**Intellectualism, Anti-Intellectualism, and Epistemic Hubris in Red and Blue America**

**Online Appendix**

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**Section I: 2020 Replication including *Educational Attainment* and *Educational Elitism***

**in *Intellectual Identity***

This section describes the reestimation of our 2020 models predicting *Epistemic Hubris* and *Party Identification* using an alternative measure of *Intellectual Identity* that adds *Educational Attainment* and *Educational Elitism* to the principal component index. This alternative measure, rescaled to 0-1, has a mean of .38, a standard deviation of .24, an eigenvalue of 2.59, and a Cronbach’s alpha of .65. The principal component loadings are as follows:

* *Intellectual Occupation*=.36
* *Intellectual College* *Major*=.49
* *Pleasure Reading*=.17
* *News Attentiveness*=.16
* *Artistic Interest*=.18
* *“Nerd” Identity*=.20
* *Self-Perceived Imaginativeness*=.12
* *Educational Attainment*=.51
* *Educational Elitism*=.47

Table OA1 reestimates Models 1, 3 and 4 in Table 4 from the main text, but with this alternative measure of *Intellectual Identity*. We see that the results are nearly identical to those in Table 4, showing that *Intellectual Identity* is a strong predictor of *Epistemic Hubris* across the board.

**Table OA1**

Intellectual Identity (with educational characteristics), Anti-Intellectual Affect,

and Epistemic Hubris

|  |  |  |  |
| --- | --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) | *b* (s.e) |
|  |  |  |  |
| *Intellectual Identity* | **.09 (.04)** | **.15 (.04)** | **.20 (.07)** |
| *Anti-Intellectual Affect*  |  | **.16 (.03)** | **.20 (.07)** |
| *Intellectual ID\*Anti-Intellectual Affect* |  |  | -.11 (.13) |
| *White* | .03 (.02) | .03 (.02) | .03 (.02) |
| *Female* | .00 (.02) | .00 (.02) | .00 (.02) |
| *Age* | .05 (.03) | .03 (.03) | .03 (.03) |
| *Income* | **.11 (.04)** | **.13 (.04)** | **.13 (.04)** |
| Constant | .28 (.03) | .18 (.03) | .16 (.04) |
| n | 992 | 991 | 991 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* corresponding to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Table OA2 reestimates Models 1, 3 and 4 in Table 5 from the main text, which are the more fully specified models, using the alternative measure of *Intellectual Identity*. Again, the patterns are essentially unchanged.

**Table OA2**

Intellectual Identity (with educational characteristics), Anti-Intellectual Affect,

and Epistemic Hubris

|  |  |  |  |
| --- | --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) | *b* (s.e) |
|  |  |  |  |
| *Intellectual Identity* | **.11 (.04)** | **.13 (.04)** | **.16 (.07)** |
| *Anti-Intellectual Affect*  |  | **.09 (.04)** | .12 (.07) |
| *Intellectual Identity\*Anti- Intellectual Affect* |  |  | -.07 (.13) |
| *White* | .02 (.02) | .02 (.02) | .02 (.02) |
| *Female* | -.02 (.02) | -.02 (.02) | -.02 (.02) |
| *Age* | -.01 (.03) | -.01 (.03) | -.01 (.03) |
| *Income* | **.12 (.04)** | **.13 (.04)** | **.13 (.04)** |
| *Christian Traditionalism* | .05 (.03) | .05 (.03) | .05 (.03) |
| *Ideological ID (conservative high)* | **.13 (.03)** | **.10 (.04)** | **.10 (.04)** |
| *Generic Populism* | **.29 (.04)** | **.27 (.04)** | **.27 (.04)** |
| *Partisan Strength* | **.06 (.02)** | **.07 (.02)** | **.07 (.02)** |
| *Ideological Strength* | **.11 (.02)** | **.11 (.02)** | **.11 (.02)** |
| *Authoritarianism* | -.03 (.03) | -.05 (.03) | -.04 (.03) |
| Constant | -.01 (.04) | -.03 (.04) | -.04 (.05) |
| n | 964 | 963 | 963 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* corresponding to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Table OA3 reestimates the multinomial logistic regression models 1, 3 and 4 in Table 8, predicting *Party Identification*. Again, the patterns are highly smilar to those we report in the main text.

**Table OA3**

Intellectual Identity, Anti-Intellectual Affect, and Party ID (Independent Leaners=Partisans)

|  |  |  |  |
| --- | --- | --- | --- |
| Covariates | *Pr. Δ*(s.e) |  *Pr. Δ* (s.e) | *Pr. Δ*(s.e) |
|  | D | R | D | R | D | R |
|  |  |  |  |  |  |  |
| *Intellectual Identity* | **.51 (.06)** | **-.49 (.06)** | **.22 (.06)** | **-.23 (.06)** | **.65** **(.14)** | **-.52** **(.17)** |
| *Anti-Intellectual Affect*  |  |  | **-.77 (.05)** | **.75 (.05)** | **-.36 (.13)** | **.53 (.12)** |
| *Intellectual ID\*Anti-Intellectual Affect* |  |  |  |  | **-1.01 (.29)** | **.60 (.30)** |
| *White* | **-.20** **(.03)** | **.25****(.03)** | **-.18 (.03)** | **.22 (.03)** | **-.18 (.03)** | **.23 (.03)** |
| *Female* | **.13****(.03)** | **-.09****(.03)** | **.10 (.03)** | **-.06 (.03)** | **.10 (.03)** | **-.06 (.03)** |
| *Age* | .02(.06) | .00(.06) | .09 (.06) | -.09 (.06) | .09 (.06) | -.08 (.06) |
| *Income* | -.05(.07) | .06 (.07) | **-.16 (.07)** | **.17 (.06)** | **-.16 (.07)** | **.17 (.06)** |
| *Christian Traditionalism* | **-.35** **(.04)** | **.39 (.04)** | **-.18 (.05)** | **.23 (.04)** | **-.17 (.04)** | **.22 (.04)** |
| n | 998 | 998 | 997 | 997 | 997 | 997 |

