finding

Gender differences in preventing the spread of coronavirus

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METHODS & ANALYSIS

Study 1

Method

Participants

We recruited 800 participants from the United States via Prolific (see for participant recruitment details osf.io/x8uvc). An a priori power analysis suggested a sample size of 788 to estimate a small effect size (d = 0.2) with a power of .80 and an alpha of .05. We recruited 800 participants to account for participant exclusion. Participants completed a five-minute survey that was programmed on Qualtrics for $0.55 on April 8, 2020. Thirty participants were excluded from the analyses, 10 for failing an attention check and 20 because their gender was nonbinary (N = 770, 442 women, M_{age} = 30.7 years, Mdn_{age} = 27.7 years, SD_{age} = 11.04). The distribution of participant ethnicity was as follows: 61.9% White, 7.4% Black or African American, 13.7% Asian, 9.4% Hispanic, 5.4% mixed, 0.7% American Indian, 0.1% Native Hawaiian, and 1.7% other. The distribution of White individuals in our sample matched the proportion in the U.S. population (U.S. population in 2018: 60.4%; United States Census Bureau, 2019). However, compared with the U.S. population, our sample was younger (Mdn = 38.2 years; United States Census Bureau, 2019), and included more Asian (U.S. population: 5.9%) and a lower number of Black (U.S. population in 2018: 13.4%) and Hispanic individuals (U.S. population in 2018: 18.3%). Men and women in the sample did not differ in their level of education, $\chi^2(6) = 9.72$, p = .14.

Measures

The Complete List of Survey Questions Included in Study 1 (April 8, 2020)

The measures were presented in a randomized order. Demographics were filled at the end of the survey.

Preventive Practices

- In the past 7 days, how many days did you have face-to-face (in person) contact with...
  - family or friends (0–7 days)
- In the past 7 days, how many days did you have face-to-face (in person) contact with...
  - other people (0–7 days)
- Please rate the extent to which you take the following actions to avoid COVID-19: - I have been washing my hands more often (1: *Strongly disagree*, 7: *Strongly agree*)
- Please rate the extent to which you take the following actions to avoid COVID-19: - I don't leave my home other than for shopping (1: *Strongly disagree*, 7: *Strongly agree*)
- Please rate the extent to which you take the following actions to avoid COVID-19: - If I have to leave the house, I make sure to stay at least 6 feet away from other people (1: *Strongly disagree*, 7: *Strongly agree*)

Sources of Information for Social Distancing

- How are the following factors influencing to what extent you are socially distancing yourself from others? (1: *Not at all*, 7: *Very much*)
  - The president's suggestions
  - Religious leaders' suggestions
  - Your governor's suggestions
  - Medical experts' suggestions
  - Your family's suggestions
  - Other countries' experiences
  - Your friends' suggestions
  - Your neighbors' suggestions
  - Your feelings of responsibility for others
  - Your anxiety
  - National media
  - Social media
  - Your health history
  - Your feelings of responsibility for yourself

Psychological Experiences

- How much preoccupied are you by the current Coronavirus pandemic? (1: *Not at all*, 7: *Extremely*)
- How much uncertainty do you experience in your daily life as a result of the current Coronavirus pandemic? (1: *Not at all*, 7: *Extremely*)
- Please evaluate the following statement: "Thinking about Covid-19 makes me feel extremely anxious" (1: *Strongly disagree*, 7: *Strongly agree*)

Other Factors

- Do you personally know someone who has COVID-19? (please select all that apply)
  - A. Yes, myself
  - B. Yes, a family member
  - C. Yes, a friend
  - D. Yes, a colleague
  - E. Yes, someone I know
  - F. No
- Are you part of a vulnerable population in terms of contracting COVID-19? (please select all that apply)
  - A. Yes, because of my health history
  - B. Yes, because of my age
  - C. Yes, because of my profession (please specify your profession)
  - D. Yes, because of other reasons (please specify)
  - E. No
- How knowledgeable are you about the recent outbreak of COVID-19 (Coronavirus) in your country? (1: *Not at all knowledgeable*, 7: *Extremely knowledgeable*)
- How many times in a day on average do you check the news and the internet for the new developments regarding the current Coronavirus pandemic? _____
- In the past 7 days, how many days did you leave your house to go to work? (0–7 days)
- How likely do you think it is that you will get COVID-19? (1: *Not at all likely*, 7: *Very likely*)
- How important is it for you to not get COVID-19? (1: *Not at all important*, 7: *Very important*)
- How much did your daily routines change through the current Coronavirus pandemic? (1: *Not at all*, 7: *Extremely*)

Marlowe-Crowne Social Desirability Scale (revised by Reynolds, 1982)

To assess participants' tendency to provide socially desirable answers, we applied the Marlowe-Crowne Social Desirability Scale, as revised by Reynolds (1982).

COVID-19 Quiz[1]

[subjects are asked to select one option below each question]

1. Which of the following statements is TRUE about COVID-19?
   A. Only elderly people show severe symptoms
   B. All individuals who are infected show all of the symptoms
   C. Most people who are infected have mild symptoms
   D. Only people with underlying health issues show the symptoms
   E. Children are not at risk of infection
2. Which of the following statements is TRUE about COVID-19?
   A. Vinegar is more effective than soap at getting rid of the virus
   B. 30% of alcohol in alcohol-based disinfectants would effectively kill the virus
   C. The virus stays on cardboard surfaces for a longer time than plastic surfaces
   D. The virus cannot survive on surfaces for more than 24 hours
   E. A diluted bleach solution can effectively help to remove the virus on surfaces
3. Which of the following statements is TRUE about COVID-19?
   A. Animals cannot spread the virus to people
   B. It can spread by touching surfaces contaminated with the virus and then touching your face
   C. During the COVID-19 incubation period of 5 days, each infected person infects one other person on average.
   D. It typically takes about 2–3 weeks to be sick after being infected by the virus
   E. The virus can be transmitted only in colder climates

Demographic Questions

- Are you a native English speaker?
- If you are not a native English speaker, would you consider yourself as fluent in English?
- What is your gender?
- What is your age?
- What is your current occupation?
- What is your ethnicity?
- In which country do you currently live?
- In which state do you currently live?
- What is the highest level of education you have completed?
- What is your political affiliation? (1: *Very Liberal*, 7: *Very Conservative*)

Results

Preventive Practices

Some of the variance in the in-person contact with family or friends item might have come from participants' contact with immediate family who are quarantining with the participant. However, the effect of gender on this item echoed that of the other social distancing items, indicating that although some variability on this item may come from in-person contact with one's immediate family living in the same household, part of the variance is likely captured by in-person contact with extended family and friends not living in the same household.

Exploratory analyses showed gender differences on in-person contact with others when the political ideology of participants was considered. Gender interacted with political ideology in predicting face-to-face contact with others, $b = -.21$, $t(762) = -2.06$, $p = .04$. Conservatism among men (but not women) significantly predicted greater face-to-face contact with others. The gender difference among conservative participants (+ 1 *SD* on the political affiliation scale) was significant, $b = .45$, $t(762) = 2.14$, $p = .033$, although it was not significant among liberal participants (–1 *SD* on the political affiliation scale), $b = -.18$, $t(762) = -.811$, $p = .418$.

The tendency to go outside during a pandemic might create different levels of risk depending on the density of population where one is located. Therefore, in an additional analysis

examining gender differences on the staying–at-home item, we added participants' location at the time (categorized as urban vs. not urban based on the population density information extracted from the zip codes, as in https://github.com/ibm-watson-data-lab/open-data/tree/master/urbanity). Specifically, we added location (urban vs. not urban) and gender in a factorial analysis of variance (ANOVA) to predict the tendency to stay at home. This analysis revealed a nonsignificant interaction between gender and location, $F(1,755) = 0.903$, $p = .342$, $\eta_p^2 = .001$, in predicting staying at home.

We also tested age, ethnicity, and education as potential moderators of the gender differences observed. The only analysis where the interaction between age and gender was significant was for in-person contact with others, $F(1, 701) = 4.17$, $p = .042$, $\eta_p^2 = .01$, suggesting a greater gender difference (women's less frequent contact with others) among older participants. Age did not moderate gender differences in any other measures, ps > .1. The only finding that was affected by participant ethnicity was the tendency to stay at home other than for shopping, $F(3, 701) = 3.54$, $p = .014$, $\eta_p^2 = .015$. Although the observed gender difference was significant among White and Black participants (ps < .03), the difference did not reach statistical significance for Asian and Hispanic participants. Ethnicity did not interact with gender significantly in any of the other measures, ps > .1. The level of education (analyzed in two categories: bachelor's degree or higher and lower than bachelor's degree) did not significantly interact with gender in predicting any of the reported effects except for handwashing frequency, $F(1, 766) = 5.14$, $p = .024$, $\eta_p^2 = .01$. Only within that measure did individuals with a lower level of education show greater gender differences (women washing their hands more frequently than men) than individuals with a higher level of education. An exploratory analysis on the interaction of gender and education in predicting in-person contact with others also revealed a significant interaction, $F(1, 763) = 7.05$, $p = .008$, $\eta_p^2 = .01$, suggesting a gender difference among those with a higher level of education: men were more likely to report in-person contact with others than were women within that group, $F(1, 763) = 8.20$, $p = .004$, $\eta_p^2 = .011$. The gender difference was not significant among men and women with a lower level of education, $F(1, 763) = 0.665$, $p = .415$, $\eta_p^2 = .001$.

Other Factors

Men and women did not differ in how knowledgeable they felt about COVID-19 and in their frequency of checking COVID-19 news.[2] They also did not differ in having contracted COVID or knowing someone infected by the virus, $\chi^2(6) = 2.77$, $p = .84$.[3,4] They did not differ in their expectancy of contracting the virus, perceived importance of not becoming infected, social desirability, and change in daily routines; thus, these variables are unlikely to account for the observed findings. It is important to note that although the difference in the number of on-site workdays approached significance, controlling for this factor did not change the reported gender differences.

Men in our sample were more conservative than women, $t(767) = 4.44$, $p < .001$. When controlling for political conservatism, many of the observed effects reduced in size—the decrease of Cohen's d varied between 43% and 6%—although the effects remained largely significant. Only one of the effects became nonsignificant: the difference in seeking information from medical experts, $F(1, 756) = 2.62$, $p = .11$.[5] These results suggest that a latent factor underlying male gender and conservatism may in part explain the observed gender differences. Future research should test whether psychological constructs related to both maleness and conservatism—for instance, high power, greater assertiveness, and feelings of autonomy and independence (Courtenay, 2000; Gilligan & Wiggins, 1988; Gollwitzer, Martel, Marshall, Höhs, & Bargh, 2020; Kray, Howland, Russell, & Jackman, 2017)—may help explain the observed gender differences.

