

## Appendix from Graff Zivin and Neidell, “Temperature and the Allocation of Time: Implications for Climate Change” (JOLE, vol. 32, no. 1, p. 1)

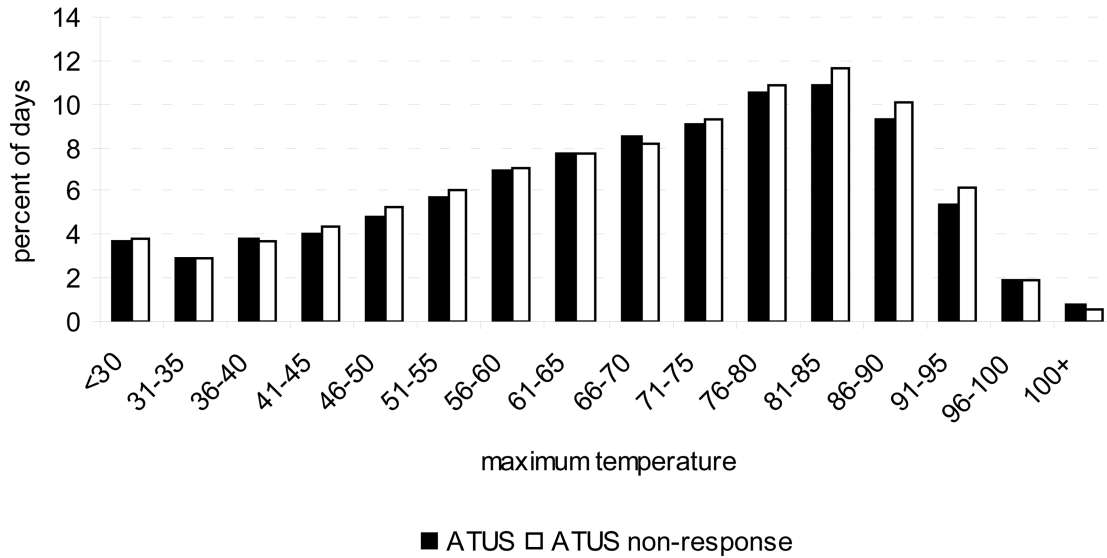


FIG. A1.—Distribution of observations by temperature (°F) for excluded and included samples. ATUS is the final sample used in the analysis and ATUS non-response is the same counties as the final sample but on dates without time diaries.

**Table A1.** Estimates of Relationship between Maximum Temperature and Time Allocation

Maximum Temperature (°F)	All Individuals		High Risk		Low Risk		Nonemployed
	Labor	Outdoor	Labor	Outdoor	Labor	Outdoor	Outdoor
≤ 30	6.423 (9.850)	−37.132 (4.554)	14.653 (26.042)	−47.095 (15.317)	1.324 (16.768)	−30.495 (6.182)	−43.060 (6.632)
31–35	−6.976 (8.534)	−37.166 (3.999)	−5.808 (22.734)	−54.743 (13.176)	−3.494 (14.146)	−32.626 (5.394)	−40.282 (6.006)
36–40	−.885 (7.742)	−32.856 (3.653)	−7.981 (22.306)	−43.638 (12.021)	−11.951 (12.591)	−27.085 (4.935)	−37.723 (5.716)
41–45	−2.892 (6.861)	−28.107 (3.556)	−11.226 (20.398)	−29.792 (11.304)	−4.382 (11.421)	−21.278 (4.650)	−37.090 (5.457)
46–50	−5.605 (6.423)	−29.525 (3.140)	−18.642 (17.154)	−31.265 (10.410)	−1.253 (10.513)	−24.766 (4.164)	−39.047 (4.980)
51–55	−3.983 (5.869)	−23.426 (2.887)	−2.729 (16.001)	−32.331 (9.444)	1.310 (9.733)	−19.733 (3.937)	−27.126 (4.603)
56–60	−3.357 (5.131)	−18.828 (2.737)	−8.180 (14.082)	−16.253 (8.758)	−4.317 (8.535)	−14.084 (3.683)	−28.364 (4.180)
61–65	−1.029 (4.608)	−14.616 (2.491)	−3.092 (12.843)	−14.673 (7.966)	−1.851 (7.703)	−9.444 (3.346)	−23.109 (3.881)
66–70	−4.682 (4.181)	−5.896 (2.417)	4.807 (11.987)	−5.192 (8.354)	−9.338 (6.711)	−3.353 (3.010)	−10.643 (3.934)
71–75	−3.453 (3.774)	−4.257 (2.363)	−15.397 (11.652)	.342 (7.528)	−3.029 (6.333)	−1.249 (2.903)	−9.744 (3.966)
76–80	...	...	...	...	...	...	...
	...	...	...	...	...	...	...