**NOTE:** Cell entries are differences in the predicted probability of identifying as either a Democrat (D) or a Republican (R), converted from multinomial logistic regression coefficients, corresponding to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

**Section II: Intellectual Identity, Anti-Intellectual Affect**

**and Intra-Partisan Epistemic Hubris (2020)**

Though we observe that intellectual identity is strongly associated with Democratic partisanship and anti-intellectual affect is strongly associated with Republican partisanship, there remain solid numbers of people within each coalition who do not conform to these stereotypes—holdovers, perhaps, from the not-too-distant past when the party brands were almost the opposite of what they are now. As such, we posit that when a person’s intellectual proclivities and partisan identity interact in ways that are not consistent with the dominant stream within each party, she may feel cross-pressured and experience cognitive dissonance—which triggers epistemic uncertainty. On the other hand, when a person’s intellectual proclivities line up with the majority of her partisan counterparts, social-psychological reinforcement takes place, giving her no reason to doubt the veracity of her factual perceptions (e.g., Campbell et al. 1960, Powell 1976, Roccas and Brewer 2002, Mutz 2002, Mason 2016). [[1]](#footnote-1)

Accordingly, given that Democratic social networks and messaging tend to champion intellectual pursuit and to favor mainstream/traditional sources of information, Democratic intellectuals who are also pro-intellectual have no reason to feel cross-pressured. The same is true of non-intellectual, anti-intellectual Republicans, given the cultural climate and official party line of the Republican party that considers university faculty to be biased, the mainstream press to be “fake news,” and the whole exercise of scholarly pursuit to be somewhat indulgent if not dishonest. Each of these groups, within their respective cosmopolitan vs. provincial cultural habitats, is decreasingly likely to encounter many influences that would challenge their tendencies to view objective reality in ways that is consistent with their attitudinal predispositions—and if they do, those challenging messages surely are swamped under the deluge of reinforcing messages. By contrast, being an intellectual/pro-intellectual Republican or a non-intellectual/anti-intellectual Democrat may well sow confusion, insecurity, or doubt, because one is routinely encountering messages from people one admires which are at odds with one’s own status or predilections.

To state things succinctly:

**H5:**Among Democrats, intellectuals and pro-intellectuals exhibit greater hubris than do non-intellectuals and/or anti-intellectuals

**H6:**Among Republicans, non-intellectuals and anti-intellectuals exhibit greater hubris than do intellectuals and/or pro-intellectuals

To evaluate these hypotheses, we estimated two models that look like those in Tables 4 and 5 of the main text, but add *Party Identification* to both, along with and its interaction with *Intellectual Identity* in Model 1 and its interaction with *Anti-Intellectual Affect* in Model 2.

Table OA4 displays the results while only accounting for the demographic covariates as controls.

**Table OA4**

Intellectual Identity, Anti-Intellectual Affect, and Epistemic Hubris

|  |  |  |
| --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) |
|  |  |  |
| *Party ID (GOP high)* | .02 (.04) | **-.20 (.04)** |
| *Intellectual Identity* | **.18 (.06)** | **.16 (.04)** |
| *Intellectual ID \* Party ID* | .04 (.09) |  |
| *Anti-Intellectual Affect*  | **.12 (.04)** | -.08 (.05) |
| *Anti-Intellectual Affect \* Party ID* |  | **.46 (.08)** |
|  |  |  |
| *White* | .02 (.02) | .00 (.02) |
| *Female* | .00 (.02) | .00 (.02) |
| *Age* | .03 (.03) | .02 (.03) |
| *Income* | **.15 (.04)** | **.12 (.04)** |
| Constant | .16 (.03) | .27 (.04) |
| n | 992 | 992 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* corresponding to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

We see in Results Column 1 that the data support the first part of *H5*: among Democrats, the most intellectual respondents tend to be about 18 points more hubristic on the 0-1 scale than are the least intellectual respondents (p<.05), even while controlling for intellectual affect. Less expectedly, the interaction term is statistically indistinguishable from zero, revealing that the relationship between *Intellectual Identity* and *Epistemic Hubris* is comparably present among Republicans. It is worth noting, though, that this relationship among Republicans is far less consequential than it is among Democrats, because—as we report in the main text—*Intellectual Identity* is far less common among the former group than the latter.

The second results column reveals more striking results, in support of the second part of *H5* and especially the second part of H6. First, the coefficient corresponding to *Party ID* indicates that among those who are the most pro-intellectual, Democrats tend to express greater *Epistemic Hubris* to the tune of about 20 decimal points on the 0-1 scale. Moreover, the *Anti-Intellectual Affect* coefficient indicates that among Democrats, the most pro-intellectual Democrats score about eight points higher on the index than do the most anti-intellectual respondents, though this relationship is not statistically reliable. It is the interaction term coefficient that really stands out, though, showing that partisanship dramatically alters this relationship. Specifically, it indicates that the most anti-intellectual Republicans tend to score about 42 decimal points higher in *Epistemic Hubris* than the most pro-intellectual Republicans do (-.08+.50; p<.001).

Table OA5 displays the results while also accounting for all of the additional potential confounds that we describe in the main text. These patterns follow those we just described with respect to *Anti-Intellectual Affect*, but they are notably weaker with respect to *Intellectual Identity*, becomingstatistically indistinguishable from zero (it is worth mentioning, however, that when we measure *Intellectual Identity* more fully, with *Education* and *Educational Elitism* included in the index rather than as controls, the relationship between *Intellectual Identity* and *Epistemic Hubris* holds in this more fully specified model).