Table S1. Summary of Study 1 findings

	Women (n = 442)	Men (n = 328)				95% CI		
	Mean (SD)	Mean (SD)	t	df	p	Lower bound	Upper bound	Cohen's d
Preventive Practices								
In person contact with family or friends (# days/a week)	4.18 (2.97)	4.72 (2.86)	2.54	719.29	.011	.12	.96	0.19
In person contact with others (# days/a week)	1.61 (2.07)	1.81 (2.08)	1.31	765	.191	−.10	.49	0.09
Handwashing	6.37 (1.07)	6.17 (1.25)	−2.33	768	.020	−.36	−.03	−0.17
Staying at home (other than shopping)	5.83 (1.65)	5.51 (1.83)	−2.49	662.52	.013	−.57	−.07	−0.19
Attention to maintaining six feet distance	6.29 (1.14)	6.03 (1.20)	−2.99	768	.003	−.42	−.09	−0.22
Source of Information for Social Distancing								
External Sources for Social Distancing								
The president	2.87 (2.09)	2.91 (1.93)	.289	732.65	.775	−.24	.33	0.02
Religious leaders	2.03 (1.73)	1.98 (1.65)	−.367	768	.714	−.29	.20	−0.03
Your governor	5.03 (1.95)	4.48 (1.87)	−3.88	768	<.001	−.82	−.27	−0.28
Medical experts	6.23 (1.24)	5.98 (1.36)	−2.64	768	.009	−.43	−.06	−0.19
National media	4.75 (1.78)	4.29 (1.72)	−3.62	768	<.001	−.71	−.21	−0.26
Social media	3.93 (2.06)	3.51 (1.85)	−2.99	740.84	.003	−.70	−.14	−0.22
Other countries	5.51 (1.75)	5.15 (1.69)	−2.90	768	.004	−.61	−.12	−0.21
Your family	4.62 (2.01)	4.68 (1.82)	.438	737.34	.662	−.21	.33	0.03
Your friends	3.74 (1.97)	3.76 (1.88)	1.37	768	.891	−.26	.29	0.10
Your neighbors	2.51 (1.84)	2.34 (1.71)	−.551	730.56	.582	−.32	.18	−0.04
Internal Sources for Social Distancing								
Your health history	4.08 (2.25)	3.52 (1.99)	−3.69	744.14	<.001	−.87	−.26	−0.27
Your anxiety	4.92 (1.92)	4.04 (1.90)	−6.32	768	<.001	−1.16	−.61	−0.46
Your feeling of responsibility for others	6.10 (1.34)	5.78 (1.32)	−3.35	768	.001	−.51	−.13	−0.24
Your feeling of responsibility for yourself	6.06 (1.34)	5.70 (1.42)	−3.61	680.96	<.001	−.56	−.17	−0.28
Psychological Experience								
Feeling extremely anxious	4.94 (1.65)	4.09 (1.67)	−7.06	768	<.001	−1.09	−.61	−0.51
Feeling preoccupied	4.71 (1.50)	4.41 (1.55)	−2.72	768	.007	−.52	−.08	−0.20
Feeling uncertain	4.88 (1.56)	4.61 (1.57)	−2.42	768	.016	−.50	−.05	−0.17
Other Factors								
Subjective knowledge	5.22 (1.09)	5.09 (1.07)	−1.7	768	.089	−.29	.02	−0.12
Frequency of checking news	3.88 (4.43)	3.82 (4.04)	−.218	756	.828	−.68	.55	−0.02
Social desirability	.43 (.23)	.41 (.23)	−.940	767	.348	−.05	.02	−0.07
Number of on-site workdays (/a week)	.75 (1.70)	.98 (1.89)	1.71	657.17	.088	−.03	.49	0.13
Change in routines	5.33 (1.67)	5.27 (1.63)	−.477	768	.634	−.29	.18	−0.03
Expectancy of getting the virus	3.72 (1.48)	3.58 (1.45)	−1.32	768	.188	−.35	.07	−0.09
Importance of not getting the virus	5.88 (1.41)	5.68 (1.51)	−1.89	768	.060	−.41	.01	−0.14

Note. We report adjusted t, degrees of freedom and p values in comparisons where the equality of variance assumption was not met.

Table S2. Pearson correlations between sources of information & preventive health measures

	In person contact with family or friends (# days/a week)	In person contact with others (# days/a week)	Handwashing	Staying at home (other than shopping)	Attention to maintaining six feet distance
The president	−.069	.009	.061	.052	.061
Religious leaders	−.013	.073*	.082*	−.002	.063
Your governor	−.082*	−.077*	.197***	.178***	.268***
Medical experts	−.065	−.142***	.253***	.230***	.330***
National media	−.014	−.053	.204***	.153***	.252***
Social media	.005	−.004	.141***	.078*	.147***
Other countries	−.015	−.051	.289***	.183***	.338***
Your family	.080*	−.020	.171***	.103**	.126***
Your friends	−.032	.069	.128***	−.021	.075*
Your neighbors	−0.21	.045	.094**	.052	.118**
Your health history	−.088*	−.003	.215***	.100**	.150***
Your anxiety	−.050	−.068	.268***	.143***	.272***
Your feeling of responsibility for others	−.036	−.090	.292***	.165***	.363***
Your feeling of responsibility for yourself	−.084*	−.162***	.313***	.270***	.367***

*$p < .05$. **$p < .01$. ***$p < .001$.

Study 2

Method

Observation Locations

We conducted our observations in three different U.S. locations, specifically, New York City (10012); New Haven, Connecticut (06511); and New Brunswick, New Jersey (08901). Although these locations are all in the northeastern United States, they differ on a variety of demographic variables. The three locations varied in terms of average annual income per household at the zip code level (NY [10012]: $10,4561, CT [06511]: $38614, NJ [08901]: $38413), the distribution of race and ethnicity, (New York [10012]: 75.8% White, 3.22% Black, 17.65% Asian, 0.51% American Indian or Alaskan Native, 0.15% Native Hawaiian or other Pacific Islander, 2.66% other; Connecticut [06511]: 39.74% White, 42.63% Black, 8.23% Asian, 1.51% American Indian or Alaskan Native, 0.16% Native Hawaiian or other Pacific Islander, 6.73% other; New Jersey [08901]: 46.56% White, 16.77% Black, 7.99% Asian, 1.76% American Indian or Alaskan Native, 0.2% Native Hawaiian or other Pacific Islander, 26.72% other), the median age of the inhabitants (New York [10012]: 34.5 years, Connecticut [06511]: 28.8 years, New Jersey [08901]: 23.3 years), and the number of persons per household (New York [10012]: 1.71, Connecticut [06511]: 2.26, New Jersey [08901]: 3.36).[6] The distribution of male and female inhabitants was similar across the three locations (New York [10012]: 50.85% female, Connecticut [06511]: 50.97% female, New Jersey [08901]: 48.79% female). All three observation locations had main streets with paved sidewalks that are convenient for walking.

Participants

On the basis of our preliminary observations in these locations, we estimated that we would observe one pedestrian every one to two minutes. As we aimed to complete our observation within two hours, we decided to limit our sample to 100 people in each area and preregistered this plan (see https://aspredicted.org/blind.php?x=cf3ea8). As preregistered, each author observed 100 individuals in each location on May 4, 2020;[7] 127 women and 173 men were observed in total.

Results

As predicted, a chi-square test of independence revealed a significant association between gender and mask wearing, with women being more likely to wear masks than men as compared to chance, $\chi^2(1) = 9.11$, $p = .003$ (see Table S3). Regarding simple effects, a z test comparing the proportions conducted on SPSS showed that within women, the proportion of those with a mask (55.1%) was significantly higher than the proportion of those without a mask at the .05 level (44.9%). In contrast, within men, the proportion of those with a mask (37.6%) was significantly lower than the proportion of those without a mask (62.4%). Although we did not predict gender differences in the number of people in public, we observed a greater proportion of men (57.7%) than women (42.3%) on the street, $\chi^2(1) = 7.05$, $p = .008$. These results align with the finding of Study 1 that women reported a higher tendency to stay at home.[8]

Table S3. Gender × Mask cross-tabulation

			Mask		
			No Mask	Mask	Total
Gender	Men	Count	108[a]	65[b]	173
		Expected Count	95.2	77.9	173.0
		% within Gender	62.4%	37.6%	100.0%
		% within Mask	65.5%	48.1%	57.7%
		% of Total	36.0%	21.7%	57.7%
	Women	Count	57[a]	70[b]	127
		Expected Count	69.9	57.2	127.0
		% within Gender	44.9%	55.1%	100.0%
		% within Mask	34.5%	51.9%	42.3%
		% of Total	19.0%	23.3%	42.3%
Total		Count	165	135	300
		Expected Count	165.0	135.0	300.0
		% within Gender	55.0%	45.0%	100.0%
		% within Mask	100.0%	100.0%	100.0%
		% of Total	55.0%	45.0%	100.0%

Note. Different superscript letters indicate significant differences at the .05 level.

Study 3

Method

Reduction in General Movement and Visits to Nonessential Retailers

Unacast gathers GPS data from thousands of different app providers in the United States (all requiring opt-in consent), which provide a unique device ID, a timestamp that the device was "pinged," and the corresponding latitude and longitude. Unacast then clusters these raw pings into dwells (based on whether a device is stationary, which is determined by using a certain number of pings over a period of time) and travel events (based on whether a device is moving, which is determined by the dispersity of the pings). The change in distance, then, is calculated using those travel events. Specifically, the percentage of reduction in total distance traveled is calculated by taking the total distance traveled for each device in a county, averaging across all the devices in a county, and then subtracting the average distance traveled in that county before March 9 (depending on the corresponding day). Devices were assigned to counties based on where a specific device was recorded for the longest time on a specific day.

The general movement (overall distance traveled) measure is defined by Unacast as the "Percent reduction in total distance traveled per device, averaged across all devices located in the county." The visits to nonessential retailers measure is defined by Unacast as the "Difference in visitation of nonessential POIs [points of interest] on a specific Post-COVID-19 day compared to a corresponding Pre-COVID-19 baseline." Post-COVID-19 indicates any day after March 8. The Pre-COVID-19 baseline was calculated as the general movement of counties' residents and visits to nonessential retailers on the same day of the week during the four weeks leading up to March 9. For example, a county's level of social distancing on Monday, March 9, was calculated as the percentage reduction in movement and nonessential visits from the average levels of movement and nonessential visits on the four pre-COVID Mondays (February 10, February 17, February 24, and March 2) in that county.

According to Unacast, the nonessential visitations measure included the following: restaurant (multiple kinds), department store, clothing store (multiple kinds), footwear store, discount stores, jewelry store, computers + consumer electronics store, gift store, seasonal store, bookstore, office supply store, barber shop or beauty salon, cosmetics + beauty supply store, gyms + fitness facilities, communications store, new and used car dealers, hotels, used product store or thrift shop, craft + hobby store, toy store, travel agency, spa, massage + esthetics parlor, sports + recreation facility, weight loss facility, home furnishing store, housewares store, home improvement + building supply store, printing + copying service, theater, music venue, amusement park or facility, furnishing rental store, shared offices + coworking spaces, car wash, cannabis retail, and flower shop. Further details regarding how the two social distancing measures were calculated can be found in the "UnacastMethodologyAndAccess" folder in our open-science framework project page (https://osf.io/bkqj7/).

Variables

For descriptions of the variables included in the mixed-effects models of Study 3, including predictors, covariates, and outcome variables, see Table S4.

Table S4. Descriptions of all variables included in the mixed-effects models of Study 3

Variable	Description	Source	County or State Level
Daily Reduction in General Movement	Percentage reduction of average distance traveled from baseline (average distance traveled for same day of week during non-COVID-19 time period for a specific county)	Unacast (2020)	County
Daily Reduction in Visits to Nonessential Retailers	Percentage reduction of visits to nonessential retail and services from baseline (average visits for same day of week during non-COVID-19 time period for a specific county)	Unacast (2020)	County
Time (linear)	Linear time variable from 3/9/20 to 5/29/20	Unacast (2020)	County
Time (quadratic)	Quadratic time variable from 3/9/20 to 5/29/20	Unacast (2020)	County
Weekend	Dummy, 0 weekday, 1 weekend	Unacast (2020)	County
Male vs. Female Percentage	Percentage of males in a county	COVID-19_US_County-level_Summaries. Killeen et al., 2020	County
COVID-19 Cases per Capita	Daily cumulative number of COVID-19 cases divided by county population on a specific day	The New York Times (2020); New York State Department of Health (2020); Unacast (2020)	County
Median Household Income	Median 2018 household income in US dollars	United States Department of Agriculture Economic Research Service (2020)	County
Population Density	Population density per square mile of land area as per 2010 census	Killeen et al. (2020)	County
Median Age	Median county age in years	United States Census Bureau (2018a)	County
Religious Adherents per 1,000 People	Rate of religious adherents per 1,000 people, as of 2010	Hoover (2010)	County
Percentage Employed	Number of people employed in 2018 divided by county population	United States Department of Agriculture Economic Research Service (2020)	County
State Policy (Stay-at-home)	Dummy, 0 no order, 1 stay-at-home order on a specific day in a specific county	Mervosh, Lee, Gamio, & Popovich (2020, June 5)	State (NYC at county)
Gini Coefficient	Gini Index estimate, 2018	United States Census Bureau (2018b)	County
High school diploma only 2014–2018	Percentage of adults who only have a high school diploma (2014–2018)	COVID-19_US_County-level_Summaries. Killeen et al., 2020	County
Some college or associate's degree 2014–2018	Percentage of adults with a college degree below bachelor's (2014–2018)	COVID-19_US_County-level_Summaries. Killeen et al., 2020	County
Bachelor's degree or higher 2014–2018	Percentage of adults who have at least a bachelor's degree (2014–2018)	COVID-19_US_County-level_Summaries. Killeen et al., 2020	County
GOP Advantage (2016 vote gap)	Percentage Republican vote minus percent Democrat vote, 2016	US County Level Election Results 08-16 (2016)	County
Percentage Employees in Agriculture, Forestry, Fishing and Hunting	2016 percentage of employees in Agriculture, Forestry, Fishing and Hunting	Social Explorer (2016)	County
Percentage Employees in Mining, Quarrying, and Oil and Gas Extraction	2016 percentage of employees in Mining, Quarrying, and Oil and Gas Extraction	Social Explorer (2016)	County
Percentage Employees in Utilities	2016 percentage of employees in Utilities	Social Explorer (2016)	County
Percentage Employees in Construction	2016 percentage of employees in Construction	Social Explorer (2016)	County
Percentage Employees in Manufacturing	2016 percentage of employees in Manufacturing	Social Explorer (2016)	County

