

Diffusion of protest through Social Media: Evidence from Nahel protest in France

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Motivation

Marginalized groups are often misrepresented in existing institutions



Protest can be a way to **empower** and change institutions



For a protest to be successful, it is important to expand sympathy and increase the reach of the movement. This is even more true for disadvantaged groups.

Diffusion is key

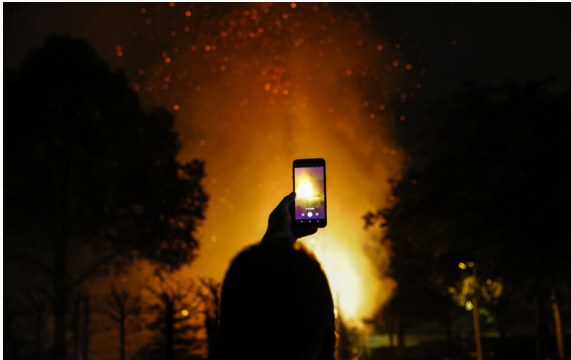
Motivation

Marginalized groups have less access to communication channels



Social media offer new ways to **coordinate, inform, and persuade**

⇒ self mediatize (Castells, 2014) → Liberation technology (Manacorda & Tesei, 2020)



How do (image-based) social media contribute to the geographic diffusion of riots?

Case study: Protests after the death of Nahel Merzouk in June 2023 in France particularly diffused through TikTok and Instagram.

Empirical strategy: Use a network of pairwise Instagram connections between municipalities to predict the spread of protests across France

Results

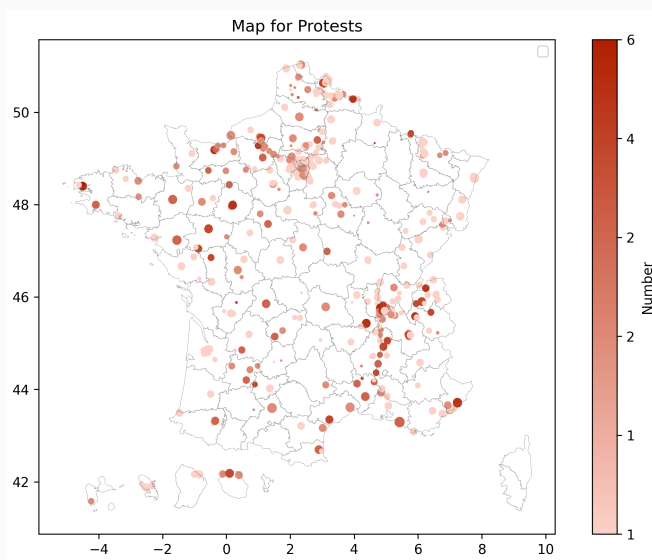
- Connection through social media increases new protests
- Suggestive evidence that image-based social media matter

- Study the role of social media on protest in **democracies** (Enikolopov et al., 2020; Manacorda & Tesei, 2020; Qin et al. 2021)
- Study the role of social media in the **dynamics** of protest (Acemoglu et al., 2018; Bonnasse et al.2018; Manacorda & Tesei, 2020; Casanueva 2022; Cantoni et al., 2023) → **China** (Qin et al., 2021).
- Consider **image-based** social media:
 - most used social media platform in France among the age group between 16 and 25 years (*Diplomeo, 2023*) which is the age group of potential rioters (*Le Monde, 2023*).
 - images can more easily trigger **emotional reactions** (Casas & Williams, 2019; Passarelli & Tabellini, 2017).

Context: Facts

- On **27 June, Nahel Merzouk**, a 17-year old boy, was **shot by a police officer** during a traffic control in Nanterre.
- Initially, the police reported that the car refused to stop and the police officer shoot in **self-defense**.
- In the hours that followed, two **videos** made by passer-by **contradicting the official report** of the police, appeared on social media and went viral.
- From 27 June to 6 July, **protests** took place in 553 municipalities. First in Nanterre or around Paris. From June 28: spread to other municipalities, some that had never had one (*Oberti & Maela, 2023*).
- Participants were primarily **men** and particularly **young**.

