Appendix A

Fig A1. Twitter - Number of Social Distancing tweets per day.

Notes: This Figure presents the number of tweets per day encouraging social distancing behaviors.
Appendix B: Additional Statistics and Robustness Checks

Table B1. Means, standard deviations and correlations of independent variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>mean</th>
<th>sd</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TwitterSD&lt;sub&gt;t−1&lt;/sub&gt;</td>
<td>1.048</td>
<td>1.48</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CovidCases&lt;sub&gt;t−1&lt;/sub&gt;</td>
<td>4.857</td>
<td>7.473</td>
<td>0.171</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay-at-home Orders</td>
<td>0.479</td>
<td>0.500</td>
<td>0.095</td>
<td>0.418</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Closures</td>
<td>0.701</td>
<td>0.458</td>
<td>0.251</td>
<td>0.412</td>
<td>0.612</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Gathering Restrictions</td>
<td>0.646</td>
<td>0.478</td>
<td>0.260</td>
<td>0.383</td>
<td>0.644</td>
<td>0.793</td>
<td>1</td>
</tr>
<tr>
<td>Business Closures</td>
<td>0.372</td>
<td>0.483</td>
<td>0.109</td>
<td>0.394</td>
<td>0.673</td>
<td>0.482</td>
<td>0.493</td>
</tr>
<tr>
<td>Precipitations</td>
<td>29.536</td>
<td>56.438</td>
<td>0.032</td>
<td>0.068</td>
<td>0.075</td>
<td>0.094</td>
<td>0.093</td>
</tr>
<tr>
<td>Temperature</td>
<td>155.722</td>
<td>80.068</td>
<td>-0.010</td>
<td>0.164</td>
<td>0.294</td>
<td>0.432</td>
<td>0.370</td>
</tr>
</tbody>
</table>

Table B2. Checking for multicollinearity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variance Inflation Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>TwitterSD&lt;sub&gt;t−1&lt;/sub&gt;</td>
<td>3.48</td>
</tr>
<tr>
<td>COVID&lt;sub&gt;t−1&lt;/sub&gt; Cases</td>
<td>2.23</td>
</tr>
<tr>
<td>Stay-at-home Orders</td>
<td>4.59</td>
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<tr>
<td>School Closures</td>
<td>13.89</td>
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<tr>
<td>Gathering Restrictions</td>
<td>5.33</td>
</tr>
<tr>
<td>Business Closures</td>
<td>4.62</td>
</tr>
<tr>
<td>Precipitations</td>
<td>1.24</td>
</tr>
<tr>
<td>Temperature</td>
<td>5.05</td>
</tr>
<tr>
<td>Average for Time</td>
<td>2.66</td>
</tr>
<tr>
<td>Average for States</td>
<td>2.24</td>
</tr>
<tr>
<td>Mean for all variables</td>
<td>2.65</td>
</tr>
</tbody>
</table>
Table B3. Impact of Twitter indices of social distancing weighted by likes, retweets and replies on mobility

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Workplaces</th>
<th>(2) Groceries and pharmacies</th>
<th>(3) Retail and recreation</th>
<th>(4) Transit stations</th>
<th>(5) Parks</th>
</tr>
</thead>
<tbody>
<tr>
<td>$z_{TwitterSD_{t-1}}$</td>
<td>-1.220***</td>
<td>-0.347*</td>
<td>-0.471**</td>
<td>-1.546***</td>
<td>-1.684***</td>
</tr>
<tr>
<td></td>
<td>(0.169)</td>
<td>(0.190)</td>
<td>(0.225)</td>
<td>(0.297)</td>
<td>(0.558)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.981</td>
<td>0.920</td>
<td>0.967</td>
<td>0.945</td>
<td>0.824</td>
</tr>
<tr>
<td>$z_{TwitterSD_{Likes_{t-1}}}$</td>
<td>-0.841***</td>
<td>-0.185</td>
<td>-0.321**</td>
<td>-1.094***</td>
<td>-1.285***</td>
</tr>
<tr>
<td></td>
<td>(0.103)</td>
<td>(0.174)</td>
<td>(0.152)</td>
<td>(0.214)</td>
<td>(0.478)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.981</td>
<td>0.920</td>
<td>0.967</td>
<td>0.945</td>
<td>0.824</td>
</tr>
<tr>
<td>$z_{TwitterSD_{Retweets_{t-1}}}$</td>
<td>-0.767***</td>
<td>-0.187</td>
<td>-0.328**</td>
<td>-1.053***</td>
<td>-1.404***</td>
</tr>
<tr>
<td></td>
<td>(0.0867)</td>
<td>(0.168)</td>
<td>(0.136)</td>
<td>(0.199)</td>
<td>(0.405)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.980</td>
<td>0.920</td>
<td>0.967</td>
<td>0.945</td>
<td>0.824</td>
</tr>
<tr>
<td>$z_{TwitterSD_{Replies_{t-1}}}$</td>
<td>-0.753***</td>
<td>-0.209</td>
<td>-0.369***</td>
<td>-1.068***</td>
<td>-1.382***</td>
</tr>
<tr>
<td></td>
<td>(0.0764)</td>
<td>(0.152)</td>
<td>(0.136)</td>
<td>(0.190)</td>
<td>(0.391)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.980</td>
<td>0.920</td>
<td>0.967</td>
<td>0.945</td>
<td>0.824</td>
</tr>
<tr>
<td>Observations</td>
<td>5,194</td>
<td>5,194</td>
<td>5,194</td>
<td>5,194</td>
<td>5,183</td>
</tr>
<tr>
<td>State FE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Division*Time FE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td># Variables</td>
<td>1,001</td>
<td>1,001</td>
<td>1,001</td>
<td>1,001</td>
<td>1,001</td>
</tr>
</tbody>
</table>