**Table OA5**

Intellectual Identity, Anti-Intellectual Affect, and Epistemic Hubris (fuller specification)

|  |  |  |
| --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) |
|  |  |  |
| *Party ID (GOP high)* | .02 (.04)  | **-.17 (.04)** |
| *Intellectual Identity* | .10 (.06) | **.09 (.05)** |
| *Intellectual ID \* Party ID* | .04 (.09) |  |
| *Anti-Intellectual Affect*  | **.09 (.03)** | **-.09 (.06)** |
| *Anti-Intellectual Affect \* Party ID* |  | **.38 (.08**) |
|  |  |  |
| *White* | .01 (.02) | .00 (.02) |
| *Female* | -.02 (.02) | -.01 (.02) |
| *Age* | -.01 (.03) | -.02 (.03) |
| *Income* | **.13 (.04)** | **.11 (.04)** |
| *Educational Attainment* | **.07 (.04)** | **.08 (.04)** |
| *Educational Elitism* | -.02 (.03) | -.02 (.03) |
| *Christian Traditionalism* | .04 (.03) | .04 (.03) |
| *Ideological ID (conservative high)* | **.09 (.04)** | **.09 (.04)** |
| *Generic Populism* | **.27 (.04)** | **.27 (.04)** |
| *Partisan Strength* | **.07 (.02)** | **.05 (.02)** |
| *Ideological Strength* | **.10 (.02)** | **.10 (.02)** |
| *Authoritarianism* | -.05 (.03) | -.03 (.03) |
| Constant | -.04 (.05) | .04 (.05) |
| n | 963 | 963 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* corresponding to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Overall, our empirical tests are mostly consistent with our theoretical argument and hypotheses: among Democrats, intellectuals and pro-intellectuals tend to exhibit greater hubris than do non-intellectuals and/or anti-intellectuals. By contrast, among Republicans, anti-intellectuals tend to exhibit much greater hubris than pro-intellectuals, regardless of whether they are intellectuals themselves or not. Thus, our theory of social psychological reinforcement vs. cross-pressure, as it relates to intellectual characteristics and partisanship, is partially supported.

**Section IV: 2019 Pilot Study**

This pilot study uses nationally representative survey data obtained from a module we fielded as part of the 2019 Cooperative Congressional Election Study (CCES; n=894 registered voters). There are five primary differences between this study and the study we describe in the main text and in Section 3 of these online materials (besides the fact that the data were collected one year earlier):

* The immigration claim in the *Epistemic Hubris* index references crime, not the economy
* Our data collection did not enable us to distinguish *Epistemic Hubris* from a *Confident Personality*, as we do in 2020
* The *Intellectual Identity* measure is much cruder, and includes both *Educational Attainment* and *Eductional Elitism*—measures we use as controls in the 2020 analyses (for the purpose, in 2020, of providing as stringent a test as possible of the hypothesis)
* The *Anti-Intellectual Affect* measure is also much cruder; it includes only one indicator instead of five
* Our data collection did not enable us to include as many potentially confounding covariates in our fully specified models

With those caveats in mind, the 2019 data are fully consistent with the 2020 data, providing some indication of our results’ robustness across years and measures.

**Measuring Epistemic Hubris**

To measure *Epistemic Hubris*, we used principal components analysis to create an index of certitude regarding nine epistemic claims relating to salient public policy debates for which the best available evidence is inconclusive, at best (Cronbach’s alpha=.73; eigenvalue=2.80). The original response scale to each claim was five-points (Certainly True, Probably True, Don’t Know, Probably False, Certainly False), which we folded into a dichotomous measure where “Certainly” responses on either side of the scale=1 and other responses=0). The nine epistemic claims, the order of which we randomly assigned to respondents, are as follows:

* “If unchecked, the US national debt will cause major economic damage”
* “If college were free, there would be much less economic inequality”
* “Gun control reduces mass shootings”
* “The quality of health care is better in many ways in the US than in Canada”
* “Unauthorized immigrants commit more crimes than natural born citizens do”
* “Life begins at conception”
* “Significant increases in the minimum wage reduce poverty”
* “Charter schools harm regular public schools”
* “When it comes to success, grit is more important than luck”

Reviews of the relevant literature pertaining to each of these claims, demonstrating their empirical inconclusiveness, are available in Section 1 of these supplementary materials.

We rescaled the index to 0-1 for analysis (mean=.40; (s.d.=.27), indicating that the average respondent expressed certitude with respect to four of the nine epistemic disputes. What is more, thirty-five percent (35%) of sample respondents expressed certainty with respect to at least a majority (5) of the epistemic disputes, and a quarter of respondents (25%) expressed certainty regarding at least 6 of the epistemic disputes. Republicans (and Independents who lean Republican) are slightly more likely to exhibit such unwarranted certitude (mean=.45; s.d.=.27), but Democrats/Democratic-leaners are not far behind (mean=.38 s.d.=.25) These numbers are consistent with what we have reported elsewhere, with somewhat different items and including multiple years (Barker, Marietta, and DeTamble 2021).

Table OA6 breaks things down by issue. We see, not surprisingly, that the epistemic disputes that inspire the most certainty are those that pertain to high profile Red/Blue Culture War issues: gun control, immigration, and especially whether human life begins at conception (and thus whether abortion is the taking of a human life). Epistemic disputes that pertain to non-Culture War issues that are nevertheless polarized by party (health care, the minimum wage), also tend to inspire relatively high levels of certainty, but to a lesser degree than do the disputes relating to the cultural divide.

