Environmental Justice and the Print Media During the Implementation of Superfund

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Research Question

• Does the print media, through disparate coverage, contribute to environmental (in)justice?

• Print media may cover poor or minority neighborhoods differently:
  – More: Editorial bias towards a story that has an additional “angle” of race, justice, etc.
  – Less: Editorial bias against a story that may seem more distant to the concerns of typical subscribers.
Why Media Matters

• Prior research shows effects of media coverage on polluters.
  – Saha & Mohr, 2013
  – Hamilton, 1995

• Media is a form of “informal regulation.”
  – Zwickl & Moser, 2015
Time Period: 1982-1984

• Initial years of Superfund.
• Large number of sites added to National Priorities List (NPL).
  – Editors had discretion about which sites to include and the about the intensity of coverage.
• Coincides with start of Environmental Justice movement.
• A period where perceptions about race shaped public opinion and policy.
Methodology

• Identify all sites added to the NPL from 1982-84.

• Identify all newspaper articles in the Washington Post or the New York Times that include the word “Superfund.”

• Of these, identify articles discussing specific sites.
Methodology: Qualitative

• A big disparity in coverage.
• At least one of top five sites mentioned in 60% of the articles.
• Review the history of those five sites:
  – Reasons for intense media coverage.
  – Socio-economic characteristics of each site.
  – How the articles portray residents & neighborhoods.
Methodology: Quantitative

• Classify the articles by article characteristics.
• Generate measures of media intensity for each site according to content and number of articles written.
• Regress media intensity on site characteristics.
  – To what degree does race & median income correlate to media coverage.
Article Analysis

• Article Features Identified
  – Neighborhood description (blue-collar, nearby school)
  – Environmental risk (runoff to stream or soil)
  – Health risks (links to cancer or birth defects)
  – Specific Chemicals name (Toluene, PCB’s, Dioxin)
  – Quote from victim, resident or advocate

• “Detailed” = any of above.
• “Political Only” = none of above + exclusively about political scandal or renewal of legislation.
<table>
<thead>
<tr>
<th></th>
<th>Washington Post</th>
<th>New York Times</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Articles</td>
<td>72</td>
<td>93</td>
<td>165</td>
</tr>
<tr>
<td>With details</td>
<td>44</td>
<td>54</td>
<td>98</td>
</tr>
<tr>
<td>Neighborhood characteristics</td>
<td>19</td>
<td>27</td>
<td>46</td>
</tr>
<tr>
<td>Political only</td>
<td>24</td>
<td>26</td>
<td>50</td>
</tr>
<tr>
<td>Multiple sites</td>
<td>36</td>
<td>21</td>
<td>57</td>
</tr>
<tr>
<td>Avg. # of Sites</td>
<td>1.9</td>
<td>1.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Site Name</td>
<td>Hazard Score</td>
<td>New York Times Cites</td>
<td>Washington Post Cites</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------</td>
<td>----------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Stringfellow Acid Pits, CA</td>
<td>61.4</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>Love Canal, NY</td>
<td>52.3</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>Times Beach, MO</td>
<td>40.1</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Seymour Recycling, IN</td>
<td>58.2</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Chem-Dyne, OH</td>
<td>48.8</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>
Frequently Mentioned Sites: Zip Code Characteristics

<table>
<thead>
<tr>
<th>Site</th>
<th>% White</th>
<th>% Non-White</th>
<th>% Hispanic</th>
<th>Population</th>
<th>Median Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Love Canal</td>
<td>96.00</td>
<td>2.71</td>
<td>1.29</td>
<td>30,290</td>
<td>$28,085</td>
</tr>
<tr>
<td>Stringfellow</td>
<td>72.63</td>
<td>4.32</td>
<td>23.10</td>
<td>17,358</td>
<td>$36,737</td>
</tr>
<tr>
<td>Times Beach</td>
<td>98.82</td>
<td>0.55</td>
<td>0.63</td>
<td>6,006</td>
<td>$40,074</td>
</tr>
<tr>
<td>Seymour Recycling</td>
<td>98.12</td>
<td>1.36</td>
<td>0.53</td>
<td>21,094</td>
<td>$26,718</td>
</tr>
<tr>
<td>Chem-Dyne</td>
<td>88.85</td>
<td>10.70</td>
<td>0.45</td>
<td>41,190</td>
<td>$24,790</td>
</tr>
</tbody>
</table>