Note: All models are OLS regressions with state and division*time FE. All controls from the baseline regression are included but not reported for ease in reading. Twitter indices are standardized and lagged by one day. State-level clustered robust standard errors in parentheses with *** p<0.01, ** p<0.05, * p<0.1.
Table B4. Baseline Results using \[25\]'s and \[26\]'s models

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>0.295***</td>
<td>-0.827***</td>
<td>-0.235</td>
<td>-0.319</td>
<td>-1.047***</td>
<td>-1.141</td>
</tr>
<tr>
<td>Workplaces</td>
<td>(0.0858)</td>
<td>(0.197)</td>
<td>(0.164)</td>
<td>(0.292)</td>
<td>(0.346)</td>
<td>(0.790)</td>
</tr>
<tr>
<td>Groceries and pharmacies</td>
<td>0.0927***</td>
<td>-0.150***</td>
<td>-0.127***</td>
<td>-0.227***</td>
<td>-0.256***</td>
<td>-0.598***</td>
</tr>
<tr>
<td>Retail and recreation</td>
<td>(0.00905)</td>
<td>(0.0187)</td>
<td>(0.0235)</td>
<td>(0.0284)</td>
<td>(0.0371)</td>
<td>(0.103)</td>
</tr>
<tr>
<td>Transit stations</td>
<td>-0.295**</td>
<td>-0.827***</td>
<td>-0.235</td>
<td>-0.319</td>
<td>-1.047**</td>
<td>-1.141</td>
</tr>
<tr>
<td>Parks</td>
<td>(0.125)</td>
<td>(0.277)</td>
<td>(0.244)</td>
<td>(0.413)</td>
<td>(0.552)</td>
<td>(1.229)</td>
</tr>
</tbody>
</table>

Using Newey and West’s standard errors

<table>
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<tr>
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<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>0.295**</td>
<td>-0.827***</td>
<td>-0.235</td>
<td>-0.319</td>
<td>-1.047*</td>
<td>-1.141</td>
</tr>
<tr>
<td>Workplaces</td>
<td>(0.125)</td>
<td>(0.277)</td>
<td>(0.244)</td>
<td>(0.413)</td>
<td>(0.552)</td>
<td>(1.229)</td>
</tr>
<tr>
<td>Groceries and pharmacies</td>
<td>0.0927***</td>
<td>-0.150***</td>
<td>-0.127***</td>
<td>-0.227***</td>
<td>-0.256***</td>
<td>-0.598***</td>
</tr>
<tr>
<td>Retail and recreation</td>
<td>(0.0191)</td>
<td>(0.0322)</td>
<td>(0.0355)</td>
<td>(0.0432)</td>
<td>(0.0740)</td>
<td>(0.115)</td>
</tr>
<tr>
<td>Transit stations</td>
<td>-0.295**</td>
<td>-0.827***</td>
<td>-0.235</td>
<td>-0.319</td>
<td>-1.047*</td>
<td>-1.141</td>
</tr>
<tr>
<td>Parks</td>
<td>(0.125)</td>
<td>(0.277)</td>
<td>(0.244)</td>
<td>(0.413)</td>
<td>(0.552)</td>
<td>(1.229)</td>
</tr>
</tbody>
</table>

Using Driscoll and Kraay’s standard errors

<table>
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<tr>
<th>VARIABLES</th>
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<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>0.295**</td>
<td>-0.827***</td>
<td>-0.235</td>
<td>-0.319</td>
<td>-1.047*</td>
<td>-1.141</td>
</tr>
<tr>
<td>Workplaces</td>
<td>(0.125)</td>
<td>(0.277)</td>
<td>(0.244)</td>
<td>(0.413)</td>
<td>(0.552)</td>
<td>(1.229)</td>
</tr>
<tr>
<td>Groceries and pharmacies</td>
<td>0.0927***</td>
<td>-0.150***</td>
<td>-0.127***</td>
<td>-0.227***</td>
<td>-0.256***</td>
<td>-0.598***</td>
</tr>
<tr>
<td>Retail and recreation</td>
<td>(0.0191)</td>
<td>(0.0322)</td>
<td>(0.0355)</td>
<td>(0.0432)</td>
<td>(0.0740)</td>
<td>(0.115)</td>
</tr>
<tr>
<td>Transit stations</td>
<td>-0.295**</td>
<td>-0.827***</td>
<td>-0.235</td>
<td>-0.319</td>
<td>-1.047*</td>
<td>-1.141</td>
</tr>
<tr>
<td>Parks</td>
<td>(0.125)</td>
<td>(0.277)</td>
<td>(0.244)</td>
<td>(0.413)</td>
<td>(0.552)</td>
<td>(1.229)</td>
</tr>
</tbody>
</table>