Total Protests in France (553)



Context: role of social media

Social media platforms are said to have played an important role in the movement's **strength and diffusion**

The logo for Le Parisien, featuring the text "Le Parisien" in white on a blue rectangular background with a thin red underline.

"Death of Nahel: How the Rioters 'Coordinate Their Actions' on Social Media"

The logo for Le Monde, featuring the text "Le Monde" in a black, stylized serif font on a white background.

"Death of Nahel M.: Riots Unfold Live on Social Media"

The logo for Libération, featuring the text "Libération" in white on a red diamond-shaped background.

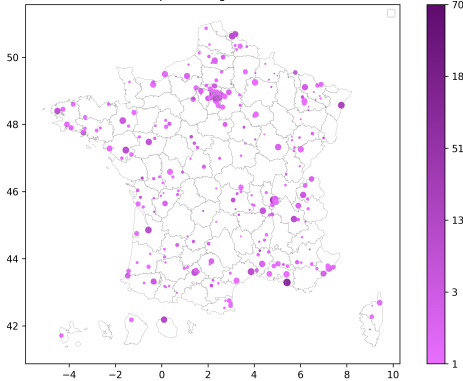
"Death of Nahel: After the Riots, Social Media Under Government Pressure"

The logo for franceinfo, featuring the text "franceinfo:" in white on a black rectangular background.

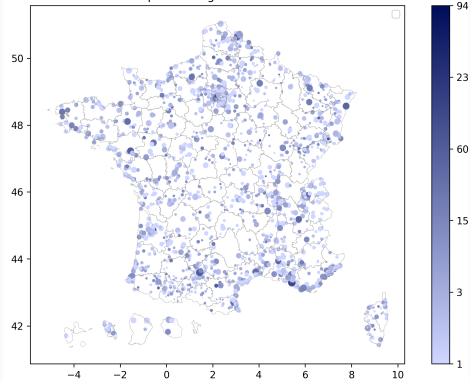
"State of Emergency in New Caledonia: TikTok Blocked on the Archipelago"

#Nahel Instagram Posts (~1500) and Comments (~5500)

Map for Instagram Posts



Map for Instagram Comments



Context: role of celebrities

Several influential popular artists and star football players quickly reacted:

Jules Koundé: *"yet another police blunder"*

Kylian Mbappé: *"My France hurts"* (widely commented in the media)

Kaaris: mentioned the role of Nahel's social origins in the shooting.

SCH: *"to Nahel's loved ones and to 'our neighborhoods'"*.

Those sportsmen and artists came from or were close to people with

migration background and **disadvantaged neighborhoods**



eased the **identification** of rioters **with Nahel Merzouk**.

Empirical strategy: Leveraging social media connectedness

How did Image-based social media affect the diffusion of protests in France?

Challenge with posts about Nahel: reverse causality

⇒ Create a **measure of social media connectedness** between municipalities before the protests

Idea: A-priori Instagram connections represent where posts about protests will be spread

⇒ If social media played a role we expect that protests are sparked more in municipalities that are more strongly connected on Instagram

In short: Use pre-existing Instagram connections between municipalities as predictor for outbreaks of new protests

Empirical Strategy: Construction of connectedness measure

Construction of the network:

- Select 14 **celebrities** (football, rap) that reacted to Nahel's death but were not politically active before.
- Look at their **posts before Nahel's death**
- Collect users commenting on these posts
- Collect the posts of these users, etc to collect 3 levels of users
- Network: post-comment relations (ignoring initial celebrity posts)
- Geolocalize users using solely public information

Restriction:

1. Use only *pre-protest* interactions to construct the network
2. Only include celebrities that were not politically vocal prior to the protests.

Protest data: all protest related to Nahel between 27 June and 6 July by day and municipality. Source: "Le Monde".

