-party. In interpreting these correlations, besides their potential bias, it is helpful to keep in mind that moderate correlations with reality are not the same as moderate *accuracy*. The slope of the regression line between perceptions and reality is much less than one: people's guesses are on average too close to 50% compared to the real numbers. Figure 3 in the main text illustrates this.

7.3 High-knowledge respondents

Finally, we may wonder whether respondents who are higher in political knowledge are more correct in their perceptions—after all, they are also the most politically active group (Carpini and Keeter, 1996). I measured knowledge with five factual questions about politics. Table 6 shows the correlations between perceptions and real agreement, and between perceptions and opinions. It recaps correlations for the full sample, and compares them to high-knowledge respondents. These are the 50.4% of respondents who got at least three questions right.

		all respondents	high-knowledge
in-party	perception–reality	0.37	0.47
in-party	perception–opinion	0.45	0.44
out-party	perception–reality	0.25	0.37
out-party	perception–opinion	0.09	$<.01$

Table 6: Correlations between perceived and real agreement with a policy, and between perceive agreement and personal opinion. Comparison between all respondents, and the 50% most politically informed respondents.

We can see that high-knowledge respondents have tighter connections between perceptions and reality. At the same time, we see almost no difference in false consensus among high-knowledge respondents and respondents as a whole. Knowledgeable respondents are no less likely to perceive their parties as "too close" to themselves. The small tendency toward false consensus with the out-party that we see in the general sample disappears among high-knowledge respondents.

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