Variable	Description	Source	County or State Level
Percentage Employees in Wholesale Trade	2016 percentage of employees in Wholesale Trade	Social Explorer (2016)	County
Percentage Employees in Retail Trade	2016 percentage of employees in Retail Trade	Social Explorer (2016)	County
Percentage Employees in Transportation	2016 percentage of employees in Transportation	Social Explorer (2016)	County
Percentage Employees in Information	2016 percentage of employees in Information	Social Explorer (2016)	County
Percentage Employees in Finance and Insurance	2016 percentage of employees in Finance and Insurance	Social Explorer (2016)	County
Percentage Employees in Real Estate and Rental and Leasing	2016 percentage of employees in Real Estate and Rental and Leasing	Social Explorer (2016)	County
Percentage Employees in Professional Scientific, and Technical Services	2016 percentage of employees in Professional Scientific, and Technical Services	Social Explorer (2016)	County
Percentage Employees in Management of Companies and Enterprises	2016 percentage of employees in Management of Companies and Enterprises	Social Explorer (2016)	County
Percentage Employees in Administrative and Support and WasteManagement and Remediation Services	2016 percentage of employees in Administrative and Support and WasteManagement and Remediation Services	Social Explorer (2016)	County
Percentage Employees in Educational Services	2016 percentage of employees in Educational Services	Social Explorer (2016)	County
Percentage Employees in Health Care and Social Assistance	2016 percentage of employees in Health Care and Social Assistance	Social Explorer (2016)	County
Percentage Employees in Arts, Entertainment, and Recreation	2016 percentage of employees in Arts, Entertainment, and Recreation	Social Explorer (2016)	County
Percentage Employees in Accommodation and Food Services	2016 percentage of employees in Accommodation and Food Services	Social Explorer (2016)	County

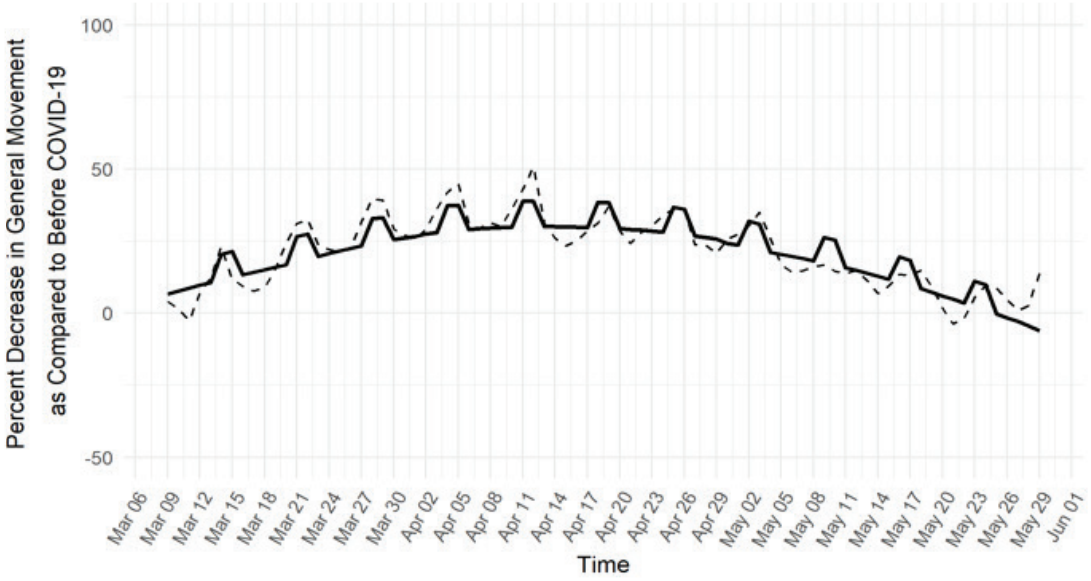
Supplemental Results

Validation of Behavioral Social Distancing Measures

We first performed several analyses to validate the included behavioral social distancing measures. We entered percentage reduction in daily distance traveled and percentage reduction in visits to nonessential retailers (reverse-coded and multiplied by 100 [to create a percentage out of 100], such that greater values corresponded to increased social distancing) into mixed-effects models that included the following fixed factors: weekend (1 = weekday, 0 = weekend), state policy (0 = stay-at-home order not in effect for a specific state on a specific day in the included date range and 1 = stay-at-home order in effect for a specific state on a specific day in the included date range),[9] median income (*z* scored), and COVID cases per capita (cumulative cases divided by county population; included for each specific day in the included date range; *z* scored). This validation model included random intercepts of county and state and random slopes of linear and quadratic time at the state level.

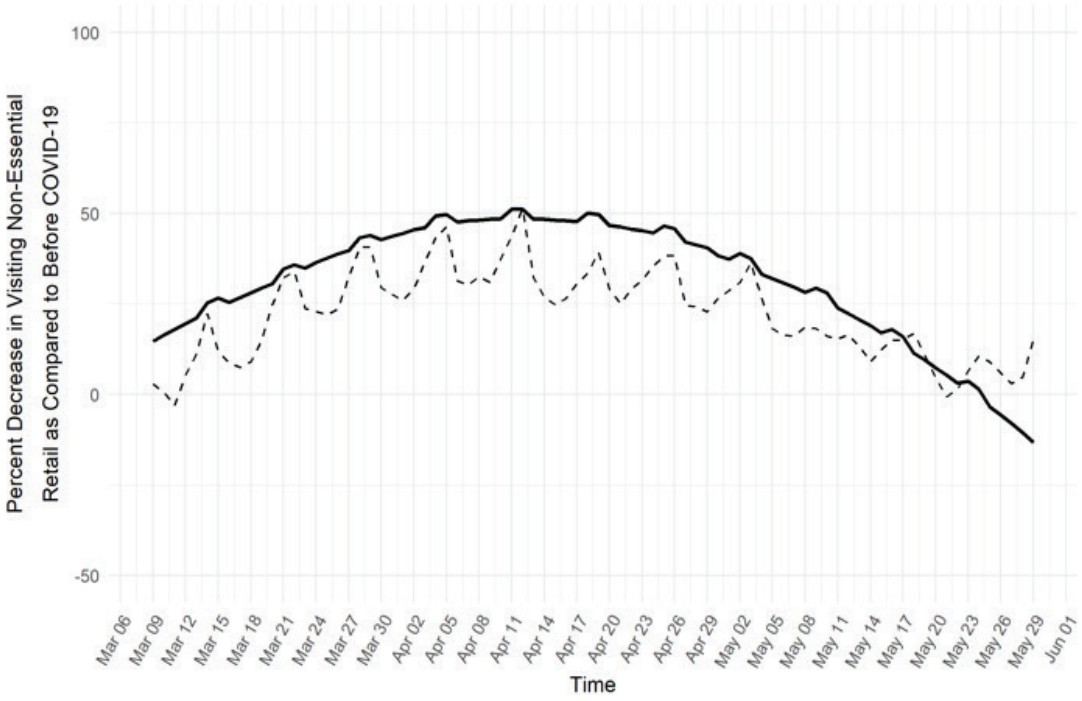
As expected, we found quadratic effects of time (above and beyond linear effects) for percentage reduction in general movement and visits to nonessential services between March 9, 2020, and May 29, 2020, such that general movement and visitation reduction increased over time, peaked, and then began to decline (see Figures S1 and S2 and Table S5; negative *b*s indicate a convex distribution). On top of these quadratic relationships, we also found that social distancing decreased over time linearly (see Table S5; see Figures S1 and S2 for visualization). We also observed large weekend effects, such that reductions in general movement and visitation are both considerably greater on weekends (see Table S5). These findings are likely driven by fewer people traveling for work on weekends. Additionally, as anticipated, median household income was associated with increased social distancing (higher income is likely linked to being able to work from home; see Table S5),

Figure S1. Social distancing (percentage reduction in general movement relative to before COVID) as a function of time (March 9 to May 29, 2020)



Note. In line with social distancing restrictions being rapidly implemented during mid-March and then weakening as states began to reopen, social distancing increased up until early to mid-April and then began to decline. The dashed line is the daily average across counties. The dark line represents the average prediction from a multilevel model, including effects of orthogonal linear and quadratic time terms, weekends, state stay-at-home policy, county median-level income, and COVID cases per capita.

Figure S2. Social distancing (percentage reduction in visits to nonessential stores & services relative to before COVID) as a function of time (March 9 to May 29, 2020)



Note. In line with social distancing restrictions being rapidly implemented during mid- March and then weakening as U.S. States began to reopen, social distancing increased up until early/mid April and then began to decline. The dashed line is the daily average across counties. The dark line represents the average prediction from a multilevel model including effects of orthogonal linear and quadratic time terms, weekends, state stay-at-home policy, county median-level income, and COVID cases per capita.

and greater social distancing was observed when a stay-at-home policy was in place, both for general movement and visits to nonessential services (see Table S5).

Gender and Social Distancing

In our main analyses, we examined whether gender, as assessed via the percentage of males versus females in a county, predicted counties' degree of social distancing between March 9 and May 29, 2020. We conducted a series of three-level mixed-effects models (observations were nested within county and county within state) varying in model specification and saturation to examine the robustness of this claim. In each of these models, we included random intercepts of county and state and the random slope of gender at the state level (where possible, that is, when doing so did not lead to convergence failures).

First, as base models, we conducted two mixed-effects models with the two social distancing measures as the outcome variables (general distance and visits to nonessential retailers, respectively), and gender ([total # of males]/[total # of males + total # of females]*100; M = 50.07%, SD = 2.26%, min = 43.13%, max = 73.16%) as a single fixed effect predictor. We observed a main effect of gender in that counties with a higher percentage of males exhibited decreased social distancing both in terms of general movement and in terms of visits to nonessential retailers, $B_{movement}$ = –2.01, 95% CI [–2.79, –1.21], p < .001, and $B_{visitation}$ = –4.54, 95% CI [–5.89, –3.18], p < .001 (see the base model in Tables S6 and S7).

To examine how the observed association between gender and social distancing changed over time and to examine the robustness of this link, we reran these models while adding

Table S5. Validation of relationship between state policy, income, weekday effects, COVID cases per capita, & percentage reduction in general movement & visits to nonessential retailers.

