**Improving the usability of climate indicator visualizations through diagnostic design principles**

*Climatic Change*

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Online Resource 1 contains summary demographic information and the regression tables used in the analysis.

**Table S1.** Demographics of survey respondents (*n* =738).

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| --- | --- | --- |
| Demographic variable | Variable level | Percent of respondents |
| Gender | Female | 52.3 |
|  | Male | 47.7 |
|  | Other | 0.0 |
| Ethnicity | White | 82.8 |
|  | Latino | 3.25 |
|  | Black | 5.96 |
|  | Native American | 0.407 |
|  | Asian | 5.96 |
|  | Other | 1.22 |
|  | No answer | 0.407 |
| Party Affiliation | Democrat | 40.7 |
|  | Independent | 27.8 |
|  | Republican | 29.1 |
|  | Other | 2.44 |
| Education Level | Less than a Bachelor’s degree | 12.3 |
|  | Bachelor’s degree | 53.8 |
|  | Master’s degree | 26.7 |
|  | Above a Master’s degree | 7.2 |

**Table S2.** Household-level demographics of survey respondents (*n* =738).

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| --- | --- | --- |
| Household size | 1 | 20.6 |
|  | 2 | 41.5 |
|  | 3 | 17.3 |
|  | 4 | 13.8 |
|  | 5+ | 6.78 |
| Household income | 0-20k | 6.5 |
|  | 20-30k | 8.1 |
|  | 30-40k | 8.0 |
|  | 40-50k | 8.0 |
|  | 50-75k | 19.6 |
|  | 75-100k | 19.0 |
|  | 100-125k | 11.7 |
|  | 125-150k | 7.6 |
|  | 150-175k | 2.2 |
|  | 175-200k | 2.3 |
|  | 200k+ | 3.8 |
|  | No answer | 3.3 |

**Table S3.** Results of logistic regression for effects of numeracy, party affiliation, and climate attitudes on ***understandability***. Depending indicator, Treat1 = *AGGI 1, HCDD 1,* or *Temp 1*; Treat2 = *AGGI 2, HCDD 2,* or *Temp 2*; Treat3 = *AGGI 3, HCDD 3,* or *Temp 3*. Each cell shows regression coefficient and standard error (in parenthesis). Stars indicate p-value thresholds: \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

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| --- | --- | --- | --- |
| Independent Variables | AGGI | HCDD | Temp |
| Treat1 | 0.896 (0.602) | -1.182 (0.621) | -0.222 (0.578) |
| Treat2 | 1.240\* (0.609) | 0.376 (0.571) | 0.763 (0.599) |
| Treat3 | 1.131 (0.640) | -0.642 (0.571) | 0.917 (0.631) |
| Numeracy | 0.553\*\* (0.171) | 0.421\*\* (0.160) | 0.195 (0.170) |
| Independent | 0.677 (0.423) | -0.015 (0.393) | -0.265 (0.405) |
| Republican | 1.511\*\* (0.473) | -0.123 (0.442) | -0.829 (0.456) |
| Mostly accepting | -0.221 (0.395) | -0.245 (0.390) | 0.147 (0.436) |
| Mostly skeptical | -0.380 (0.526) | -0.455 (0.484) | 0.531 (0.469) |
| Very Skeptical | -1.151 (0.687) | -0.293 (0.588) | -0.003 (0.588) |
| Treat1\*Numeracy | 0.135 (0.237) | 0.145 (0.237) | 0.311 (0.226) |
| Treat2\*Numeracy | -0.168 (0.235) | -0.226 (0.226) | -0.248 (0.231) |
| Treat3\*Numeracy | 0.101 (0.249) | 0.292 (0.232) | 0.364 (0.248) |
| Treat1\*Independent | -1.110 (0.589) | 0.240 (0.570) | 0.513 (0.555) |
| Treat2\*Independent | -0.386 (0.592) | -0.614 (0.571) | -0.152 (0.575) |
| Treat3\*Independent | -0.545 (0.610) | 0.859 (0.596) | 0.106 (0.627) |
| Treat1\*Republican | -0.956 (0.652) | 0.811 (0.609) | 1.386\* (0.627) |
| Treat2\*Republican | -1.647\* (0.644) | -0.750 (0.628) | 1.183 (0.612) |
| Treat3\*Republican | -1.210 (0.668) | 0.647 (0.646) | 0.273 (0.657) |
| Treat1\*Mostly accepting | -0.136 (0.563) | -0.093 (0.572) | -0.192 (0.568) |
| Treat2\*Mostly accepting | 0.364 (0.577) | 0.440 (0.558) | -0.522 (0.584) |
| Treat3\*Mostly accepting | -0.148 (0.608) | 0.664 (0.586) | -0.371 (0.639) |
| Treat1\*Mostly skeptical | -1.109 (0.742) | 0.156 (0.682) | -1.008 (0.716) |
| Treat2\*Mostly skeptical | 0.524 (0.694) | 0.668 (0.698) | -0.747 (0.662) |
| Treat3\*Mostly skeptical | -0.325 (0.758) | 0.416 (0.688) | 0.075 (0.731) |
| Treat1\*Very skeptical | 0.538 (0.869) | 0.163 (0.766) | -0.273 (0.779) |
| Treat2\*Very skeptical | 0.401 (0.868) | 0.813 (0.805) | -0.848 (0.795) |
| Treat3\*Very skeptical | 0.761 (0.888) | 0.899 (0.859) | 0.050 (0.861) |
| Constant | -1.517\*\*\* (0.444) | -0.308 (0.394) | -0.656 (0.436) |
| Log Likelihood | -448.588 | -456.692 | -453.015 |
| Akaike Inf. Crit. | 953.176 | 969.383 | 962.030 |

