

# **The Effect of Disaster-induced Displacement on Social Behaviour: The Case of Hurricane Harvey**

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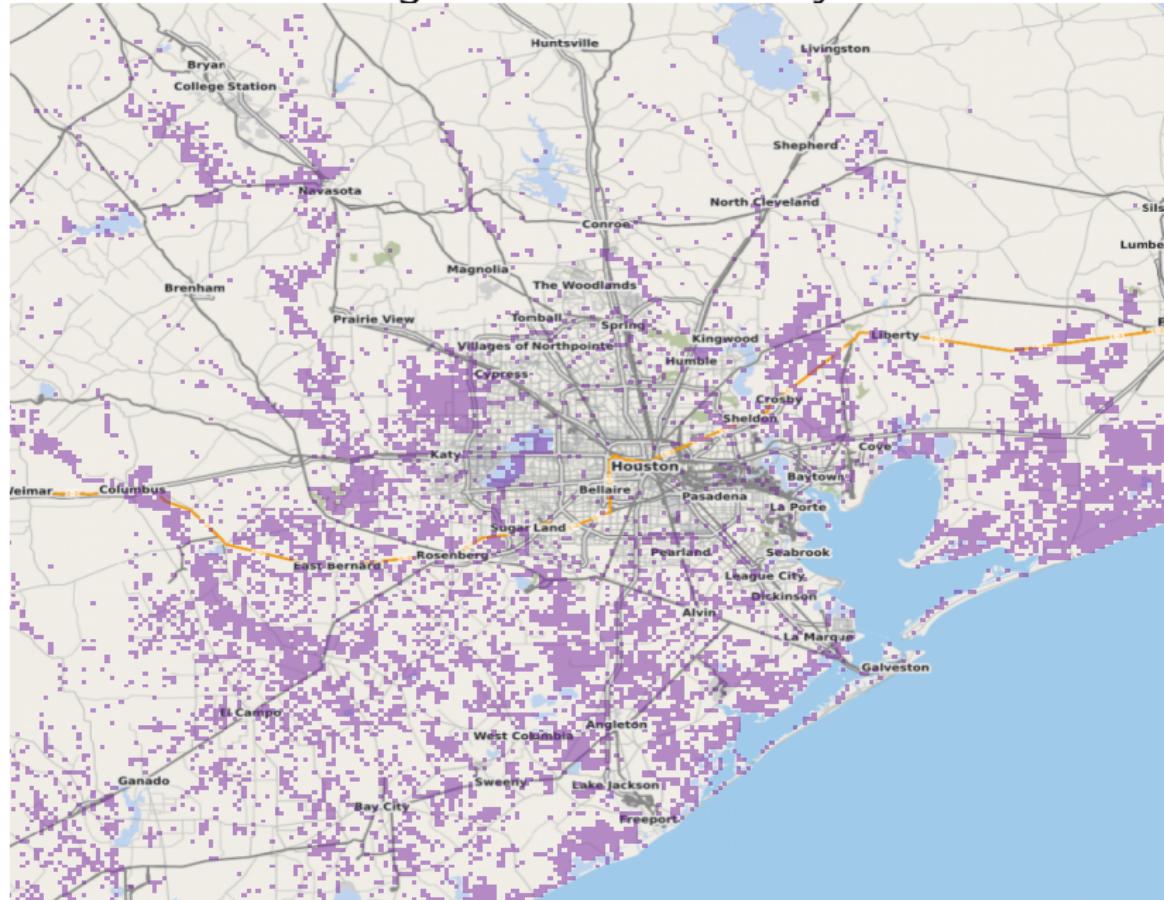
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# Flooded Areas during Hurricane Harvey



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Storms will likely remain extremely costly.

- ▶ Storms are becoming slower;
- ▶ Rising atmospheric moisture due to higher sea surface temp.