Predictors	Reduction in General Movement			Reduction in Visits to Nonessential Retailers		
	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	17.881	16.021 — 19.741	<.001	28.161	26.300 — 30.022	<.001
timeLinear_c	−3.454	−4.345 — −2.562	<.001	−8.400	−9.684 — −7.116	<.001
timeQuad_c	−8.185	−8.769 — −7.601	<.001	−13.511	−14.133 — −12.888	<.001
weekend	8.845	8.739 — 8.952	<.001	2.639	2.456 — 2.821	<.001
state_policy_dummy	5.527	5.338 — 5.715	<.001	6.228	5.907 — 6.548	<.001
income_c	4.133	3.794 — 4.473	<.001	5.642	5.000 — 6.284	<.001
cases_c	0.485	0.414 — 0.557	<.001	1.757	1.614 — 1.900	<.001
Random Effects						
σ^2	141.750			286.830		
τ_{00}	66.028 $_{county\_fips}$			211.502 $_{county\_fips}$		
	43.037 $_{state\_name}$			37.862 $_{state\_name}$		
τ_{11}	10.448 state_name.timeLinear_c			21.600 $_{state\_name.timeLinear\_c}$		
	4.407 $_{state\_name.timeQuad\_c}$			4.831 $_{state\_name.timeQuad\_c}$		
ρ_{01}	0.643 $_{state\_name.timeLinear\_c}$			0.890 $_{state\_name.timeLinear\_c}$		
	−0.715 $_{state\_name.timeQuad\_c}$			0.184 $_{state\_name.timeQuad\_c}$		
ICC	0.466			0.490		
N	3025 $_{county\_fips}$			2073 $_{county\_fips}$		
	51 $_{state\_name}$			51 $_{state\_name}$		
Observations	248050			169890		
Marginal R^2/Conditional R^2	0.356/0.657			0.376/0.682		

the interactions between time and gender as well as adding covariates. Namely, we ran two further model specifications, a main effects model (including main effect of all covariates and the interaction terms between gender and linear and quadratic time), and a saturated model (including all covariates, all interaction terms between covariates and linear time, and the interaction term between gender and linear time). We included the following covariates: COVID-19 cases per capita (cumulative cases divided by county population, included for each specific day in the included date range; *z* scored), state policy (dummy coded as 1 and 0; 1 = stay-at-home order not in effect for a specific state on a specific day in the included date range and 0 = stay-at-home order in effect for a specific state on a specific day in the included date range), weekend (0 = weekday, 1 = weekend), median income (*z* scored), median age (*z* scored), population density (in terms of population per square mile of land area; *z* scored), religiosity (*z* scored; variable was rate of religious adherents per 1,000 people; note that several counties had more religious adherents than residents, perhaps due to registration at multiple congregations or from registration by non-county residents), percentage employment (*z* scored), economic inequality (Gini coefficient; *z* scored), percentage of adults who only have a high school diploma (*z* scored), percentage of adults who have at least a bachelor's degree (*z* scored), and percentage of adults with a college degree below bachelor's (*z* scored; see Tables S6 and S7 for more details).

It is important to note that we observed interactions between gender and linear time for

both the main models, $B_{movement}$ = −0.42, 95% CI [−0.47, −0.38], p < .001, and $B_{visitation}$ = −0.35, 95% CI [−0.46, −0.25], p < .001, and the saturated models: $B_{movement}$ = −0.51, 95% CI [−0.56, −0.45], p < .001, and $B_{visitation}$ = −0.44, 95% CI [−0.57, −0.32], p < .001. The observed negative interactions indicated that the link between gender and reduced social distancing increased with time (see Figures S3a and S3b).[10] Crucially, these interactions were observed while adjusting for numerous control variables (see above) and for interactions between these variables and linear time (see the rows in bold in the main models and saturated models in Tables S6 and S7 for the relevant interactions between gender and time).

We reran the saturated model (see Tables S6 and S7) again while additionally controlling for the percentage of employment in various types of professions (for example, agriculture, finance, or manufacturing). These models were run separately because the percentage of employment type variables included substantial amounts of missing data and thus reduced sample size. We included percentage of employment in agriculture (which also includes forestry, fishing, and hunting), mining (which also includes quarrying, oil, and gas extraction), utilities, construction, manufacturing, wholesale trade, retail trade, transportation and warehousing, information, finance and insurance, real estate, professional services (which also includes scientific and technical services), management of companies and enterprises, administrative positions, educational services, health care and social assistance, arts (which also includes entertainment and recreation), and accommodation and food services (all z scored; see Table S4 for more detail). When doing so, the negative interactions between county gender and linear time remained, $B_{movement}$ = −0.69, 95% CI [−0.78, −0.60], p < .001, and $B_{visitation}$ = −1.06, 95% CI [−1.22, −0.90], p < .001 (see Table S8; see the row in bold for the relevant interaction term between gender distribution and linear time; only 1,983 and 1,744 counties were included in these analyses, respectively, due to missing data in the percentage of employment types variables).

We also reran the main and saturated models (see Tables S6 and S7) again while additionally controlling for partisanship (represented by a greater percentage of votes for Donald Trump versus Hilary Clinton in the 2016 election; see Table S4). These models were run separately because, given the results of Study 1, we were specifically interested in whether partisanship (political leaning) may account for the observed gender-based differences in social distancing. When including the partisanship variable in the main models, the links between counties' gender distribution and social distancing over time did not substantially decrease, $B_{movement}$ = −0.53, 95% CI [−0.58, −0.48], p < .001, and $B_{visitation}$ = −0.31, 95% CI [−0.41, −0.20], p < .001. And, for the saturated models, while including political orientation decreased the interaction between gender and time in terms of visits to nonessential retailers, $B_{visitation}$ = −0.18, 95% CI [−0.30, −0.05], p = .006, it did not do so in terms of general movement, $B_{movement}$ = −0.52, 95% CI [−0.57, −0.46], p < .001 (see Tables S9 and S10). In sum, when including the partisanship variable in the models, the negative interactions between county gender distribution and time largely did not decrease (see the main text and Tables S9 and S10).

Finally, we reran the main and saturated models (see Tables S6 and S7) again while additionally including counties' total number of family households (weighted by county population) and total number of nonfamily households where the householder lives alone (weighted by county population) in the models (only ~826 counties were included due to missing data in these variables). Specifically, in both models, we added three-way interaction terms between each of these variables and gender distribution and linear time (and all lower order terms) to examine whether our findings were moderated by family versus nonfamily households. That is, our findings may be driven by families applying stereotypical gender roles when COVID developed, that is, females caring for children and males going to get groceries. Such gender role behaviors could explain why counties with a greater percentage of males exhibited less social distancing (further, Study 2's results show that

Table S6. Predicting reduction in general movement

Predictors	Reduction in General Movement								
	Base Model			Main Model			Saturated Model		
	Estimates	CI	*p*	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	24.007	21.828 — 26.186	<.001	18.108	16.595 — 19.621	<.001	14.171	12.539 — 15.802	<.001
MalePercentage_c	−2.001	−2.793 — −1.210	<.001	−0.516	−1.314 — 0.282	.205	−0.477	−1.276 — 0.323	.243
TimeLinear_c				−4.032	−4.084 — −3.980	<.001	−2.597	−2.675 — −2.519	<.001
TimeQuad_c				−8.151	−8.211 — −8.091	<.001			
state_policy_dummy				4.109	3.967 — 4.250	<.001	14.325	14.197 — 14.453	<.001
Cases_per_capita_c				0.723	0.653 — 0.792	<.001	4.701	4.544 — 4.857	<.001
weekend				8.823	8.715 — 8.930	<.001	10.002	9.886 — 10.119	<.001
Density_c				0.819	0.590 — 1.048	<.001	0.679	0.451 — 0.907	<.001
Income_c				2.508	1.998 — 3.018	<.001	2.324	1.814 — 2.835	<.001
IncomeInequality_c				0.966	0.600 — 1.331	<.001	0.876	0.511 — 1.240	<.001
PercentEmploymen_c				−0.625	−1.051 — −0.200	.004	−0.592	−1.017 — −0.166	.006
Religiosity_c				−0.093	−0.404 — 0.217	.557	−0.074	−0.384 — 0.236	.640
Age_c				0.408	0.105 — 0.711	.008	0.374	0.071 — 0.677	.016
PercentBachelorsDegree_c				2.134	1.408 — 2.860	<.001	2.180	1.456 — 2.905	<.001
PercentOnlyHSDiploma_c				−1.281	−1.982 — −0.579	<.001	−1.253	−1.954 — −0.552	<.001
PercentSomeCollegeDegree_c				−0.484	−0.909 — −0.059	.025	−0.446	−0.871 — −0.021	.040
TimeLinear_c *MalePercentage_c				**−0.424**	**−0.471 — −0.376**	**<.001**	**−0.509**	**−0.564 — −0.454**	**<.001**
TimeQuad_c *MalePercentage_c				0.101	0.054 — 0.149	<.001			
TimeLinear_c *state_policy_dummy							−6.210	−6.344 — −6.076	<.001
TimeLinear_c *Cases_per_capita_c							−4.024	−4.137 — −3.911	<.001
TimeLinear_c *weekend							−4.294	−4.416 — −4.172	<.001
TimeLinear_c *Density_c							0.244	0.189 — 0.299	<.001
TimeLinear_c *Income_c							0.740	0.647 — 0.834	<.001
TimeLinear_c *IncomeInequality_c							0.540	0.471 — 0.610	<.001
TimeLinear_c *PercentEmployment_c							0.083	0.010 — 0.156	.025
TimeLinear_c *Religiosity_c							−0.611	−0.667 — −0.556	<.001
TimeLinear_c *Age_c							−0.899	−0.957 — −0.841	<.001
TimeLinear_c *PercentBachelorsDegree_c							−0.833	−0.957 — −0.709	<.001
TimeLinear_c *PercentOnlyHSDiploma_c							−0.963	−1.074 — −0.852	<.001
TimeLinear_c *PercentSomeCollegeDegree_c							−1.207	−1.279 — −1.135	<.001

Random Effects			
σ^2	268.373		172.538
τ_{00}	73.596 $_{county\_fips}$		51.585 $_{county\_fips}$
	59.093 $_{state\_name}$		32.445 $_{state\_name}$
τ_{11}	4.431 $_{state\_name.MalePercentage\_c}$		9.660 $_{county\_fips.MalePercentage\_c}$
			3.619 $_{state\_name.MalePercentage\_c}$
ρ_{01}	−0.061 $_{state\_name}$		0.760 $_{county\_fips}$
			0.323 $_{state\_name}$
ICC	0.338		0.361
N	3025 $_{county\_fips}$	3022 $_{county\_fips}$	3022 $_{county\_fips}$
	51 $_{state\_name}$	51 $_{state\_name}$	51 $_{state\_name}$
Observations	248050	247804	247804
Marginal R^2/Conditional R^2	0.010/0.345	NA	0.346/0.582

Note. The row in bold identifies the relevant interaction between gender and time.

Table S7. Predicting reduction in visits to nonessential retailers

Predictors	Reduction in Visits to Nonessential Retailers								
	Base Model			Main Model			Saturated Model		
	Estimates	CI	*p*	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	33.401	30.937 — 35.865	<.001	25.360	23.351 — 27.368	<.001	18.381	16.438 — 20.323	<.001
MalePercentage_c	−4.537	−5.893 — −3.181	<.001	−0.834	−1.658 — −0.010	.047	−0.682	−1.495 — 0.130	.100
TimeLinear_c				−9.123	−9.218 — −9.028	<.001	−8.498	−8.645 — −8.350	<.001
TimeQuad_c				−13.116	−13.222 — −13.009	<.001			
state_policy_dummy				5.720	5.477 — 5.964	<.001	22.492	22.268 — 22.717	<.001
Cases_per_capita_c				2.341	2.206 — 2.475	<.001	7.077	6.784 — 7.370	<.001
weekend				2.621	2.434 — 2.807	<.001	4.496	4.289 — 4.703	<.001
Density_c				0.262	−0.179 — 0.704	.244	0.122	−0.320 — 0.564	.588
Income_c				−2.316	−3.296 — −1.336	<.001	−2.509	−3.490 — −1.528	<.001
IncomeInequality_c				1.140	0.346 — 1.934	.005	1.014	0.219 — 1.809	.012
PercentEmployment_c				1.435	0.555 — 2.315	.001	1.539	0.659 — 2.419	.001
Religiosity_c				−0.677	−1.340 — −0.014	.045	−0.547	−1.210 — 0.116	.106
Age_c				−4.833	−5.497 — −4.169	<.001	−4.980	−5.644 — −4.316	<.001
PercentBachelorsDegree_c				8.335	6.962 — 9.708	<.001	8.220	6.846 — 9.594	<.001
PercentOnlyHSDiploma_c				−1.657	−3.068 — −0.247	.021	−1.752	−3.163 — −0.341	.015
PercentSomeCollegeDegree_c				1.088	0.264 — 1.913	.010	1.078	0.253 — 1.903	.010
TimeLinear_c *MalePercentage_c				**−0.351**	**−0.457 — −0.246**	**<.001**	**−0.442**	**−0.568 — −0.315**	**<.001**
TimeQuad_c *MalePercentage_c				−0.211	−0.316 — −0.106	<.001			
TimeLinear_c *State_policy_dummy							−7.526	−7.754 — −7.298	<.001
TimeLinear_c *Cases_per_capita_c							−5.475	−5.677 — −5.272	<.001
TimeLinear_c * weekend							−4.692	−4.909 — −4.476	<.001
TimeLinear_c * Density_c							0.202	0.120 — 0.284	<.001
TimeLinear_c * Income_c							0.951	0.783 — 1.119	<.001
TimeLinear_c *IncomeInequality_c							1.281	1.139 — 1.423	<.001
TimeLinear_c *PercentEmployment_c							−0.791	−0.939 — −0.643	<.001
TimeLinear_c *Religiosity_c							−0.280	−0.391 — −0.169	<.001
TimeLinear_c *Age_c							−2.062	−2.179 — −1.944	<.001
TimeLinear_c *PercentBachelorsDegree_c							−0.577	−0.801 — −0.353	<.001
TimeLinear_c *PercentOnlyHSDiploma_c							−2.627	−2.841 — −2.413	<.001
TimeLinear_c *PercentSomeCollegeDegree_c							−1.332	−1.472 — −1.191	<.001

Random Effects			
σ^2	587.895		371.880
τ_{00}	228.320 $_{county\_fips}$		118.869 $_{county\_fips}$
	67.722 $_{state\_name}$		41.992 $_{state\_name}$
τ_{11}	6.861 $_{state\_name.MalePercentage\_c}$		0.524 $_{state\_name.MalePercentage\_c}$
ρ_{01}	−0.561 $_{state\_name}$		0.055 $_{state\_name}$
ICC	0.341		0.302
N	2073 $_{county\_fips}$	2072 $_{county\_fips}$	2072 $_{county\_fips}$
	51 $_{state\_name}$	51 $_{state\_name}$	51 $_{state\_name}$
Observations	169890	169808	169808
Marginal R^2/Conditional R^2	0.014/0.350	NA	0.420/0.595

Note. The row in bold identifies the relevant interaction between gender and time.