Table A1 (Continued)

Maximum Temperature (°F)	All Individuals		High Risk		Low Risk		Nonemployed
	Labor	Outdoor	Labor	Outdoor	Labor	Outdoor	Outdoor
81–85	–3.769 (3.790)	–2.044 (2.109)	.148 (11.096)	–5.806 (7.255)	–10.061 (5.924)	1.444 (2.748)	–3.668 (3.748)
86–90	–4.642 (3.989)	2.241 (2.447)	–5.053 (12.056)	4.164 (8.357)	–3.364 (6.469)	2.816 (3.200)	.062 (4.121)
91–95	–6.621 (5.155)	2.163 (3.071)	–17.400 (15.688)	10.607 (10.372)	–.633 (8.139)	7.747 (4.039)	–8.154 (5.124)
96–100	–13.876 (7.288)	3.452 (4.526)	–41.417 (20.626)	6.422 (15.049)	–11.256 (12.098)	7.137 (5.612)	–4.854 (7.557)
>100	–18.327 (9.513)	–8.573 (5.331)	–58.032 (25.113)	–9.833 (16.482)	–14.951 (16.134)	2.240 (6.992)	–22.020 (8.754)
Observations	42,280	42,280	6,246	6,246	21,151	21,151	14,883

NOTE.—This table reports regression coefficients of the impact of maximum temperature on time allocation based on eqq. (1)–(3) in the text, corresponding with results from figs. 2–5. Given the constraint that the total change in time allocation sums to zero, we do not report the coefficients for time allocated to indoor leisure. Standard errors clustered on state-month are in parentheses. Covariates include age, gender, number of children, earnings, employment status, race, education, marital status, family income, day of week dummies, minimum temperature, precipitation, humidity, sunrise, sunset, year-month dummies, and county fixed effects.

Table A2. Estimates of Relationship between Mean Temperature and Time Allocation

Mean Temperature (°F)	All Individuals		High Risk		Low Risk		Nonemployed
	Labor	Outdoor	Labor	Outdoor	Labor	Outdoor	Outdoor
< 20	12.847 (16.103)	–66.050 (8.750)	9.381 (44.285)	–62.557 (27.078)	28.055 (25.804)	–55.131 (11.549)	–86.929 (13.022)
20–25	10.917 (14.354)	–56.650 (7.436)	–26.536 (40.723)	–47.037 (23.572)	31.593 (22.926)	–48.654 (9.765)	–75.008 (11.322)
25–30	1.750 (12.251)	–51.777 (6.629)	–19.868 (35.161)	–47.377 (20.886)	15.613 (19.177)	–44.435 (8.744)	–66.496 (10.119)
30–35	9.032 (11.082)	–46.893 (6.034)	–28.785 (31.041)	–41.768 (18.989)	23.204 (17.564)	–37.635 (7.881)	–64.831 (9.137)
35–40	.057 (9.990)	–41.796 (5.425)	–25.275 (28.807)	–30.471 (17.388)	11.138 (15.574)	–34.412 (7.062)	–58.518 (8.469)
40–45	–.190 (8.737)	–33.918 (4.848)	–18.517 (23.957)	–30.770 (15.110)	17.532 (14.100)	–25.447 (6.488)	–49.542 (7.511)
45–50	1.439 (7.952)	–27.500 (4.157)	–11.055 (21.562)	–13.822 (13.055)	10.659 (12.351)	–23.382 (5.703)	–42.823 (6.537)
50–55	4.481 (6.632)	–21.214 (3.680)	–18.536 (18.541)	–11.954 (11.524)	17.181 (10.506)	–15.521 (4.981)	–34.562 (5.650)
55–60	–.080 (5.541)	–11.261 (3.335)	–3.774 (16.051)	–.177 (10.280)	6.145 (8.835)	–8.222 (4.388)	–22.386 (5.133)
60–65	2.673 (4.714)	–7.469 (2.879)	–4.962 (13.735)	–2.954 (8.166)	11.195 (7.531)	–6.390 (3.685)	–11.928 (4.988)
65–70	–1.006 (3.879)	–4.842 (2.209)	–16.327 (11.228)	3.270 (7.263)	3.968 (5.925)	–2.819 (3.021)	–12.153 (3.866)
70–75	...	...	...	...	...	...	...
75–80	–5.757 (4.134)	3.938 (2.521)	8.785 (11.533)	2.621 (7.687)	–7.234 (6.375)	5.992 (3.102)	–.470 (4.113)
80–85	–4.944 (5.391)	6.418 (3.328)	–13.134 (14.315)	19.568 (9.418)	.151 (8.468)	5.575 (4.163)	1.039 (4.972)
85+	–12.849 (8.009)	3.720 (5.169)	–62.735 (23.545)	8.822 (15.552)	1.331 (13.650)	2.705 (5.638)	–.692 (8.547)
Number of observations	42,280	42,280	6,246	6,246	21,151	21,151	14,883

NOTE.—This table reports regression coefficients of the impact of maximum temperature on time allocation based on eqq. (1)–(3) in the text, corresponding with results from figs. 2–5. Given the constraint that the total change in time allocation sums to zero, we do not report the coefficients for time allocated to indoor leisure. Standard errors clustered on state-month are in parentheses. Covariates include age, gender, number of children, earnings, employment status, race, education, marital status, family income, day of week dummies, minimum temperature, precipitation, humidity, sunrise, sunset, year-month dummies, and county fixed effects.