**Table S4.** Results of linear regression for effects of numeracy, party affiliation, and climate attitudes on ***subjective response***. Depending indicator, Treat1 = *AGGI 1, HCDD 1,* or *Temp 1*; Treat2 = *AGGI 2, HCDD 2,* or *Temp 2*; Treat3 = *AGGI 3, HCDD 3,* or *Temp 3*. Each cell shows regression coefficient and standard error (in parenthesis). Stars indicate p-value thresholds: \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

|  |  |  |  |
| --- | --- | --- | --- |
| Independent Variables | AGGI | HCDD | Temp |
| Treat1 | 0.272 (0.419) | 0.043 (0.470) | 0.817\* (0.324) |
| Treat2 | 0.338 (0.406) | -0.483 (0.444) | -0.054 (0.386) |
| Treat3 | 0.908\* (0.407) | -0.373 (0.404) | 0.564 (0.338) |
| Numeracy | 0.022 (0.115) | 0.058 (0.108) | 0.164 (0.103) |
| Independent | 0.057 (0.289) | -0.544\* (0.248) | -0.223 (0.260) |
| Republican | 0.808\*\* (0.280) | 0.157 (0.312) | 0.112 (0.283) |
| Mostly accepting | -0.138 (0.262) | -0.293 (0.266) | -0.147 (0.258) |
| Mostly skeptical | -0.301 (0.315) | -0.577 (0.323) | -0.727\* (0.283) |
| Very Skeptical | -0.991\* (0.446) | -0.759 (0.419) | -0.961\* (0.394) |
| Treat1\*Numeracy | 0.003 (0.152) | -0.395\* (0.165) | -0.164 (0.129) |
| Treat2\*Numeracy | 0.296 (0.152) | 0.025 (0.165) | -0.023 (0.149) |
| Treat3\*Numeracy | 0.025 (0.154) | 0.218 (0.151) | -0.114 (0.129) |
| Treat1\*Independent | -0.121 (0.397) | 0.190 (0.401) | 0.022 (0.340) |
| Treat2\*Independent | -0.320 (0.373) | 0.372 (0.386) | 0.176 (0.390) |
| Treat3\*Independent | -0.376 (0.381) | 1.020\*\* (0.379) | 0.322 (0.338) |
| Treat1\*Republican | -0.376 (0.394) | 0.001 (0.450) | 0.224 (0.375) |
| Treat2\*Republican | -0.705 (0.379) | 0.037 (0.467) | 0.363 (0.372) |
| Treat3\*Republican | -0.648 (0.385) | -0.053 (0.440) | -0.150 (0.374) |
| Treat1\*Mostly accepting | -0.065 (0.363) | 0.091 (0.414) | 0.086 (0.331) |
| Treat2\*Mostly accepting | -0.257 (0.348) | 0.571 (0.391) | -0.282 (0.353) |
| Treat3\*Mostly accepting | -0.214 (0.349) | 0.343 (0.400) | -0.017 (0.331) |
| Treat1\*Mostly skeptical | -0.396 (0.466) | 0.453 (0.497) | 0.099 (0.447) |
| Treat2\*Mostly skeptical | -0.600 (0.412) | 0.234 (0.488) | -0.197 (0.439) |
| Treat3\*Mostly skeptical | -0.435 (0.431) | 0.207 (0.454) | 0.436 (0.379) |
| Treat1\*Very skeptical | 0.033 (0.561) | 0.510 (0.564) | 0.193 (0.483) |
| Treat2\*Very skeptical | -0.261 (0.563) | 0.315 (0.571) | -0.217 (0.514) |
| Treat3\*Very skeptical | 0.381 (0.548) | -0.005 (0.548) | 0.520 (0.495) |
| Constant | 3.835\*\*\* (0.311) | 3.685\*\*\* (0.291) | 4.190\*\*\* (0.260) |
| R2 | 0.114 | 0.099 | 0.160 |
| Adjusted R2 | 0.079 | 0.063 | 0.127 |