Table S8. Predicting reduction in general movement & nonessential visitation when also including percentage of employment type in the saturated model

Predictors	Reduction in General Movement			Reduction in Visits to Nonessential Retailers		
	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	14.943	13.394 — 16.492	<.001	18.875	17.078 — 20.672	<.001
TimeLinear_c	−2.262	−2.354 — −2.170	<.001	−8.323	−8.489 — -8.157	<.001
MalePercentage_c	−0.132	−1.056 — 0.792	.780	−1.349	−2.427 — -0.271	.014
state_policy_dummy	14.545	14.407 — 14.683	<.001	22.777	22.538 — 23.017	<.001
Cases_per_capita_c	5.195	5.020 — 5.370	<.001	6.465	6.169 — 6.761	<.001
weekend	10.080	9.955 — 10.206	<.001	4.985	4.768 — 5.203	<.001
Density_c	0.418	0.216 — 0.620	<.001	0.042	−0.384 — 0.468	.848
Income_c	1.473	0.897 — 2.050	<.001	−1.674	−2.746 — -0.603	.002
IncomeInequality_c	0.234	−0.205 — 0.673	.297	0.592	−0.271 — 1.455	.179
PercentEmployment_c	0.325	−0.228 — 0.878	.249	1.656	0.632 — 2.680	.002
Religiosity_c	0.080	−0.286 — 0.446	.667	−0.064	−0.752 — 0.623	.854
PercentBachelorsDegree_c	0.441	−0.442 — 1.324	.328	6.286	4.726 — 7.846	<.001
PercentOnlyHSDiploma_c	−1.576	−2.408 — −0.745	<.001	−0.545	−2.034 — 0.943	.473
PercentSomeCollegeDegree_c	−1.009	−1.505 — −0.513	<.001	0.354	−0.535 — 1.243	.436
Age_c	0.934	0.560 — 1.309	<.001	−5.134	−5.871 — -4.396	<.001
pct_emp_agri_2016	−0.084	−0.383 — 0.215	.584	−0.040	−0.599 — 0.519	.889
pct_emp_mini_2016	0.589	0.205 — 0.973	.003	0.385	−0.266 — 1.035	.246
pct_emp_util_2016	−0.225	−0.512 — 0.061	.123	−0.075	−0.591 — 0.442	.777
pct_emp_cons_2016	0.298	−0.033 — 0.629	.078	−0.082	−0.711 — 0.548	.799
pct_emp_manu_2016	0.169	−0.387 — 0.726	.551	0.191	−0.997 — 1.378	.753
pct_emp_whol_2016	−0.100	−0.408 — 0.208	.525	−0.229	−0.801 — 0.343	.432
pct_emp_reta_2016	−0.228	−0.591 — 0.134	.217	−0.695	−1.402 — 0.013	.054
pct_emp_tran_2016	−0.294	−0.612 — 0.024	.070	0.560	−0.041 — 1.161	.068
pct_emp_info_2016	0.741	0.438 — 1.043	<.001	0.472	−0.101 — 1.046	.107
pct_emp_fina_2016	0.327	0.032 — 0.623	.030	−0.227	−0.816 — 0.362	.450
pct_emp_real_2016	0.634	0.313 — 0.955	<.001	−0.418	−1.022 — 0.185	.174
pct_emp_prof_2016	1.191	0.822 — 1.561	<.001	0.324	−0.389 — 1.037	.373
pct_emp_mana_2016	0.277	−0.020 — 0.574	.068	1.119	0.520 — 1.718	<.001
pct_emp_admi_2016	0.705	0.393 — 1.017	<.001	1.654	1.062 — 2.246	<.001
pct_emp_educ_2016	0.569	0.277 — 0.861	<.001	0.736	0.163 — 1.309	.012
pct_emp_heal_2016	0.399	0.002 — 0.796	.049	1.138	0.323 — 1.953	.006
pct_emp_arts_2016	0.896	0.539 — 1.253	<.001	0.702	0.092 — 1.312	.024
pct_emp_acco_2016	0.408	−0.000 — 0.817	.050	2.549	1.779 — 3.318	<.001
TimeLinear_c *MalePercentage_c	**−0.690**	**−0.777 — −0.602**	**<.001**	**−1.062**	**−1.224 — −0.900**	**<.001**
TimeLinear_c *state_policy_dummy	−7.027	−7.166 — −6.888	<.001	−8.309	−8.548 — −8.070	<.001
TimeLinear_c *Cases_per_capita_c	−4.466	−4.586 — −4.345	<.001	−5.099	−5.303 — −4.896	<.001
TimeLinear_c * weekend	−4.694	−4.825 — −4.563	<.001	−4.441	−4.669 — −4.213	<.001
TimeLinear_c * Density_c	0.259	0.209 — 0.309	<.001	0.177	0.094 — 0.259	<.001
TimeLinear_c * Income_c	0.777	0.669 — 0.886	<.001	1.096	0.904 — 1.289	<.001
TimeLinear_c *IncomeInequality_c	0.611	0.523 — 0.699	<.001	1.231	1.069 — 1.392	<.001
TimeLinear_c *PercentEmployment_c	−0.029	−0.127 — 0.069	.560	−0.834	−1.015 — −0.654	<.001
TimeLinear_c *Religiosity_c	−0.257	−0.325 — −0.190	<.001	−0.187	−0.308 — −0.067	.002

Predictors	Reduction in General Movement			Reduction in Visits to Nonessential Retailers		
	Estimates	CI	*p*	Estimates	CI	*p*
TimeLinear_c *PercentBachelorsDegree_c	−0.835	−0.991 — −0.678	<.001	−0.728	−1.002 — −0.453	<.001
TimeLinear_c *PercentOnlyHSDiploma_c	−0.973	−1.108 — −0.838	<.001	−2.588	−2.826 — −2.350	<.001
TimeLinear_c *PercentSomeCollegeDegree_c	−1.072	−1.161 — −0.983	<.001	−1.354	−1.512 — −1.197	<.001
TimeLinear_c * Age_c	−0.748	−0.821 — −0.675	<.001	−2.073	−2.208 — −1.938	<.001
TimeLinear_c *pct_emp_agri_2016	−0.035	−0.095 — 0.025	.249	0.285	0.181 — 0.389	<.001
TimeLinear_c *pct_emp_mini_2016	−0.126	−0.193 — −0.060	<.001	−0.251	−0.374 — −0.128	<.001
TimeLinear_c *pct_emp_util_2016	0.120	0.063 — 0.177	<.001	0.347	0.247 — 0.447	<.001
TimeLinear_c *pct_emp_cons_2016	−0.138	−0.206 — −0.071	<.001	−0.132	−0.253 — −0.011	.033
TimeLinear_c *pct_emp_manu_2016	−0.016	−0.130 — 0.098	.786	−0.886	−1.119 — −0.653	<.001
TimeLinear_c *pct_emp_whol_2016	−0.023	−0.088 — 0.041	.476	−0.083	−0.195 — 0.028	.144
TimeLinear_c *pct_emp_reta_2016	−0.210	−0.284 — −0.136	<.001	−0.892	−1.030 — −0.753	<.001
TimeLinear_c *pct_emp_tran_2016	0.301	0.235 — 0.367	<.001	0.320	0.201 — 0.439	<.001
TimeLinear_c *pct_emp_info_2016	−0.086	−0.151 — −0.022	.008	−0.297	−0.410 — −0.184	<.001
TimeLinear_c *pct_emp_fina_2016	0.006	−0.059 — 0.070	0.859	−0.456	−0.571 — −0.340	<.001
TimeLinear_c *pct_emp_real_2016	−0.173	−0.240 — −0.107	<.001	−0.577	−0.694 — −0.461	<.001
TimeLinear_c *pct_emp_prof_2016	−0.192	−0.269 — −0.115	<.001	−0.421	−0.560 — −0.282	<.001
TimeLinear_c *pct_emp_mana_2016	0.071	0.004 — 0.137	.039	−0.171	−0.289 — −0.053	.004
TimeLinear_c *pct_emp_admi_2016	0.409	0.345 — 0.474	<.001	0.677	0.563 — 0.790	<.001
TimeLinear_c *pct_emp_educ_2016	0.062	−0.001 — 0.125	0.054	0.430	0.319 — 0.541	<.001
TimeLinear_c *pct_emp_heal_2016	−0.223	−0.306 — −0.141	<.001	−0.310	−0.467 — −0.153	<.001
TimeLinear_c *pct_emp_arts_2016	0.097	0.030 — 0.164	.005	0.082	−0.036 — 0.201	.174
TimeLinear_c *pct_emp_acco_2016	0.402	0.320 — 0.484	<.001	0.322	0.173 — 0.470	<.001
Random Effects						
σ^2	130.441			346.368		
τ_{00}	$41.153_{\text{county\_fips}}$			$100.131_{\text{county\_fips}}$		
	$28.321_{\text{state\_name}}$			$33.538_{\text{state\_name}}$		
τ_{11}	$19.786_{\text{county\_fips.MalePercentage\_c}}$			$2.318_{\text{state\_name.MalePercentage\_c}}$		
	$3.846_{\text{state\_name.MalePercentage\_c}}$					
ρ_{01}	$0.751_{\text{county\_fips}}$			$0.348_{\text{state\_name}}$		
	$0.727_{\text{state\_name}}$					
ICC	0.356			0.278		
N	$1983_{\text{county\_fips}}$			$1744_{\text{county\_fips}}$		
	$51_{\text{state\_name}}$			$51_{\text{state\_name}}$		
Observations	162606			142940		
Marginal R^2/Conditional R^2	0.435/0.636			0.445/0.599		

Note. The row in bold identifies the relevant interaction between gender and time.