**Table OA6: Prevalence of Epistemic Hubris (2019 CCES)**

|  |  |  |  |
| --- | --- | --- | --- |
| Epistemic Dispute | All % | Democrats % | Republicans % |
| Life at Conception | 59 | 51 | 71 |
| Gun Control | 57 | 49 | 68 |
| Immigration | 45 | 64 | 24 |
| National Debt | 40 | 41 | 38 |
| Health Care | 39 | 36 | 44 |
| Minimum Wage | 39 | 38 | 38 |
| Free College | 38 | 32 | 47 |
| Charter Schools | 32 | 28 | 35 |
| Grit vs. Luck | 26 | 19 | 35 |

**NOTE:** Percentage of survey respondents who express certitude (either true or false) with respect to each claim.

In sum, the variance in *Epistemic Hubris*,across issues and parties, is substantial and consistent with our expectations. Next, we turn our attention to assessing the degree to which that variance be accounted for by differences in intellectual status and anti-intellectual populism.

**Intellectual Identity, Anti-Intellectual Affect, and Epistemic Hubris**

To test Hypotheses 1-2, we specify several linear regression models that model the variance in *Epistemic Hubris*.

The explanatory variables of theoretical interest are *Intellectual Identituy*, *Anti-Intellectual Affect*, and (in the final model) *Intellectual Identity\*Anti-Intellectual Affect*. We measure *Intellectual Identity* in two ways, estimating all of our models twice with the two measures. The first version is a summative scale that includes standardized versions of *Intellectual Occupation* (23%) and *News Attentiveness* (mean=.32; s.d.=.26; eigenvalue=1.32). See the Measurement Appendix in the main text for full descriptions of these measures (*News Attentiveness* includes an additional item in 2019 that was not available in 2020: whether one had gotten news by reading a blog in the previous 24 hours). We rescaled index to 0-1 (mean=.14; s.d.=.27). [[2]](#footnote-2)

The second version of the measure adds two additional indicators and uses principle component analysis to create the index: *Educational Attainment* (0=< high school graduate; 5=post-graduate degree; mean=.50; s.d.=.30), (2) *Educational Elitism* (mean=.14; s.d.=.26).

We measure the variance in *Anti-Intellectual Affect* with responses to the following Likert-style survey question: “To what extent do you agree or disagree with the following statement: “You can’t trust media or scientists to tell us what is objectively true or false anymore; you have to trust your eyes, heart and gut” (0=strongly agree; 4=strongly disagree; rescaled to 0-1 for analysis; mean=.50; standard deviation=.37). We round out the first set of equations with standard demographic covariates (*Race*, *Gender*, *Age*, and *Income*).[[3]](#footnote-3)

With each measure of *Intellectual Identity*,we specify two sets of four equations (16 equations overall). The first set of equations only includes demographic characteristics as potentially confounding variables. The second set of equations adds *Partisan Strength* (44%=strong partisans), *Ideological Strength* (32%=very ideological), and *Ideological Identification* (mean=.51; s.d.=.31)—measured identically to those in the 2020 analysis (see descriptions in the main text and Measurement Appendix)—as well as for *Christian Traditionalism* (measured similarly but without the measure of biblical inerrancy; mean=.41; s.d.=.34).

Across both model specifications (demographics only vs. fuller) and both measures of *Intellectual Identity* (two-item vs. four-item), the four equations differ with respect to the intellectual variables that are included: the first includes just *Intellectual Identity.* The second includes just *Anti-Intellectual Affect*. The third includes both, additively. The fourth includes both, additively and interactively (*Intellectual Identity \* Anti-Intellectual Affect*).

Table OA7 displays the results of the first set of equations, using the two-item measure of *Intellectual Identity* (without *Educational Attainment* or *Educational Elitism*) and the simple model specification (just demographic controls. It shows that both *Intellectual Identity* and *Anti-Intellectual Affect* are consistent predictors of *Epistemic Hubris*.

**Table OA7**

Intellectual Identity (Two-Item Index), Anti-Intellectual Affect, and Epistemic Hubris: Simple Models

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) | *b* (s.e) | *b* (s.e) |
|  |  |  |  |  |
| *Intellectual Identity* | **.13 (.04)** |  | **.13 (.04)** | **.15 (.06)** |
| *Anti-Intellectual Affect* |  | **.10 (.02)** | **.11 (.02)** | **.12 (.04)** |
| *Intellectual Identity\*Anti-Intellectual Affect* |  |  |  | -.06 (.10) |
| *White* | -.01 (.02) | -.01 (.02) | -.02 (.02) | -.02 (.02) |
| *Female* | **-.06 (.02)** | **-.06 (.02)** | **-.06 (.02)** | **-.06 (.02)** |
| *Age* | .03 (.04) | .02 (.04) | .01 (.04) | .01 (.04) |
| *Income* | .00 (.04) | .05 (.04) | .00 (.04) | .01 (.04) |
| Constant | **.41 (.03)** | **.37 (.03)** | **.36 (.03)** | **.34 (.04)** |
| n | 923 | 962 | 922 | 922 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Table OA8 displays the results of the more fully specified models, still using the two-item measure of *Intellectual Identity*. The results largely mimic those in Table OA7 in terms of direction, substance and statistical significance.