Notes: Unweighted averages. 1990 Census data at zip-code level.
Narrative: Evacuated Towns

Love Canal and Times Beach

– Working-class and predominantly white.
– In the case of Love Canal, poorer, black residents also affected, but their story ignored (Blum, 2008).
– By 1982: Love Canal was already a historical episode. Articles were about aftermath or Love Canal mentioned in passing.
– Times Beach events occurred during 1982-83.
Narrative: Political Scandal

Stringfellow, Seymour, and Chem-Dyne.
  – Amongst first sites to be slated for remediation.
  – Great fanfare as Reagan administration announced settlements.
  – Charges of “sweetheart” deals, announcements timed to influence elections, and insufficient planning/funding for the scale of cleanup needed.
Narrative: Political Scandal

Stringfellow, Seymour, and Chem-Dyne.

– These sites more diverse in terms of race and income, but..
– Most articles were not about the sites at all.
– If articles investigated the sites, only because of the scandal.
– Stringfellow coverage focused broadly on water supplies of Riverside and Los Angeles.
Quantitative Analysis

• Do characteristics of zip code have a statistical relationship to:
  – Likelihood of any coverage?
  – Likelihood of coverage with any site, hazard, or neighborhood details?
  – Number of articles written?
  – Number of articles written that include details?

• Methods: Probit and Poisson Estimations using 1990 census data.
# Estimation Results

<table>
<thead>
<tr>
<th></th>
<th>Media Attention</th>
<th>Attn: Detailed</th>
<th># of Articles</th>
<th># Articles: Detailed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-white</td>
<td>0.001</td>
<td>0.002</td>
<td>-0.026***</td>
<td>-0.023***</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.010*</td>
<td>0.010*</td>
<td>0.022***</td>
<td>0.015***</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Log Income</td>
<td>0.041</td>
<td>0.037</td>
<td>-0.077</td>
<td>-0.280</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.24)</td>
<td>(0.20)</td>
<td>(0.24)</td>
</tr>
<tr>
<td>Hazard Score</td>
<td>0.031***</td>
<td>0.025***</td>
<td>0.072***</td>
<td>0.053***</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Population/10,000</td>
<td>0.005</td>
<td>0.014</td>
<td>0.025</td>
<td>0.060</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.05)</td>
<td>(0.04)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Washington Area</td>
<td>3.004***</td>
<td>2.969***</td>
<td>2.111***</td>
<td>1.910***</td>
</tr>
<tr>
<td></td>
<td>(0.52)</td>
<td>(0.52)</td>
<td>(0.23)</td>
<td>(0.28)</td>
</tr>
<tr>
<td>New York Area</td>
<td>0.438***</td>
<td>0.271</td>
<td>0.394***</td>
<td>0.535***</td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.17)</td>
<td>(0.14)</td>
<td>(0.17)</td>
</tr>
</tbody>
</table>

Pseudo R-Squared

N=470.
Interpretation

• Influential Outlier: Stringfellow
  – If Stringfellow is dropped:
    • Hispanic becomes insignificant (still positive)
    • Non-white remains significant only in count data models

• Relative to “white”, the New York Times and Washington Post reported less frequently on NPL sites in non-white communities.

• Relative to “white” the two papers were similarly likely to report on NPL sites in Hispanic communities.
Extensions in Progress

• Merge onto 1980 tract & county-level data.
• Estimate relationship between media attention and type or duration of cleanup.
  – Initial results show strong positive correlation between all measures of media attention and probability of “deleted.”
  – Concern about selection:
    • some articles written specifically in response to slow progress.
    • Selection likely to bias against finding a result.
Missing from the Narrative

• Warren County, NC
  – Hazardous waste disposal facilities
• Potential sites never included
  – E.g. Cancer cluster in Colorado
• Newer Time Periods
• Other News Outlets (west coast or regional)