Table S9. Predicting reduction in general movement & nonessential visitation while also including partisanship in the main model

Predictors	Reduction in General Movement			Reduction in Visits to Nonessential Retailers		
	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	17.497	16.148 — 18.846	<.001	25.219	23.537 – 26.901	<.001
MalePercentage_c	−0.135	−0.997 — 0.727	0.759	−0.184	−0.897 – 0.530	.614
TimeLinear_c	−4.062	−4.113 — −4.011	<.001	−9.071	−9.165 — −8.977	<.001
TimeQuad_c	−8.128	−8.187 — −8.070	<.001	−13.099	−13.204 — −12.993	<.001
state_policy_dummy	4.119	3.980 — 4.258	<.001	5.682	5.440 — 5.923	<.001
Cases_per_capita_c	0.734	0.667 — 0.802	<.001	2.301	2.168 — 2.434	<.001
Weekend	8.881	8.775 — 8.986	<.001	2.624	2.438 — 2.809	<.001
Density_c	0.670	0.441 — 0.899	<.001	0.009	−0.424 — 0.442	.969
Income_c	2.865	2.364 — 3.366	<.001	−1.735	−2.696 — −0.773	<.001
IncomeInequality_c	0.740	0.381 — 1.098	<.001	0.743	−0.038 — 1.524	.062
PercentEmployment_c	−0.452	−0.868 — −0.037	.033	1.429	0.575 — 2.282	.001
Religiosity_c	0.068	−0.237 — 0.372	.663	−0.478	−1.124 — 0.167	.147
Age_c	0.906	0.600 — 1.212	<.001	−4.113	−4.776 — −3.451	<.001
PercentBachelorsDegree_c	1.728	1.018 — 2.439	<.001	7.683	6.342 — 9.024	<.001
PercentOnlyHSDiploma_c	−0.741	−1.430 — −0.051	.035	−0.713	−2.094 — 0.669	.312
PercentSomeCollegeDegree_c	0.024	−0.397 — 0.446	.910	1.709	0.896 — 2.523	<.001
VotingConservative_c	−2.148	−2.517 — −1.780	<.001	−3.385	−4.112 — −2.658	<.001
MalePercentage_c *TimeLinear_c	**−0.532**	**−0.579 — −0.484**	**<.001**	**−0.306**	**−0.410 — −0.201**	**<.001**
MalePercentage_c *TimeQuad_c	0.109	0.062 — 0.157	<.001	−0.179	−0.283 — −0.074	.001
Random Effects						
σ^2	140.284			295.345		
τ_{00}	$48.831_{\text{county\_fips}}$			$114.398_{\text{county\_fips}}$		
	$21.005_{\text{state\_name}}$			$29.763_{\text{state\_name}}$		
τ_{11}	$9.833_{\text{county\_fips.MalePercentage\_c}}$					
	$4.641_{\text{state\_name.MalePercentage\_c}}$					
ρ_{01}	$0.722_{\text{county\_fips}}$					
	$0.419_{\text{state\_name}}$					
ICC	0.373			0.328		
N	$3006_{\text{county\_fips}}$			$2067_{\text{county\_fips}}$		
	$50_{\text{state\_name}}$			$50_{\text{state\_name}}$		
Observations	246492			169398		
Marginal R^2/Conditional R^2	0.418/0.636			0.502/0.665		

Note. The row in bold identifies the relevant interaction between gender and time.

Table S10. Predicting reduction in general movement & nonessential visitation while also including partisanship in the saturated model

Predictors	Reduction in General Movement			Reduction in Visits to Nonessential Retailers		
	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	13.713	12.171 — 15.255	<.001	18.639	16.849 — 20.428	<.001
TimeLinear_c	−2.496	−2.574 — −2.418	<.001	−8.156	−8.303 — −8.009	<.001
MalePercentage_c	−0.084	−0.929 — 0.760	0.845	−0.090	−0.807 — 0.626	.805
state_policy_dummy	14.125	13.998 — 14.252	<.001	21.908	21.684 — 22.133	<.001
Cases_per_capita_c	4.615	4.462 — 4.769	<.001	6.820	6.530 — 7.111	<.001
Weekend	10.060	9.945 — 10.176	<.001	4.502	4.297 — 4.707	<.001
Density_c	0.555	0.327 — 0.783	<.001	−0.094	−0.528 — 0.341	.672
Income_c	2.690	2.187 — 3.192	<.001	−1.940	−2.906 — −0.973	<.001
IncomeInequality_c	0.677	0.318 — 1.036	<.001	0.638	−0.146 — 1.422	.111
PercentEmployment_c	−0.437	−0.853 — −0.021	.040	1.568	0.710 — 2.426	<.001
Religiosity_c	0.076	−0.229 — 0.380	.625	−0.315	−0.964 — 0.334	.341
PercentBachelorsDegree_c	1.732	1.021 — 2.444	<.001	7.478	6.129 — 8.826	<.001
PercentOnlyHSDiploma_c	−0.815	−1.506 — −0.124	.021	−0.974	−2.364 — 0.415	.169
PercentSomeCollegeDegree_c	0.014	−0.408 — 0.437	.947	1.636	0.818 — 2.453	<.001
Age_c	0.839	0.532 — 1.145	<.001	−4.336	−5.002 — −3.671	<.001
VotingConservative_c	−2.013	−2.383 — −1.644	<.001	−3.203	−3.934 — −2.471	<.001
TimeLinear_c *MalePercentage_c	**−0.518**	**−0.573 — −0.463**	**<.001**	**−0.175**	**−0.302 — −0.049**	**.006**
TimeLinear_c *state_policy_dummy	−6.533	−6.666 — −6.399	<.001	−8.228	−8.457 — −7.999	<.001
TimeLinear_c *Cases_per_capita_c	−4.079	−4.191 — −3.968	<.001	−5.636	−5.837 — −5.436	<.001
TimeLinear_c * weekend	−4.305	−4.425 — −4.185	<.001	−4.677	−4.891 — −4.462	<.001
TimeLinear_c * Density_c	0.152	0.097 — 0.206	<.001	0.033	−0.049 — 0.115	.428
TimeLinear_c * Income_c	0.823	0.730 — 0.917	<.001	1.405	1.237 — 1.573	<.001
TimeLinear_c * IncomeInequality_c	0.380	0.311 — 0.450	<.001	1.018	0.876 — 1.160	<.001
TimeLinear_c * PercentEmployment_c	0.066	−0.006 — 0.139	.071	−1.026	−1.173 — −0.879	<.001
TimeLinear_c * Religiosity_c	−0.468	−0.523 — −0.412	<.001	0.001	−0.111 — 0.112	0.991
TimeLinear_c * PercentBachelorsDegree_c	−1.147	−1.271 — −1.023	<.001	−1.153	−1.378 — −0.929	<.001
TimeLinear_c *PercentOnlyHSDiploma_c	−0.796	−0.907 — −0.686	<.001	−1.946	−2.161 — −1.731	<.001
TimeLinear_c*PercentSomeCollegeDegree_c	−1.107	−1.178 — −1.036	<.001	−1.031	−1.171 — −0.891	<.001
TimeLinear_c * Age_c	−0.752	−0.810 — −0.694	<.001	−1.882	−1.999 — −1.765	<.001
TimeLinear_c *VotingConservative_c	−1.010	−1.077 — −0.943	<.001	−2.169	−2.295 — −2.044	<.001
Random Effects						
σ^2	166.652			364.180		
τ_{00}	$48.725_{\text{county\_fips}}$			$114.197_{\text{county\_fips}}$		
	$28.199_{\text{state\_name}}$			$34.342_{\text{state\_name}}$		
τ_{11}	$9.195_{\text{county\_fips.MalePercentage\_c}}$					
	$4.294_{\text{state\_name.MalePercentage\_c}}$					
ρ_{01}	$0.743_{\text{county\_fips}}$					
	$0.261_{\text{state\_name}}$					
ICC	0.350			0.290		
N	$3006_{\text{county\_fips}}$			$2067_{\text{county\_fips}}$		
	$50_{\text{state\_name}}$			$50_{\text{state\_name}}$		
Observations	246492			169398		
Marginal R^2/Conditional R^2	0.371/0.591			0.441/0.603		

Note. The row in bold identifies the relevant interaction between gender and time.

Table S11. Predicting reduction in general movement while also including the three-way interactions terms between gender distribution, time, & number of family households & number of nonfamily households where the householders live alone

Predictors	Reduction in General Movement					
	Main Model			Saturated Model		
	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	11.159	9.388 — 12.930	<.001	13.944	12.293 — 15.595	<0.001
TimeLinear_c	−3.711	−3.834 — −3.588	<.001	−1.478	−1.650 — −1.307	<.001
FamiliesAdjustForPop_c	−0.509	−1.199 — 0.181	.148	−0.254	−0.934 — 0.426	0.464
NonFamilyLivingAloneAdjustForPop_c	1.894	1.063 — 2.724	<.001	2.082	1.266 — 2.898	<.001
MalePercentage_c	−1.232	−2.585 — 0.120	.074	−0.680	−2.013 — 0.654	.318
state_policy_dummy	17.684	17.485 — 17.882	<.001	15.291	15.102 — 15.480	<.001
Cases_per_capita_c	−0.547	−0.692 — −0.401	<.001	4.261	4.043 — 4.479	<.001
Weekend	9.632	9.443 — 9.822	<.001	9.476	9.305 — 9.646	<.001
Density_c	0.636	0.383 — 0.889	<.001	0.404	0.172 — 0.636	.001
Income_c	3.740	2.822 — 4.658	<.001	3.107	2.203 — 4.010	<.001
IncomeInequality_c	0.933	0.181 — 1.685	.015	0.489	−0.248 — 1.225	.193
PercentEmployment_c	1.546	0.729 — 2.363	<.001	1.729	0.923 — 2.534	<.001
Religiosity_c	0.243	−0.446 — 0.932	.490	−0.073	−0.746 — 0.600	.831
Age_c	0.663	−0.135 — 1.461	.103	0.632	−0.148 — 1.413	.112
PercentBachelorsDegree_c	−2.219	−3.641 — −0.797	.002	−1.683	−3.077 — −0.288	.018
PercentOnlyHSDiploma_c	−5.042	−6.506 — −3.578	<.001	−4.840	−6.278 — −3.403	<.001
PercentSomeCollegeDegree_c	−1.429	−2.204 — −0.655	<.001	−1.411	−2.176 — −0.647	<.001
TimeLinear_c * FamiliesAdjustForPop_c	−1.131	−1.228 — −1.034	<.001	−0.662	−0.782 — −0.542	<.001
TimeLinear_c * NonFamilyLivingAloneAdjustForPop_c	−0.477	-0.582 — −0.372	<.001	0.224	0.077 — 0.371	.003
TimeLinear_c * MalePercentage_c	−2.257	−2.449 — −2.065	<.001	−1.741	−1.931 — −1.552	<.001
FamiliesAdjustForPop_c *MalePercentage_c	0.489	−0.376 — 1.354	.268	0.443	−0.374 — 1.260	.288
NonFamilyLivingAloneAdjustForPop_c * MalePercentage_c	0.730	−0.249 — 1.708	.144	0.488	−0.447 — 1.423	.306
(TimeLinear_c *FamiliesAdjustForPop_c*) MalePercentage_c	**0.119**	**−0.015 — 0.253**	**.083**	**0.089**	**−0.034 — 0.213**	**.155**
(TimeLinear_c *NonFamilyLivingAloneAdjustForPop_c*) MalePercentage_c	**0.327**	**0.167 – 0.488**	**<.001**	**0.417**	**0.268 — 0.567**	**<.001**
TimeLinear_c * state_policy_dummy				−8.030	−8.213 — −7.847	<.001
TimeLinear_c * Cases_per_capita_c				−3.999	−4.139 — −3.858	<.001
TimeLinear_c * weekend				−5.359	−5.538 — −5.181	<.001
TimeLinear_c * Density_c				0.229	0.180 — 0.277	<.001
TimeLinear_c * Income_c				1.217	1.041 — 1.393	<.001
TimeLinear_c * IncomeInequality_c				0.603	0.454 — 0.752	<.001
TimeLinear_c * PercentEmployment_c				0.500	0.344 — 0.656	<.001

Predictors	Reduction in General Movement					
	Main Model			Saturated Model		
	Estimates	CI	*p*	Estimates	CI	*p*
TimeLinear_c * Religiosity_c				−0.168	−0.290 — −0.046	.007
TimeLinear_c * Age_c				−0.386	−0.528 — −0.245	<.001
TimeLinear_c * PercentBachelorsDegree_c				−1.200	−1.439 — −0.960	<.001
TimeLinear_c * PercentOnlyHSDiploma_c				−0.884	−1.113 — −0.655	<.001
TimeLinear_c * PercentSomeCollegeDegree_c				−0.743	−0.892 — −0.593	<.001
Random Effects						
σ^2				100.528		
τ_{00}				$26.205_{\text{county\_fips}}$		
				$25.559_{\text{state\_name}}$		
τ_{11}				$14.697_{\text{county\_fips.MalePercentage\_c}}$		
				$4.023_{\text{state\_name.MalePercentage\_c}}$		
ρ_{01}				$0.549_{\text{county\_fips}}$		
				$-0.091_{\text{state\_name}}$		
ICC				0.341		
N	$827_{\text{county\_fips}}$			$827_{\text{county\_fips}}$		
	$51_{\text{state\_name}}$			$51_{\text{state\_name}}$		
Observations	67814			67814		
Marginal R^2/Conditional R^2	NA			0.530/0.690		

Note. The rows in bold are the relevant interactions.