**Table OA8**

Intellectual Identity (Two-Item Index), Anti-Intellectual Affect, and Epistemic Hubris: Fuller Models

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) | *b* (s.e) | *b* (s.e) |
|  |  |  |  |  |
| *Intellectual Identity* | **.10 (.04)** |  | **.10 (.04)** | **.12( .06)** |
| *Anti-Intellectual Affect*  |  | **.08 (.03)** | **.08 (.03)** | **.09 (.04)** |
| *Intellectual Identity\***Anti-Intellectual Affect* |  |  |  | -.05 (.09) |
| *Educational Attainment* | .06 (.04) | **.09 (.04)** | .06 (.04) | .06 (.04) |
| *Educational Elitism* | -.03 (.04) | -.01 (.04) | -.03 (.03) | -.03 (.03) |
| *White* | -.03 (.02) | -.03 (.02) | **-.04 (.02)** | -.04 (.02) |
| *Female* | **-.05 (.02)** | **-.06 (.02)** | **-.05 (.02)** | **-.05 (.02)** |
| *Age* | .01 (.04) | .03 (.04) | .00 (.04) | .00 (.04) |
| *Income* | .01 (.04) | .02 (.04) | .01 (.04) | .01 (.04) |
| *Christian Traditionalism* | -.01 (.03) | -.00 (.03) | -.02 (.03) | -.02 (.03) |
| *Partisan Strength* | -.02 (.02) | -.03 (.02) | -.02 (.02) | -.02 (.02) |
| *Ideological Strength* | **.19 (.02)** | **.20 (.02)** | **.19 (.02)** | **.19 (.02)** |
| *Ideological Identification* | **.10 (.03)** | .05 (.03) | **.06 (.03)** | .06 (.03) |
| Constant | .31 (.03) | .28 (.03) | .31 (.03) | .29 (.04) |
| n | 923 | 962 | 922 | 922 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Tables OA9 and OA10 display the same models, using the four-item measure of *Intellectual Identity* that incorporates *Educational Attainment* and *Educational Elitism*. Looking at Table OA9 first, we see that the most intellectual respondents tend to express 9-11 more points of *Hubris* on the 0-1 scale than do the least intellectual respondents (Results Columns 1 and 3; p<.05) and that the most anti-intellectual respondents tend to express about 10-11 more points of *Hubris* on the scale than do the most pro-intellectual respondents (Results Columns 2 and 3; p<.001). Column 4 reveals similar results to what we observe in the 2020 analysis as well; the interaction of *Intellectual Identity* and *Anti-Intellectual Affect* may diminish the conditional additive effects of each, but the term is not significant and the overall takeaway is that those who score highly on the *Intellectual Identity* index and those who score highly on the *Anti-Intellectual Affect* index both tend to express similarly high levels of *Epistemic Hubris*, either in isolation or in concert.

**Table OA9**

Intellectual Identity (Four-Item Index), Anti-Intellectual Affect, and Epistemic Hubris: Simple Models

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) | *b* (s.e) | *b* (s.e) |
|  |  |  |  |  |
| *Intellectual Identity* | **.09 (.04)** |  | **.11 (.04)** | **.18 (.06)** |
| *Anti-Intellectual Affect* |  | **.10 (.02)** | **.11 (.02)** | **.15 (.04)** |
| *Intellectual Identity\*Anti-Intellectual Affect* |  |  |  | -.15 (.10) |
| *White* | -.01 (.02) | -.01 (.02) | -.02 (.02) | -.02 (.02) |
| *Female* | **-.06 (.02)** | **-.06 (.02)** | **-.06 (.02)** | **-.06 (.02)** |
| *Age* | .03 (.04) | .02 (.04) | .01 (.04) | .01 (.04) |
| *Income* | .00 (.04) | .05 (.04) | .00 (.04) | .01 (.04) |
| Constant | **.41 (.03)** | **.37 (.03)** | **.36 (.03)** | **.34 (.04)** |
| n | 923 | 962 | 922 | 922 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

The more fully specified models in Table OA10 tell the same story.

**Table OA10**

Intellectual Identity (Four-Item Index), Anti-Intellectual Affect, and Epistemic Hubris: Fuller Models

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Covariates | *b* (s.e) | *b* (s.e) | *b* (s.e) | *b* (s.e) |
|  |  |  |  |  |
| *Intellectual Identity* | **.10 (.04)** |  | **.10 (.04)** | **.15 (.06)** |
| *Anti-Intellectual Affect*  |  | **.08 (.03)** | **.08 (.03)** | **.11 (.04)** |
| *Intellectual Identity\*Anti-Intellectual Affect* |  |  |  | -.10 (.10) |
| *White* | -.03 (.02) | -.03 (.02) | -.03 (.02) | -.03 (.02) |
| *Female* | **-.05 (.02)** | **-.05 (.02)** | **-.05 (.02)** | **-.05 (.02)** |
| *Age* | .01 (.04) | .02 (.04) | .01 (.04) | .00 (.04) |
| *Income* | .02 (.04) | .06 (.04) | .02 (.04) | .02 (.04) |
| *Christian Traditionalism* | -.01 (.03) | -.00 (.03) | -.01 (.03) | -.01 (.03) |
| *Partisan Strength* | -.02 (.02) | -.03 (.02) | -.02 (.02) | -.02 (.02) |
| *Ideological Strength* | **.19 (.02)** | **.20 (.02)** | **.19 (.02)** | **.19 (.02)** |
| *Ideological Identification* | **.10 (.03)** | .04 (.03) | .06 (.03) | .06 (.03) |
| Constant | **.32 (.03)** | **.32 (.03)** | **.31 (.03)** | **.29 (.04)** |
| n | 923 | 962 | 922 | 922 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

In sum, these results augment those from 2020 that we describe in the main text, providing further support for Hypotheses 1 and 2.