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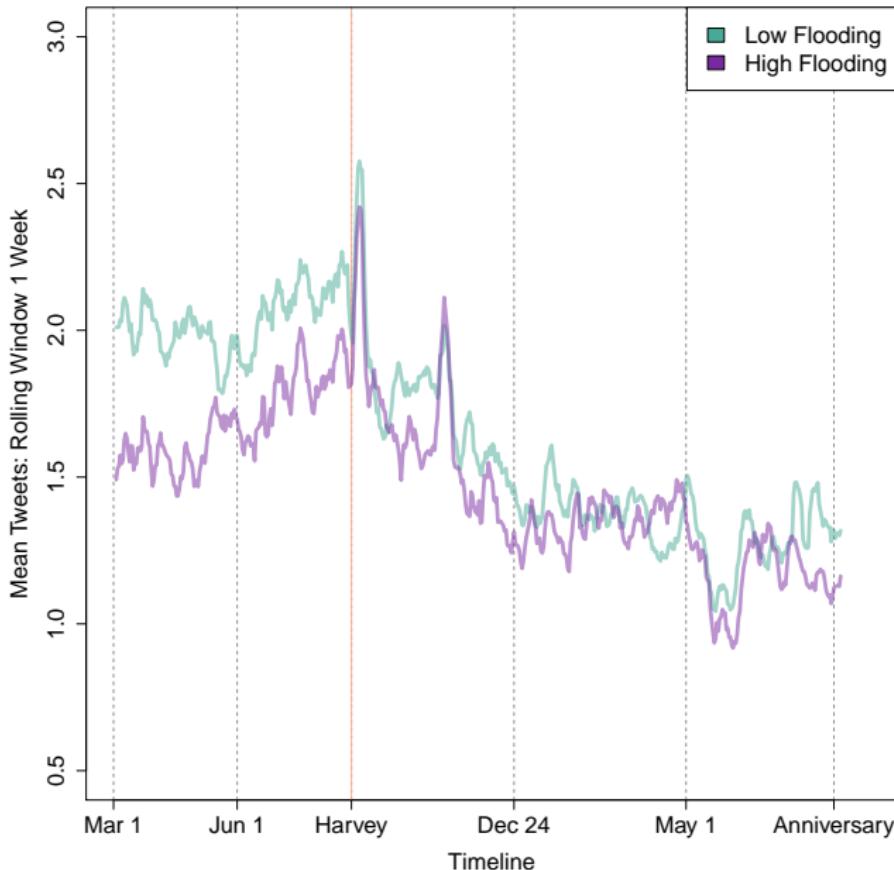
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*Today:* The relationship between exposure to flooding and social network engagement (in terms of tweeting frequency).

# Flooding and Tweeting



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- ▶  $Flood_i$  is a continuous measure of how much flooding individual  $i$  experienced;
- ▶  $Harvey_t$  is an indicator for days on or after August 25.

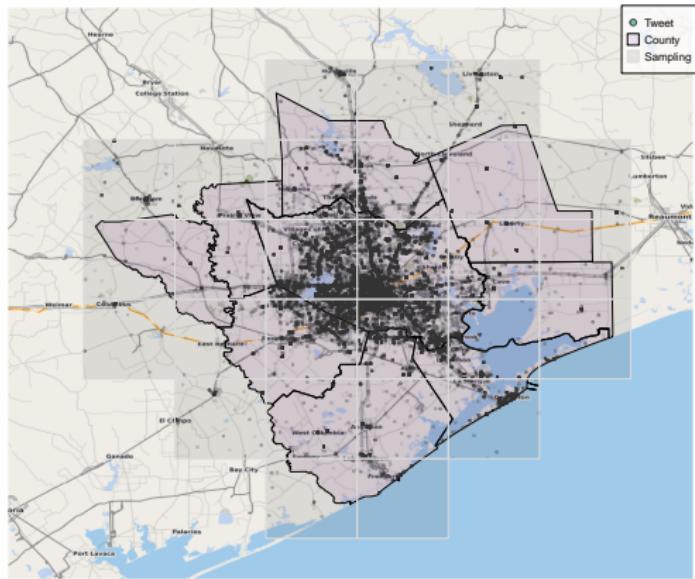
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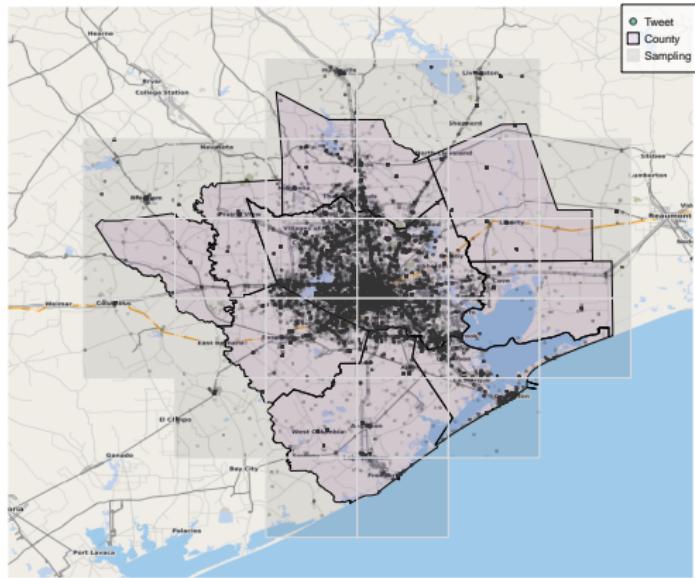
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$\gamma$  is the DID effect we are interested in.

