**Supplemental Text**

**Statements about climate researchers' carbon footprints affect their credibility and the impact of their advice**

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*Analysis of Researcher Credibility Items*

Six items probed researcher credibility. These generally had strong positive pairwise correlations (after reverse-coding the 2 negatively worded items). To simplify modeling we tentatively summed these items with equal weights to form a *Researcher Credibility* scale. The naïve calculation of Cronbach’s α for this scale gives α = .917 (Survey #1) or α = .887 (Survey #2). However, since credibility ratings varied considerably among the behavior descriptions, these correlations include both individual reliability and variation correlated with the descriptions. The correlation matrix for the 6 items therefore had to be examined separately within each description of researcher’s behavior.

These 6 × 6 correlation matrices differ little save for the 3 High Home descriptions. The average correlation matrix across the 15 other descriptions in Surveys 1 and 2 is shown in Supplementary Table 1. This average correlation matrix has α = .873; the values of α for the 15 matrices included in the average range from .848 to .907. The differences among these 15 correlation matrices are about what one might expect, based on sampling variation with N **≈** 290 (Survey 1) or N **≈** 265 (Survey 2). With true correlation around +.50, sampling errors for observed correlations are **≈** ± .05 for these sample sizes.

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|  | **Supplementary Table 1: Researcher Credibility item correlations**  (average for 15 behavior descriptions; reversed coding for the two negative items) | | | | | |
| R’s behavior *consistent* w/ advice | R’s advocacy is *sincere* | *do not trust R*’s authority | good *reasons* for R’s behavior | *doubt R*’s credibility | R gives quality *advice* |
| consistent | 1 | +.58 | +.42 | +.56 | +.49 | +.44 |
| sincere | +.58 | 1 | +.49 | +.63 | +.56 | +.58 |
| don’t trust R | +.42 | +.49 | 1 | +.48 | +.65 | +.54 |
| reasons | +.56 | +.63 | +.48 | 1 | +.54 | +.56 |
| doubt R | +.49 | +.56 | +.65 | +.54 | 1 | +.55 |
| advice | +.44 | +.58 | +.54 | +.56 | +.55 | 1 |

For the 3 High Home descriptions in the 2 surveys, the correlations are substantially lower than those in Supplementary Table 1, except for the two negatively coded items: distrust of authority and doubt of credibility. These two items are highly correlated (+.64) for these High Home descriptions. The value of Cronbach’s α is only about .76 for these groups. In the main text, Researcher Credibility is nonetheless calculated uniformly by summing responses across the 6 items (with appropriate reverse coding) and then rescaling linearly to be +1 at maximum (all 6 items at the high-credibility extreme) and –1 at minimum (all 6 at the opposite extreme).

The Researcher Credibilityscore exhibits end effects, especially a ceiling effect in Survey 1, as can be seen clearly in Figure 1 for the Low Home and Low Fly conditions. The ceiling effect is less important for Survey 2. For Survey 1, the percentage of participants showing maximum Researcher Credibility = 1 was about 28%, 23%, and 16% respectively for the Low Home, Low Fly (male) and Low Fly (female) groups, whereas in Survey 2 the percentages were 23%, 11%, 13%, and 12% for Low Home (LL), Low Home (AQ), Low Fly (LL) and Low Fly (AQ). The difference is likely attributable to the absence of the attention-directing open-ended question in Survey 2.

*Linear Model for Researcher Credibility*

Researcher Credibility varies not only as a function of the vignette describing the researcher’s behavior but also with several other potential explanatory variables, including beliefs, attitudes and demographics. We attempt to characterize these associations using linear models.

***Demographic variables*** include Age, Education, Gender and Income. Age was reported in years, Education on a 1 – 6 scale ranging from No Diploma to Graduate Degree, Gender merely as Female or Male, and household Income on a 1 – 7 scale with roughly logarithmic spacing, the extreme categories being “No income” and “over $200,000 per year.” (See the full surveys in the Supplementary Appendices A and B for a more exact description of response choices.)

***Political orientation*** was reported on a 7-point scale, from “Extremely Liberal” to “Extremely Conservative.”

***Climate change beliefs and attitudes***. We probed 6 items, including the one about importance of climate change (given above and partially analyzed in Figure 3). Two of these items are highly correlated with climate change importance:

*Do you think that climate change is happening?*

1 – 4, definitely yes – definitely no

*How sure are you that climate change is happening?*

1 – 4, extremely sure – not at all sure

These items correlated +.75 with one another and respectively +.53 and +.56 with the importance item. The remaining 3 items correlate less well with these 3 and with one another and have less explanatory value in the analyses that follow. In the analyses we viewed Climate Change Importance as an attitudinal variable and we took the average of the two questions about Climate Change Happening as an indicator of belief about climate change. The attitude and the belief are each related to Researcher Credibility: a source that delivers a message viewed as unimportant loses credibility and likewise for a message that runs counter to the audience’s current beliefs.

We fit a linear model for Researcher Credibility using 25 parameters: 18 for the vignettes, 4 for demographics, 1 for Political Orientation, and 2 for Climate Change attitude and belief. Supplementary Table 2shows a sequential analysis-of-variance table, which also includes a possible unequal-slopes model (further 117 parameters allowing variation in slope for demographics, etc. among the vignettes).