**Blue Intellectualism, Red Anti-Intellectualism?**

To evaluate our hypotheses (consistent with conventional wisdom and our 2020 data) that intellectuals are disproportionately Democratic and that anti-intellectuals are disproportionately Republican, we estimate a series of multinomial logistic regression equations that model the variance in *Party Identification* (3-point: Democrats and Independents who lean Democratic=0 [44% of registered voters in the sample]; Pure Independents=1 [20%]; Republicans and Independents who lean Republican=2 [36%]). As was the case in our 2020 analyses, we focus on the comparison between Democrats/Democratic Leaners and Republicans/Republican Leaners.[[4]](#footnote-4)

Again, we estimate four models, examining the explanatory purchase of (1) *Intellectual Identity* without accounting for *Anti-Intellectual Affect*, (2) *Anti-Intellectual Affect* without accounting for *Intellectual Identity*, (3) both variables, and (4) both plus their interaction. We round out all the models with the covariates we described earlier and that we include in the 2020 models (*Race* [White vs. Non-White], *Gender* [Female=1], *Age*, *Gross Household Income*, and *Christian Traditionalism*. As in the previous section, we estimate all the models twice—once with the measure of *Intellectual Identity* that is purged of the education indicators, and once with the measure that includes them.

Table OA11 shows the results with the simpler measure of *Intellectual Identity*. Consequently, the model includes *Educational Attainment* and *Educational Elitism* as additional confounds. Model 1 shows that after converting the logit coefficients to differences in predicted probabilities, a minimum to maximum difference in *Intellectual Identity* is associated with an increase in the probability of identifying as a Democrat by about 14 percentage points (p<.05). Model 2 shows that when simultaneously accounting for *Intellectual Affect*, the relationship falls to 10 percentage-points and loses statistical significace (p<.12), but Model 4 shows that among those who are also pro-intellectual in terms of affect, the relationship jumps to 35 percentage points (p<.001). Among strong anti-intellectuals, though, those who are the most intellectual in terms of identity are actually 20 percentage points less likely to identify as Democrats than are those who are the least intellectual.

**Table OA11**

Intellectual Identity (2-Item Index), Anti-Intellectual Affect, and Party ID (Independent Leaners=Partisans)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Covariates |  *Pr. Δ*   (s.e) |  *Pr. Δ* (s.e) |  *Pr. Δ*   (s.e) |  *Pr. Δ*   (s.e) |
|  | D | R | D | R | D | R | D | R |
|  |  |  |  |  |  |  |  |  |
| *Intellectual Identity* | **.14 (.07)** | **-.09 (.06)** |  |  | .10 (.07) | -.06 (.06) | **.35 (.10)** | -.16 (.11) |
| *Anti-Intellectual Affect*  |  |  | **-.43 (.03)** | **.40 (.03)** | **-.43 (.03)** | **.40 (.03)** | **-.27 (.06)** | **.33 (.05)** |
| *Intellectual Identity\*Anti-Intellectual Affect* |  |  |  |  |  |  | **-.56 (.18)** | .23 (.16) |
| *Educational Attainment* | **.18 (.08)** | -.02 (.07) | **.19 (.07)** | -.01 (.06) | **.15 (.07)** | .00 (.07) | **.15 (.07)** | .01 (07) |
| *Educational Elitism* | -.02 (.07) | -.07 (06) | .00 (.06**)** | -.05 (.06) | -.02 (.06) | -.04 (.06) | -.01 (.06) | -.05 (.06) |
| *White* | **-.15 (.03)** | **.24 (.03)** | **-.11 (.03)** | **.20 (.03)** | **-.11 (.03)** | **.20 (.03)** | **-.11 (.03)** | **.20 (.03)** |
| *Female* | **.13 (.03)** | -.05 (.03) | **.10 (.03)** | -.04 (.03) | **.11 (.03)** | -.03 (.03) | **.11 (.03)** | -.03 (.03) |
| *Age* | -.10 (.07) | **.37 (.06)** | .02 (.06) | .25 (.05) | .00 (.06) | **.26 (.05)** | .00 (.06) | **.26 (.05)** |
| *Income* | -.10 (.08) | **.22 (.07)** | -.07 (.07) | **.18 (.06)** | -.09 (.07) | **.23 (.06)** | -.08 (.07) | **.23 (.06)** |
| *Christian Traditionalism* | **-.31 (.04)** | **.33 (.04)** | **-.19 (.04)** | **.23 (.04)** | **-.20 (.04)** | **.23 (.04)** | **-.19 (.04)** | **.23 (.04)** |
| n | 956 | 998 | 956 | 956 |

**NOTE:** Cell entries are differences in the predicted probability of identifying as either a Democrat (D) or a Republican (R), converted from multinomial logistic regression coefficients, that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

When it comes to *Anti-Intellectual Affect*, the results are much stronger. Model 2 shows that those who are the most anti-intellectual are about 44 percentage-points less likely to identity as a Democrat and 40 percentage-points more likely to identify as a Republican than are the most pro-intellectual respondents. Model 3 shows that those results are virtually unchanged in the presence of *Intellectual Identity* in the model. Finally, Model 4 shows that among the least intellectual respondents in terms of identity, a minimum-to-maximum difference in *Anti-Intellectual Affect* is related to a 27 percentage-point drop in the probability of identifying as a Democrat (p<.001) and a 33 percentage-point increase in the probability of identifying as a Republican (p<.01). The model indicates that these relationships strengthen even further among respondents whose identities are strongly intellectual.

Table OA12 displays the results using the four-item measure of *Intellectual Identity* that includes both *Educational Attainment* and *Educational Elitism*, therefore removing them as control variables in the model. We see that the data strongly conform to our expectations. As Results Column 1 shows, a minimum-to-maximum difference in *Intellectual Identity* corresponds to a 34 percentage-point increase in the estimated probability of identifying as a Democrat (p<.001) and an 18 percentage-point decrease in the estimated probability of identifying as a Republican (p<.001) when not also accounting for *Affect*. Results Column 3 shows that those percentage changes drop to 25 points and 10 points, respectively, when accounting for *Affect*, but the former maintains statistical significance (p<.001).