Observations 5,194 5,194 5,194 5,194 5,194 5,183
Division*Time FE Yes Yes Yes Yes Yes Yes

Note: \[25\] standard errors are computed using an OLS model. \[26\] standard errors are computed using a State fixed-effect model. All models have division*time FE dummies. Controls are included but their coefficients are not reported for ease in reading. Standard errors in parentheses with *** p<0.01, ** p<0.05, * p<0.1.
Table B5. Baseline Results using alternative lags and first differences

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Workplaces</td>
<td>0.0873**</td>
<td>-0.163</td>
<td>-0.241**</td>
<td>-0.168*</td>
<td>-0.169</td>
<td>-0.848</td>
</tr>
<tr>
<td>Groceries and pharmacies</td>
<td>(0.0425)</td>
<td>(0.113)</td>
<td>(0.110)</td>
<td>(0.0908)</td>
<td>(0.163)</td>
<td>(0.614)</td>
</tr>
<tr>
<td>Retail and recreation</td>
<td>0.0754**</td>
<td>-0.255***</td>
<td>0.0512</td>
<td>0.0311</td>
<td>-0.153</td>
<td>0.115</td>
</tr>
<tr>
<td>Transit stations</td>
<td>(0.0345)</td>
<td>(0.0828)</td>
<td>(0.100)</td>
<td>(0.0936)</td>
<td>(0.114)</td>
<td>(0.643)</td>
</tr>
<tr>
<td>Parks</td>
<td>0.0213***</td>
<td>-0.0226***</td>
<td>-0.0318</td>
<td>-0.0430***</td>
<td>-0.0146</td>
<td>-0.275**</td>
</tr>
<tr>
<td></td>
<td>(0.00606)</td>
<td>(0.00810)</td>
<td>(0.0195)</td>
<td>(0.0151)</td>
<td>(0.0178)</td>
<td>(0.117)</td>
</tr>
<tr>
<td>Lagged Mobility</td>
<td>0.0252***</td>
<td>-0.0400***</td>
<td>-0.0472**</td>
<td>-0.0474***</td>
<td>-0.0366**</td>
<td>-0.141</td>
</tr>
<tr>
<td></td>
<td>(0.00583)</td>
<td>(0.0122)</td>
<td>(0.0186)</td>
<td>(0.0139)</td>
<td>(0.0166)</td>
<td>(0.117)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.561***</td>
<td>0.615***</td>
<td>0.513***</td>
<td>0.692***</td>
<td>0.785***</td>
<td>0.349***</td>
</tr>
<tr>
<td></td>
<td>(0.0349)</td>
<td>(0.0245)</td>
<td>(0.0420)</td>
<td>(0.0415)</td>
<td>(0.0287)</td>
<td>(0.0582)</td>
</tr>
<tr>
<td></td>
<td>0.983</td>
<td>0.988</td>
<td>0.942</td>
<td>0.983</td>
<td>0.979</td>
<td>0.846</td>
</tr>
</tbody>
</table>

Using 2 lags for TwitterSD and CovidCases

| Δ TwitterSD_{t-1}          | 0.106**      | -0.181**     | -0.486***    | -0.220*      | -0.130       | -1.050       |
|                            | (0.0443)     | (0.0895)     | (0.140)      | (0.113)      | (0.149)      | (1.028)      |
| Δ CovidCases_{t-1}         | -0.00387     | 0.0148*      | 0.00190      | 0.000778     | 0.0169       | -0.0351      |
|                            | (0.00510)    | (0.00828)    | (0.035)      | (0.00933)    | (0.0160)     | (0.113)      |
| R-squared                  | 0.927        | 0.937        | 0.766        | 0.775        | 0.641        | 0.616        |
|                            | 5,194        | 5,194        | 5,194        | 5,194        | 5,194        | 5,183        |

Using first differences for continuous variables

| Observations               | 5,194        | 5,194        | 5,194        | 5,194        | 5,194        | 5,183        |
| Division*Time FE           | Yes          | Yes          | Yes          | Yes          | Yes          | Yes          |

Note: All models are OLS models with state and Division*Time fixed effects. In the first part of the table, we use two lags for the Twitter index of social distancing and COVID-19 cases, and one lag for the dependent variable. In the second part of the table, we use the first difference for all continuous variables, including mobility. In the latter case, the dependent variable is the first difference of the considered mobility between t and t-1. Controls are included but their coefficients are not reported for ease in reading. State-level clustered robust standard errors in parentheses with *** p<0.01, ** p<0.05, * p<0.1.