Table S12. Predicting reduction in nonessential visitation while also including the three-way interactions terms between gender distribution, time, & number of family households & number of nonfamily households where the householders live alone

Predictors	Reduction in Visits to Nonessential Retailers					
	Main Model			Saturated Model		
	Estimates	CI	*p*	Estimates	CI	*p*
(Intercept)	20.631	18.848 — 22.414	<.001	23.576	21.934 — 25.218	<.001
TimeLinear_c	−7.346	−7.516 — −7.176	<.001	−5.674	−5.923 — −5.425	<.001
FamiliesAdjustForPop_c	−2.272	−3.111 — −1.433	<.001	−2.084	−2.909 — −1.260	<.001
NonFamilyLivingAloneAdjustForPop_c	1.145	0.130 — 2.159	.027	1.281	0.284 — 2.278	.012
MalePercentage_c	−2.800	−4.319 — −1.280	<.001	−2.529	−4.022 — −1.036	.001
state_policy_dummy	25.362	25.088 — 25.637	<.001	22.816	22.541 — 23.090	<.001
Cases_per_capita_c	−0.222	−0.423 — −0.020	.031	4.454	4.138 — 4.770	<.001
weekend	7.029	6.767 — 7.292	<.001	6.874	6.626 — 7.122	<.001
Density_c	−0.034	−0.351 — 0.283	.833	−0.200	−0.514 — 0.113	.210
Income_c	0.523	−0.700 — 1.746	.402	0.014	−1.191 — 1.218	.982
IncomeInequality_c	2.453	1.439 — 3.468	<.001	2.099	1.096 — 3.102	<.001
PercentEmployment_c	1.159	0.070 — 2.248	.037	1.350	0.277 — 2.423	.014
Religiosity_c	0.540	−0.378 — 1.459	.249	0.200	−0.701 — 1.100	.664
Age_c	−2.609	−3.667 — −1.551	<.001	−2.580	−3.623 — −1.538	<.001
PercentBachelorsDegree_c	2.912	1.079 — 4.745	.002	3.391	1.603 — 5.178	<.001
PercentOnlyHSDiploma_c	−1.880	−3.790 — 0.030	.054	−1.588	−3.446 — 0.270	.094
PercentSomeCollegeDegree_c	−0.472	−1.502 — 0.558	.369	−0.470	−1.484 — 0.543	.363
TimeLinear_c * FamiliesAdjustForPop_c	−2.611	−2.745 — −2.477	<.001	−1.618	−1.793 — −1.444	<.001
TimeLinear_c * NonFamilyLivingAloneAdjustForPop_c	−0.970	−1.115 — −0.825	<.001	0.136	−0.078 — 0.349	.212
TimeLinear_c *MalePercentage_c	−3.553	−3.818 — −3.287	<.001	−2.553	−2.829 — −2.278	<.001
FamiliesAdjustForPop_c * MalePercentage_c	−0.276	−1.150 — 0.598	.535	−0.287	−1.139 — 0.565	.510
NonFamilyLivingAloneAdjustForPop_c * MalePercentage_c	0.434	−0.599 — 1.466	.411	0.258	−0.754 — 1.270	.617
(TimeLinear_c *FamiliesAdjustForPop_c*) MalePercentage_c	**0.387**	**0.201 — 0.572**	**<.001**	**0.545**	**0.366 — 0.724**	**<.001**
(TimeLinear_c *NonFamilyLivingAloneAdjustForPop_c*) MalePercentage_c	**0.149**	**−0.073 — 0.371**	**.188**	**0.439**	**0.221 — 0.656**	**<.001**
TimeLinear_c * state_policy_dummy				−9.026	−9.292 — −8.761	<.001
TimeLinear_c * Cases_per_capita_c				−3.945	−4.149 — −3.741	<.001
TimeLinear_c * weekend				−3.505	−3.764 — −3.246	<.001
TimeLinear_c * Density_c				0.069	−0.001 — 0.139	.053
TimeLinear_c * Income_c				1.600	1.345 — 1.856	<.001
TimeLinear_c * IncomeInequality_c				1.064	0.848 — 1.280	<.001
TimeLinear_c * PercentEmployment_c				−0.519	−0.748 — −0.291	<.001

Predictors	Reduction in Visits to Nonessential Retailers					
	Main Model			Saturated Model		
	Estimates	CI	*p*	Estimates	CI	*p*
TimeLinear_c * Religiosity_c				−0.417	−0.595 — −0.239	<.001
TimeLinear_c * Age_c				−0.393	−0.598 — −0.187	<.001
TimeLinear_c * PercentBachelorsDegree_c				−1.575	−1.924 — −1.227	<.001
TimeLinear_c * PercentOnlyHSDiploma_c				−2.187	−2.520 — −1.854	<.001
TimeLinear_c * PercentSomeCollegeDegree_c				−1.344	−1.562 — −1.127	<.001
Random Effects						
σ^2				212.094		
τ_{00}				41.813 $_{county\_fips}$		
				19.696 $_{state\_name}$		
τ_{11}				4.537 $_{state\_name.MalePercentage\_c}$		
ρ_{01}				−0.410 $_{state\_name}$		
ICC				0.237		
N	826 $_{county\_fips}$			826 $_{county\_fips}$		
	51 $_{state\_name}$			51 $_{state\_name}$		
Observations	67732			67732		
Marginal R^2/Conditional R^2	NA			0.501/0.620		

Note. The rows in bold are the relevant interactions.

even when outside, men are less careful, in that they are less likely to wear a mask). We did not find this to be the case, however; consistent three-way interactions across the two types of social distancing and households variables were not observed, and for the interactions that were observed, they suggested that the observed gender differences were driven by single females socially distancing more than single males rather than by family women social distancing more than family males (see Tables S11 and S12 and Figures S4–S7).

endnotes

1. The quiz had low statistical reliability; therefore, we do not discuss it in the main text.

2. Twelve participants who did not report their frequency of checking news were excluded from the analysis.

3. Most participants did not personally know someone who contracted the virus (women: 75.6%, men: 75.9%). Three men and one woman reported having had the virus themselves.

4. A comparison of the distributions of participants (within each gender) in terms of their reported vulnerabilities to COVID-19 revealed some significant gender differences, $\chi^2(5) = 28.89$, $p < .001$. Specifically, a chi-square analysis showed that women were more likely to report vulnerabilities due to their health history (women: 19.2%, men: 10.7%), profession (women: 7.9%, men: 4%) and other reasons (women: 5.4%, men: 2.1%) compared with men. Controlling for reported vulnerabilities did not affect the observed gender differences.

5. Exploratory analyses revealed an interaction between gender and political orientation on this item, $b = -.21$, $t(765) = -3.26$, $p = .001$. Among conservatives, men exhibited a greater reluctance to listen to medical experts than women; the gender difference among conservative participants (+1 *SD*) was significant, $b = -.44$, $t(765) = -3.43$, $p = .001$. This link was not significant among liberal participants (-1 *SD*), $b = .17$, $t(765) = 1.26$, $p = .210$.

6. The demographic data for each location was obtained here: https://www.cdxtech.com/tools/demographicdata/

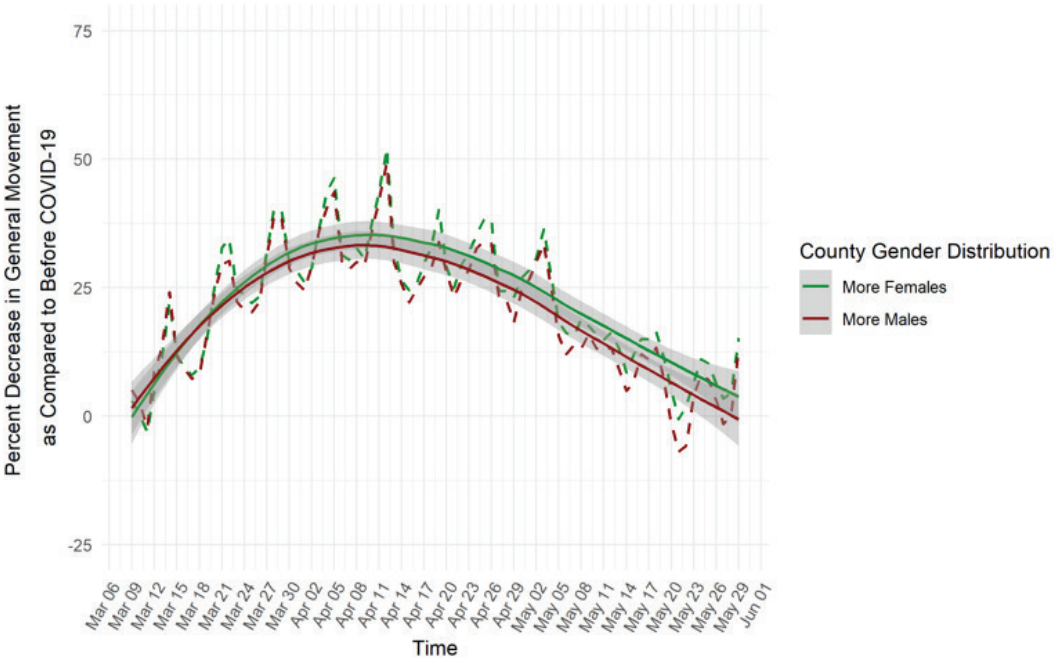
7. Because of the scarcity of people on the selected street in New Brunswick, New Jersey, the observer in that location completed the observation on May 5. The timing of observation in each location was as follows: New York: 5 p.m.–7 p.m.; Connecticut: 3:30 p.m.–5:30 p.m.; New Jersey: 3 p.m.–8 p.m. on May 4, 9 a.m.–12.30 p.m. on May 5.

8. We ended up collecting more data than planned and preregistered in NY and CT locations within the two hours of observation. We report the results based on the first 100 observations in each location in accordance with the preregistered plan. Importantly, the results remained the same when we included all collected observations (N= 777) in the analysis, $\chi^2(1) = 39.58$, $p < .001$.

9. State policy was quantified at the state level, except for counties in New York City, which continued to have stay-at-home orders in effect even when New York State lifted its order.

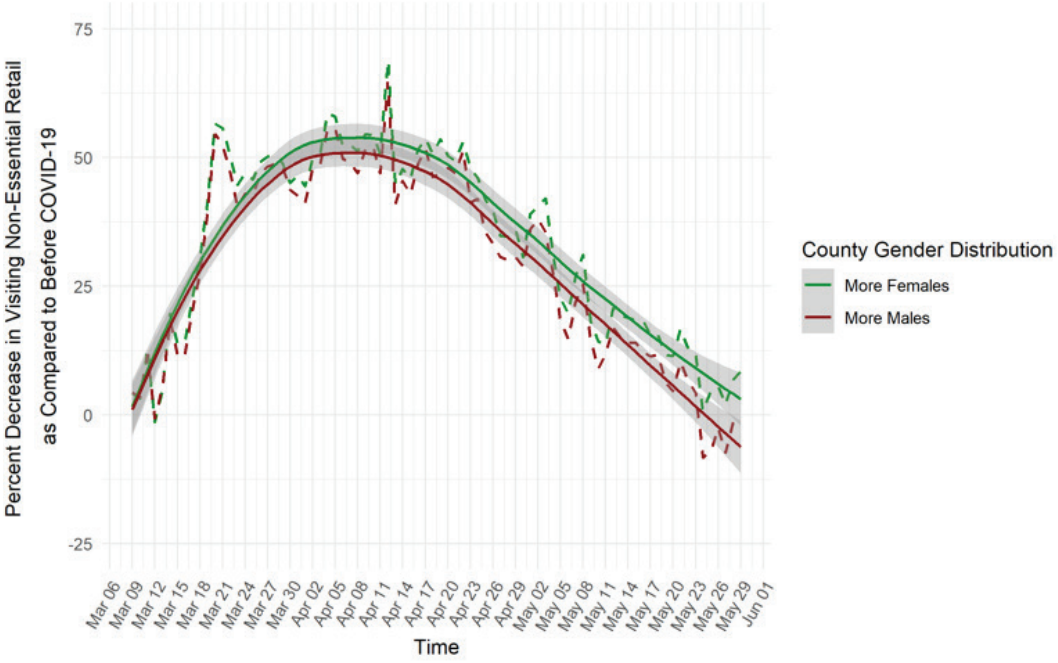
10. We also observed significant quadratic interactions in the main models. For counties with a higher percentage of males as compared with counties with a higher percentage of females, the change in general movement over time was more concave, while the change in visits to nonessential retailers was more convex (these findings are not particularly relevant for our conclusions, however, and are thus noted in this footnote).