As for *Anti-Intellectual Affect*, the results are even more eye-popping, regardless of whether the model also accounts for *Intellectual Identity*: a minimum to maximum difference is associated with an estimated 42-45 percentage-point increase in the probability of identifying as a Republican, and a 40 percentage-point decrease in the probability of identifying as a Democrat (p<.001).

Looking at the variables in concert (the final results column), we see that among the most pro-intellectual respondents in the sample, a full-range increase in *Intellectual Identity* increases the probability of identifying as a Democrat by over 45 percentage-points (p<.001), while appearing to decrease the probability of identifying as a Republican by about 15 percentage-points (though the latter relationship does not cross conventional thresholds of statistical significance). Among respondents who are strongly anti-intellectual, though, the predictive capacity of *Intellectual Identity* vanishes. Meanwhile, a full range increase in *Anti-Intellectual Affect* is associated with a 36 point increase in the estimated probability of identifying as a Republican and a 28 point decrease in the probability of identifying as a Democrat—numbers that are even larger among those with high scores on the *Intellectual Identity* scale.

**Table OA12**

Intellectual Identity (4-Item Index), Anti-Intellectual Affect, and Party ID (Independent Leaners=Partisans)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Covariates |  *Pr. Δ*   (s.e) |  *Pr. Δ* (s.e) |  *Pr. Δ*   (s.e) |  *Pr. Δ*   (s.e) |
|  | D | R | D | R | D | R | D | R |
|  |  |  |  |  |  |  |  |  |
| *Intellectual Identity* | **.34 (.07)** | **-.18 (.07)** |  |  | **.25 (.07)** | -.10 (.06) | **.45 (.11)** | -.16 (.12) |
| *Anti-Intellectual Affect*  |  |  | **-.45 (.03)** | **.40 (.03)** | **-.42 (.03)** | **.40 (.03)** | **-.28 (.07)** | **.36 (.06)** |
| *Intellectual Identity\*Anti-Intellectual Affect* |  |  |  |  |  |  | **-.49 (.19)** | .14 (.17) |
| *White* | **-.15 (.03)** | **.24 (.03)** | **-.11 (.03)** | **.20 (.03)** | **-.11 (.03)** | **.20 (.03)** | **-.11 (.03)** | **.20 (.03)** |
| *Female* | **.13 (.03)** | -.05 (.03) | **.11 (.03)** | -.04 (.03) | **.11 (.03)** | -.03 (.03) | **.11 (.03)** | -.03 (.03) |
| *Age* | -.09 (.07) | **.36 (.06)** | .00 (.06) | .00 (.06) | .00 (.06) | **.26 (.05)** | .00 (.06) | **.26 (.05)** |
| *Income* | -.09 (.08) | **.23 (.07)** | .02 (.06) | **.15 (.06)** | -.09 (.07) | **.23 (.06)** | -.08 (.07) | **.23 (.06)** |
| *Christian Traditionalism* | **-.31 (.04)** | **.33 (.04)** | **-.19 (.04)** | **.23 (.04)** | **-.20 (.04)** | **.23 (.04)** | **-.19 (.04)** | **.23 (.04)** |
| n | 957 | 998 | 956 | 956 |

**NOTE:** Cell entries are differences in the predicted probability of identifying as either a Democrat (D) or a Republican (R), converted from multinomial logistic regression coefficients, that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

To summarize, these findings are consistent with hypotheses *H3* and *H4*., that *Intellectual Identity* is associated with Democratic partisanship and that *Anti-Intellectual Affect* is associated with Republican partisanship.

**Intellectualism, Anti-Intellectualism, and Intra-Partisan Epistemic Hubris**

To test Hypothesis 5 that intellectualism is associated with intra-partisan epistemic hubris among Democrats and Hypothesis 6 that anti-intellectualism is associated with intra-partisan epistemic hubris among Republicans, we re-estimated the first two *Epistemic Hubris* models described above, interacting the key variables of interest with *Party Identification*. First, we estimate the conditional effects of *Intellectual Identity* by party, then we do the same with respect to *Anti-Intellectual Affect*.Again, we display four sets of results: (1) simple model specifications and the two-item measure of *Intellectual Identity*, (2) fuller model specifications and the four-item measure of *Intellectual Identity*, (3) simple model specifications with the four-item measure of *Intellectual Identity* and (4) fuller model specifications with the four-item mesure of *Intellectual Identity*.

Table OA13 displays the results using the two-item measure of *Intellectual Identity*. The simple model specification reveals that among Democrats, the most intellectual respondents in the sample tend to score about 11 points higher on the 0-1 *Epistemic Hubris* scale than do the least intellectual respondents (p<.001), and that the relationship is about the same among Republicans. These relationships do not withstand the fuller model specification, however.

**Table OA13**

Intellectual Identity (**Two**-Item Index) and Intra-Partisan Epistemic Hubris

|  |  |  |
| --- | --- | --- |
| Covariates | *Simple Model**b* (s.e) | *Fuller Model**b* (s.e) |
|  |  |  |
| *Party ID (GOP high)* | **.07 (.03)** | -.01 (.03) |
| *Intellectual Identity* | **.11 (.05)** | .05 (.05) |
| *Intellectual ID \* Party ID* | .03 (.08) | .09 (.07) |
|  |  |  |
| *White* | -.03 (.02) | -.03 (.02) |
| *Female* | -.05 (.01) | -.05 (.02) |
| *Age* | -.01 (.04) | -.00 (.04) |
| *Income* | -.00 (.04) | .01 (.04) |
| *Educational Attainment* |  | .05 (.04) |
| *Educational Elitism* |  | -.03 (.04) |
| *Christian Traditionalism* |  | -.01 (.03) |
| *Ideological ID (conservative high)* |  | **.08 (.04**) |
| *Partisan Strength* |  | -.02 (.02) |
| *Ideological Strength* |  | **.19 (.02)** |
| Constant | .39 (.03) | .32 (.03) |
| n | 923 | 923 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Table OA14 re-estimates those equations using the four-item measure of *Intellectual Identity*, with *Educational Attainment and Educational Elitism* included. The results largely mirror those of Table OA13: in the simple model specification, *Intellectual Identity* predicts intra-partisan *Epistemic Hubris* among both Democrats and Republicans, but the relationship weakens and becomes statistically insignificant after accounting for the additional covariates.