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| **Supplementary Table 2. Sequential analysis of variance for Researcher Credibility** | | |
| *Variable group* | *df* | *incremental reduction in sum of squares* |
| Vignettes | 17 | 416 |
| Demographics | 4 | 4 |
| Political orientation | 1 | 44 |
| Climate Change attitude & beliefs | 2 | 35 |
| Unequal slopes | 119 | 22 |
| Residuals | 4769 | 506 |

The effects shown in this table are all statistically significant by F tests, in light of the very small residual mean square (506/4769 = 0.106). The unequal slopes, however, are hard to interpret and seem not very important. Therefore we focus on the 25-parameter equal slopes model. Even a sample of size nearly 5000 is insufficient to sort out the possible interactions with correlated explanatory variables.

The huge main effect of Vignettes was already displayed in Figures 1 and 2: Researcher Credibility is affected powerfully by the description of the researcher’s behavior. Demographics account for little, compared with Political Orientation and with Climate Change attitude (important?) and Climate Change belief (happening?). Because of ceiling effects, especially for the large subgroup (28%) that views climate change as very important (light gray bars in Figure 3), the detailed differences among the 18 vignettes cannot be considered as precise estimates of the differential impacts of the vignettes on researcher credibility.

Supplementary Table 3 gives the coefficients for the other 7 explanatory variables in the equal-slopes model for Study 2.

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| **Supplementary Table 3. Equal-slopes model for Research Credibility (\**p*<0.05; \*\**p*<0.001)** | | | |
| *Coefficient* | *scale of variable* | *estimate* | *s.e.*  *esti.* |
| **Age** | 18 – 76 yrs | −0.0007 | *0.0004* |
| **Education** | 1 – 6 scale | +0.000 | *0.004* |
| **Male** | 0 = female  1 = male | +0.034 | *0.010 \** |
| **Income** | 1 – 7 scale | −0.003 | *0.004* |
| **Political Orientation** | 1 – 7 (liberal to conservative) | −0.028 | *0.003 \*\** |
| **Climate Chg Importance** | 1 – 4 (not at all to very) | +0.066 | *0.007 \*\** |
| **Climate Chg Happening** | 1 – 4 (No to Yes) | +0.087 | *0.008 \*\** |

If the unequal slopes across vignettes are viewed as a random effect, then the point estimates of average slope change negligibly from the values in Supplementary Table 3, but the standard errors are estimated to be about 30% higher. The only variable for which slope seems to change systematically with the vignettes is Gender (see below).

Note that the estimated effect of Political Orientation is a decrease in credibilityof about 0.17 for the 6-point difference between Extremely Liberal and Extremely Conservative groups. The decrease actually observed directly is much larger, 0.36, but this of course includes the effect of the correlated changes in climate change attitude and belief as a function of political orientation.

The only meaningful demographic variable is Gender: males show slightly higher credibility on average (.034 ± *.010* points). Here, the inhomogeneity across vignettes is systematic. As noted in the main text, males rated researcher credibility a bit higher than females for High Fly and High Home and slightly lower than females for Low Fly and Low Home.

*Behavior intentions: Multivariate patterns*

We next analyze the stated intentions to fly less, use less energy at home, and increase the use of public transportation.

These intentions were stated immediately following the vignette, before any questions about researcher credibility or background beliefs. As noted above, on average respondents endorsed 2.54 out of the 7 possible items. There are 27 – 1 = 127 possible endorsement patterns; it seems important to examine this multivariate response by noting which patterns actually occur, and based on this, to understand better how respondents deal with this composite item.

In fact, 79% of the respondents endorsed at least one of Fly Less, Use Less Energy at Home, or Take Public Transport More Often. Mostly they report the intention to conserve energy at home (72%), often in combination with flying less, using public transport more, or all three. Supplementary Table 4 gives the joint distribution for these 3 behavioral intentions.

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| **Supplementary Table 4: Joint distribution of three main reported behavioral intentions for Survey 1 and Survey 2 combined** | | | | | | | | |
| **Intentions** | *not any* | *Home only* | *Fly only* | *Transp only* | *Home, Fly* | *Home, Transp* | *Fly, Transp* | *all three* |
| **percentage endorsement** | 20.8 | 24.9 | 3.1 | 2.4 | 17.3 | 13.5 | 1.6 | 16.5 |

The 3 intentions are of course correlated (LR statistic = 912.3, df=4, rejecting the null hypothesis). Under independence the expected %s would be only 11.3% for “not any” and only 9.4% for “all three”.

The 21% who did not endorse any of these three specific intentions fell mostly into 2 groups: “firm rejection” (12.9%), who endorsed “Change no actions” or “Already conserve energy” or both of these; and “vague intentions” (7.1%), who endorsed the option “Think about changing some actions”, sometimes in combination with “Already conserve.” This vaguer intention was endorsed also by over 60% of those who chose at least one of the specific behavioral intentions. Apart from these two subgroups, there was a handful of respondents (0.5%) who used “Other”, sometimes combined with “Change no actions” and/or “Already conserve.” Finally, only 26 of the 4943 respondents (0.5%) combined “Change no actions” with “Think about changing some actions” – a combination that is hard to interpret and may be viewed as “noise.”

Many of the firm rejecters probably believe they are already doing everything that they can do – at any rate, over half of them (primarily from the subgroup that endorsed only “Already conserve”) view climate change as very or somewhat important.

Because 80% of participants select at least one of the intentions to change behavior (Fly Less, Use Less Energy at Home, Take Public Transport More Often), while another 13% are firm rejecters (who either do not believe in climate change or who think they are already doing what they can), and because the three change intentions are logically if not probabilistically independent, the main text analyzes each of these three change intentions by relating it to Researcher Credibility and other relevant variables.