**Table S5.** Results of linear regression for effects of numeracy, party affiliation, and climate attitudes on ***trust***. Depending indicator, Treat1 = *AGGI 1, HCDD 1,* or *Temp 1*; Treat2 = *AGGI 2, HCDD 2,* or *Temp 2*; Treat3 = *AGGI 3, HCDD 3,* or *Temp 3*. Each cell shows regression coefficient and standard error (in parenthesis). Stars indicate p-value thresholds: \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

|  |  |  |  |
| --- | --- | --- | --- |
| Independent Variables | AGGI | HCDD | Temp |
| Treat1 | 0.472\* (0.224) | -0.014 (0.241) | 0.387 (0.212) |
| Treat2 | 0.379 (0.233) | -0.004 (0.234) | 0.141 (0.227) |
| Treat3 | 0.448 (0.244) | -0.152 (0.206) | 0.009 (0.238) |
| Numeracy | 0.106 (0.059) | 0.032 (0.052) | 0.169\*\* (0.060) |
| Independent | 0.059 (0.180) | -0.106 (0.148) | -0.273 (0.157) |
| Republican | 0.127 (0.135) | 0.141 (0.155) | -0.056 (0.144) |
| Mostly accepting | -0.042 (0.162) | -0.210 (0.140) | -0.167 (0.162) |
| Mostly skeptical | -0.265 (0.171) | -0.529\*\* (0.178) | -0.508\*\*\* (0.145) |
| Very Skeptical | -0.860\*\* (0.268) | -0.811\*\* (0.251) | -0.882\*\*\* (0.241) |
| Treat1\*Numeracy | -0.244\*\* (0.084) | -0.172 (0.088) | -0.198\* (0.086) |
| Treat2\*Numeracy | 0.031 (0.088) | 0.001 (0.089) | -0.051 (0.084) |
| Treat3\*Numeracy | -0.084 (0.090) | 0.027 (0.082) | -0.244\*\* (0.086) |
| Treat1\*Independent | -0.094 (0.239) | -0.288 (0.246) | 0.271 (0.225) |
| Treat2\*Independent | -0.343 (0.232) | 0.063 (0.238) | -0.071 (0.232) |
| Treat3\*Independent | -0.253 (0.250) | 0.102 (0.230) | 0.534\* (0.221) |
| Treat1\*Republican | -0.126 (0.213) | -0.242 (0.243) | 0.173 (0.217) |
| Treat2\*Republican | -0.225 (0.202) | 0.122 (0.241) | 0.042 (0.208) |
| Treat3\*Republican | 0.026 (0.224) | -0.018 (0.229) | 0.135 (0.223) |
| Treat1\*Mostly accepting | -0.134 (0.218) | 0.112 (0.238) | -0.035 (0.219) |
| Treat2\*Mostly accepting | -0.270 (0.212) | -0.021 (0.216) | -0.166 (0.216) |
| Treat3\*Mostly accepting | -0.188 (0.223) | 0.392 (0.218) | 0.247 (0.231) |
| Treat1\*Mostly skeptical | -0.160 (0.254) | 0.399 (0.287) | 0.071 (0.267) |
| Treat2\*Mostly skeptical | -0.485\* (0.235) | -0.187 (0.278) | -0.325 (0.247) |
| Treat3\*Mostly skeptical | -0.397 (0.265) | 0.209 (0.247) | 0.281 (0.232) |
| Treat1\*Very skeptical | -0.053 (0.348) | 0.403 (0.350) | -0.321 (0.327) |
| Treat2\*Very skeptical | -0.542 (0.343) | -0.492 (0.347) | -0.327 (0.312) |
| Treat3\*Very skeptical | -0.204 (0.368) | -0.098 (0.354) | 0.150 (0.350) |
| Constant | 2.773\*\*\* (0.171) | 2.878\*\*\* (0.134) | 2.951\*\*\* (0.155) |
| R2 | 0.214 | 0.160 | 0.215 |
| Adjusted R2 | 0.184 | 0.127 | 0.185 |