**Table OA14**

Intellectual Identity (**Four**-Item Index) and Intra-Partisan Epistemic Hubris

|  |  |  |
| --- | --- | --- |
| Covariates | *Simple Model**b* (s.e) | *Fuller Model**b* (s.e) |
|  |  |  |
| *Party ID (GOP high)* | **.09 (.03** | **.00 (.03)** |
| *Intellectual Identity* | **.13 (.03)** | **.06 (.05)** |
| *Intellectual ID \* Party ID* | -.04 (.09) | .08 (.08) |
|  |  |  |
| *White* | -.03 (.02) | -.03 (.02) |
| *Female* | **-.05 (.02)** | **-.05 (.02)** |
| *Age* | .01 (.04) | .01 (.04**)** |
| *Income* | -.01 (.04) | .01 (.04) |
| *Christian Traditionalism* |  | -.01 (.03) |
| *Ideological ID (conservative high)* |  | **.08 (.04**) |
| *Partisan Strength* |  | -.02 (.02) |
| *Ideological Strength* |  | **.19 (.02**) |
| Constant | .38 (.03) | .34 (.03) |
| n | 923 | 923 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Table OA15 displays the results of both model specifications predicting *Epistemic Hubris* with *Anti-Intellectual Affect*. Here we see a much clearer picture. In both model specifications, *Anti-Intellectual Affect* is not associated with *Epistemic Hubris* among Democrats (as indicated by the constitutive *Anti-Intellectual Affect* term). But among Republicans, a minimum-to-maximum difference in *Anti-Intellectual Affect* is associated with a 24 point increase on the 0-1 *Epistemic Hubris* scale in the simple model (-.06 +.30; p<.001) and with a 19 point increase on the scale in the more fully specified model (-.01 +.20; p<.001).

**Table OA15**

Anti-Intellectual Affect and Intra-Partisan Epistemic Hubris:

|  |  |  |
| --- | --- | --- |
| Covariates | *Simple Model**b* (s.e) | *Fuller Model**b* (s.e) |
|  |  |  |
| *Party ID (GOP high)* | **-.12 (.04)** | **-.11 (.04)** |
| *Anti-Intellectual Affect* | -.06 (.04) | -.01 (.04) |
| *Anti-Intellectual Affect \* Party ID* | **.30 (.06)** | **.20 (.06)** |
|  |  |  |
| *White* | -.03 (.01) | -.03 (.02) |
| *Female* | -.05 (.02) | **-.05 (.02)** |
| *Age* | -.02 (.04) | .01 (.04) |
| *Income* | .03 (.04) | .01 (.04) |
| *Eduational Attainment* |  | **.08 (.04)** |
| *Educational Elitism* |  | -.01 (.04) |
| *Christian Traditionalism* |  | .01 (.03) |
| *Ideological ID (conservative high)* |  | .06 (.04) |
| *Partisan Strength* |  | -.03 (.02) |
| *Ideological Strength* |  | **.19 (.02**) |
| Constant | .44 | .33 |
| n | 962 | 962 |

**NOTE:** Ordinary least squares regression coefficients of the difference in *Epistemic Hubris* that correspond to minimum-to-maximum differences in each explanatory variable. Standard errors are in parentheses. Statistically significant relationships (p<.05) are in **bold.**

Thus, when it comes to the intra-partisan variance in *Epistemic Hubris*, the 2019 data partially support Hypotheses 5 and fully support Hypotheseis 6.

To summarize the results of our 2019 Pilot Study, we observe that despite using much cruder measures, the empirical tests are broadly consistent with the results we obtain in 2020. Intellectual identity corresponds to Democratic party identification and to epistemic hubris, but it does not explain any more of the intra-partisan variance among Democrats than among Republicans. More impressively, anti-intellectual affect corresponds to Republican party identification and to epistemic hubris—but only among Republicans.

**References**

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1. Partisanship, preferences, behavior and affect tend to harden among those whose social identities/orientations reinforce each other, and they tend to soften among those whose identities/orientations create psychological cross-pressure and cognitive dissonance (e.g., Campbell et al. 1960, Powell 1976, Mutz 2002, Mason 2016). We apply the same logic applies to differences in epistemic certitude as they relate to the interplay of intellectual identity and intellectual affect: when identity and affect reinforce one another, we expect certitude to spike; when they cross-cut, we expect it to fall. [↑](#footnote-ref-1)
2. Principal component loadings for *News Attentiveness*: newspaper=.62; TV=.29; radio=.55; blog=.47). [↑](#footnote-ref-2)
3. *White*=1 (69%); *Female*=1 (57%); *Age*: 18-91, rescaled to 0-1 (mean=.43; s.d.=.23); *Gross Household Income*: 0=<$10k; 15=>350k (rescaled to 0-1; mean=.34; s.d.=.23). [↑](#footnote-ref-3)
4. To reiterate, we do not presume a causal relationship between either of the intellectual variables and party identification. Designating *Epistemic Hubris* as the outcome variable carries the advantage of enabling us to model the interaction of *Intellectual Identity* and *Anti-Intellectual Affect*. [↑](#footnote-ref-4)