Figure S3a. U.S. counties' average social distancing (percentage reduction in general movement) as a function of time & gender distribution



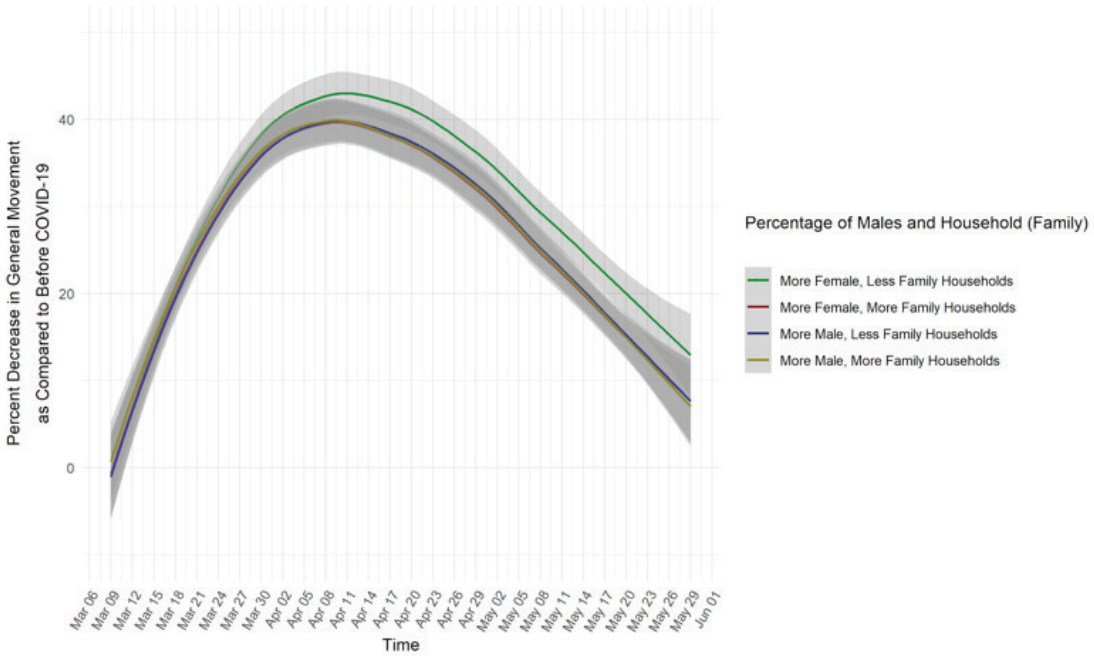
Note. This figure compares movement in counties with more males to movement in counties with more females (split in terms of above the median of counties' gender distribution versus below the median of counties' gender distribution for the purposes of the figure). Dashed lines depict the daily average across counties. Dark lines represent the daily average across counties smoothed with geom_smooth in ggplot (default is loess smooth for $n < 1{,}000$). Estimates were composed from raw scores.

Figure S3b. U.S. counties' average social distancing (percentage reduction in visits to nonessential retailers) as a function of time & gender distribution



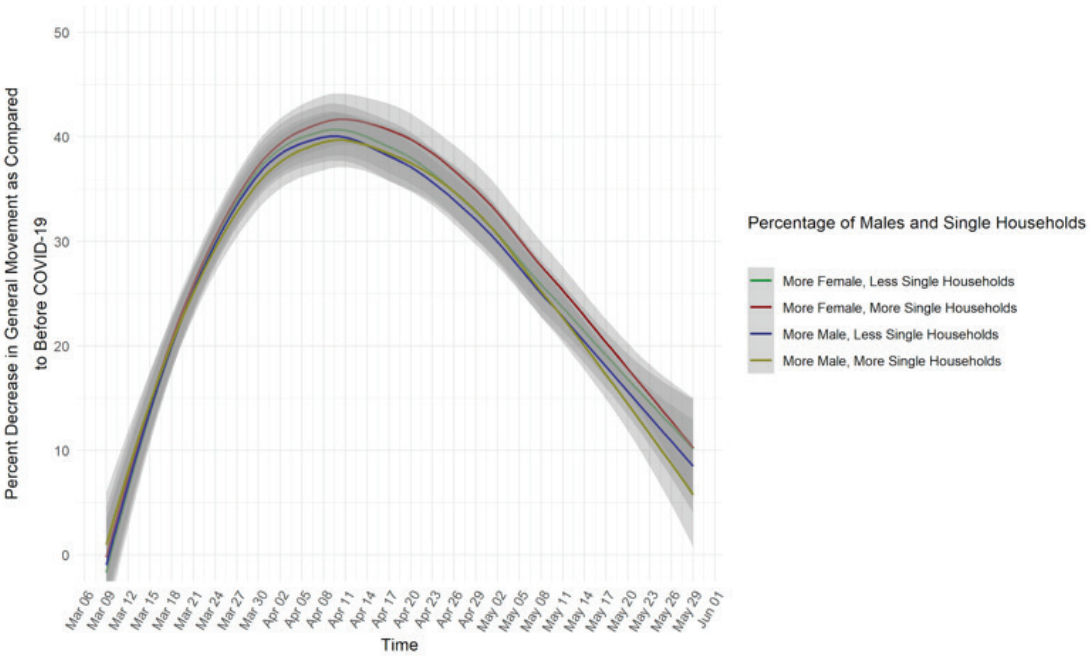
Note. This figure compares visits to nonessential retailers in counties with more males to visits in counties with more females (split in terms of above the median of counties' gender distribution versus below the median of counties' gender distribution for the purposes of the figure). Dashed lines depict the daily average across counties. Dark lines represent the daily average across counties smoothed with geom_smooth in ggplot (default is loess smooth for $n < 1{,}000$). Estimates were composed from raw scores.

Figure S4. Social distancing (percentage reduction in general movement relative to movement before COVID) as a function of time (March 9 to May 29, 2020) & total number of households that are families (weighted for population of county)



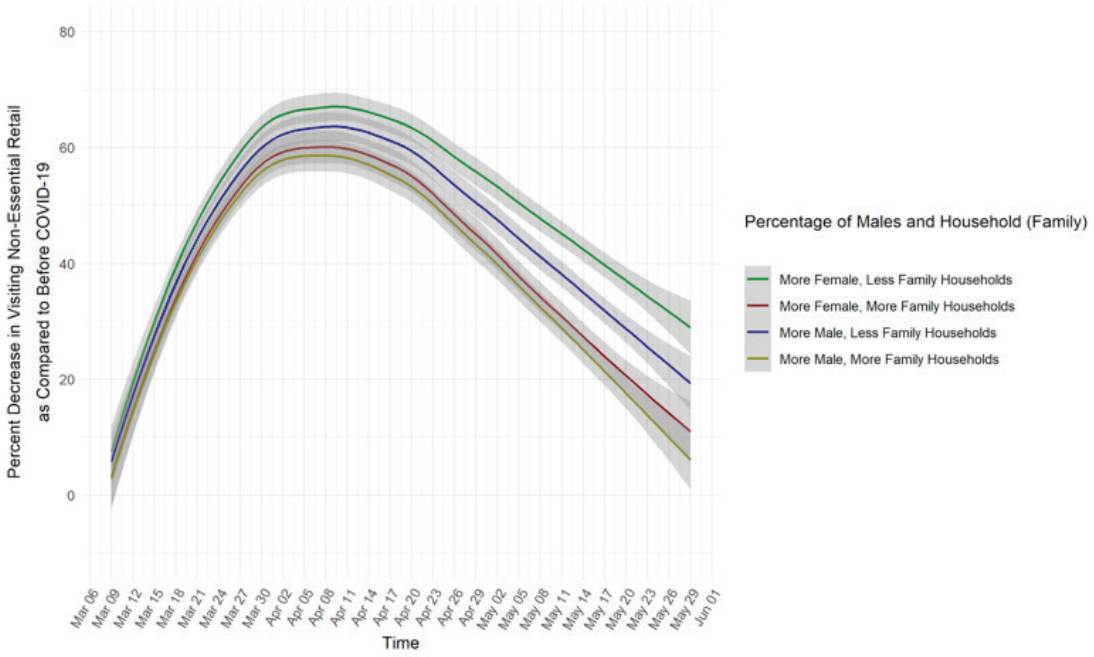
Note. Although the depicted raw scores may suggest an interaction, significant interactions were not observed in either the main model or the saturated model (see Table S8). Raw scores are depicted (not model predictions).

Figure S5. Social distancing (percentage reduction in general movement relative to movement before COVID) as a function of time (March 9 to May 29, 2020) & total number of households that are not families in which the householder is a single person (weighted for population of county)



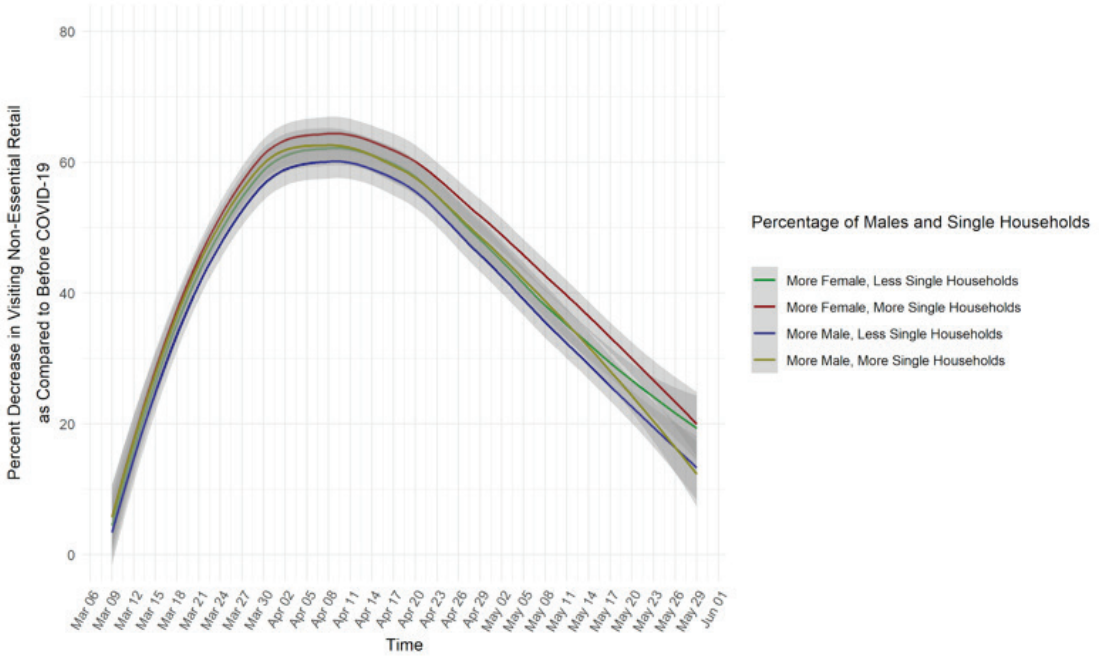
Note. Significant interactions were observed in the main model and the saturated model; these interactions indicated that counties with a greater proportion of females and greater number of nonfamily households made up of a single person exhibited the greatest amount of social distancing (see Table S8). Raw scores are depicted (not model predictions).

Figure S6. Social distancing (percentage reduction in visits to nonessential retailers relative to visits before COVID) as a function of time (March 9 to May 29, 2020) & total number of households that are families (weighted for population of county)



Note. Significant interactions were observed in the main model and the saturated model; these interactions indicated that counties with a greater proportion of females and fewer family households exhibited the greatest amount of social distancing (see Table S9). Raw scores are depicted (not model predictions).

Figure S7. Social distancing (percentage reduction in visits to nonessential retailers relative to visits before COVID) as a function of time (March 9 to May 29, 2020) & total number of households that are not families in which the householder is a single person (weighted for population of county)



Note. Consistent interactions were not observed across the main and saturated models (see Table S9). Raw scores are depicted (not model predictions).

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