# Sample



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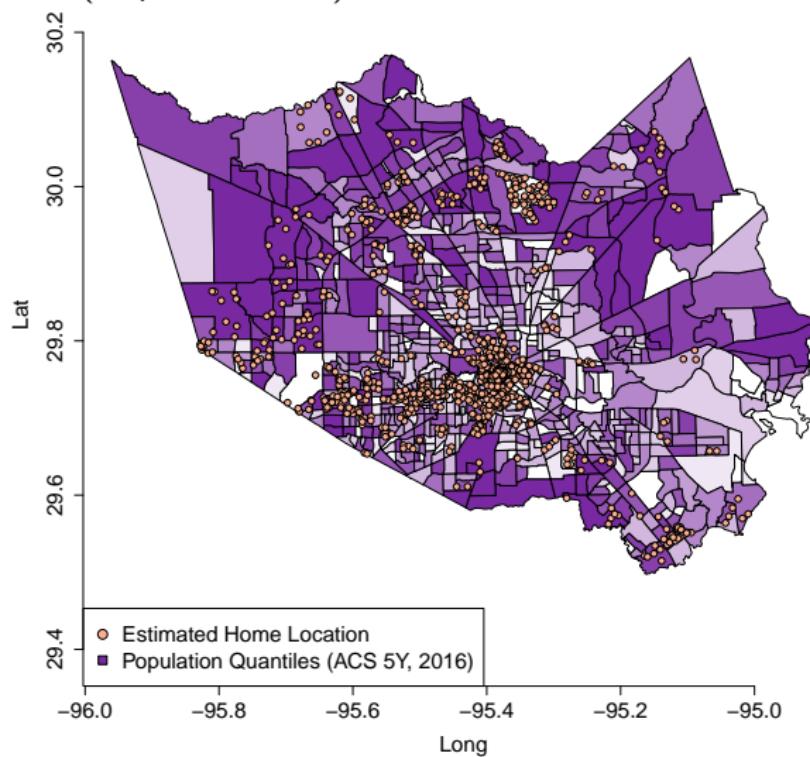
- ▶ 16050 unique users
- ▶ 15689 active and public
- ▶ 15631 old enough
- ▶ 1398 final sample

## Home Locations

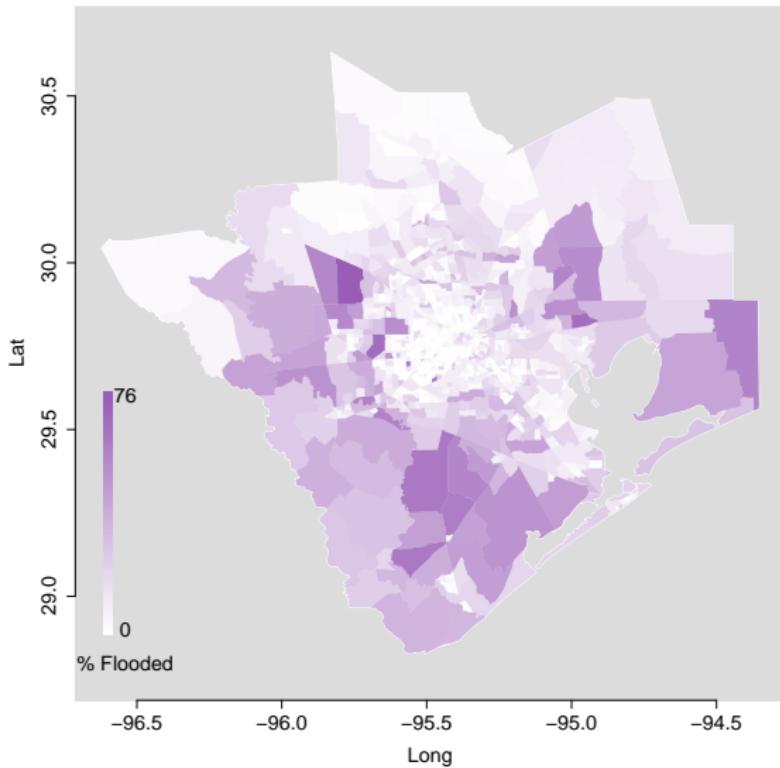
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# Flooding by Census Tract



# Results

	Pooled		Fixed Effects	
	Coefficient	s.e.	Coefficient	s.e.
Harvey × Flooding	0.669*	0.081	0.669*	0.081
Flooding	-0.849*	0.067	-0.849*	0.066
Harvey	-0.547*	0.011	-0.673*	0.125
Intercept	1.960*	0.009	1.913*	0.089

(Day Fixed Effects)

$i = 1398, t = 546; * = p < 0.001$

- ▶ After Harvey, those affected by flooding tended to tweet more (after accounting for general trend of decreased tweeting).

## In Progress

We are currently in the progress of obtaining the following data:

- ▶ Voter registration files from Texas;
- ▶ Tweet data from Dallas.

We are also working on methods to estimate our measures with greater validity.

Questions or comments?

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A copy of the paper and these slides are available at

<https://tedhchen.com/pages/research.html>