Instagram data: Measure of connectedness of municipality posts constructed using multiple levels of post-comment relations.

General data: Geographic and demographic data for heterogeneity analyses from INSEE.

Empirical strategy: Focus on Municipality Pairs

$$\text{Protest}_{i,d} = \beta_0 + \beta_1(\text{Connections}_{j \rightarrow i} \times \text{Protest}_{j,d-1}) + (\alpha_i) + \lambda_{ij} + \delta_d + (\gamma_{rd})$$

- β_1 : **Interaction of connections with protest** - measures the Instagram connections if the other municipality had a protest on d-1
- α_i : **Municipality fixed effects** - account for municipality-specific propensity to protest (e.g. demographic structure).
- λ_{ij} : **Municipality pair fixed effects** - measures similarity of time-invariant features / connections between municipalities i and j
- δ_d : **Day fixed effects** - measures day-specific effects (e.g. protest dynamic)
- γ_{rd} : **Region-day fixed effects** - account for region-specific daily shocks (eg. regional media stories)

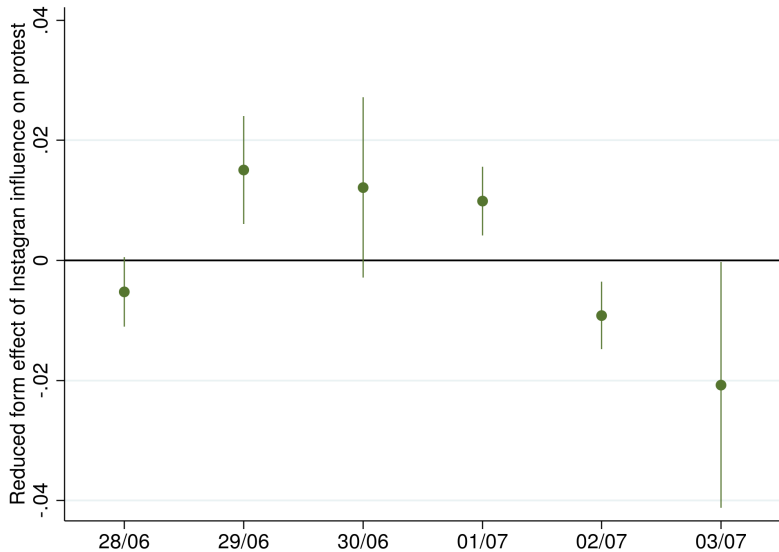
Results: Main Specification

	(1)	(2)	Protest (3)	(4)	(5)
Instagram connections \times Protest $d-1$	0.00482*** (0.00168)	0.0188*** (0.00501)	0.00479*** (0.00167)	0.00894*** (0.00319)	0.00876*** (0.00321)
Protest $d-1$	Y	Y	Y	Y	Y
Comment muni. FE	Y		Y		
Post muni. FE	Y		Y		
Muni. pair FE				Y	Y
Day FE		Y	Y		Y
Region-day FE				Y	
Observations	7,593,054	7,593,054	7,593,054	7,593,054	7,593,054

Results: Temporal Dynamics

	Protest			
	(1)	(2)	(3)	(4)
Instagram connections \times Protest $d-1$	0.00876*** (0.00319)			0.00797** (0.00311)
Instagram connections \times Protest $d-2$		0.00859*** (0.00289)		0.00573** (0.00269)
Instagram connections \times Protest $d-3$			0.00358** (0.00158)	0.00331** (0.00168)
Protest $d-1$	Y			Y
Protest $d-2$		Y		Y
Protest $d-3$			Y	Y
Muni. pair FE	Y	Y	Y	Y
Day FE	Y	Y	Y	Y
Observations	7,593,054	7,593,054	7,593,054	7,593,054

Results: Evolution of the Effect over Time



Results: Geographic vs Social Media Spread

	(1)	(2)	Protest		(5)
			(3)	(4)	
Instagram connections \times Protest $d-1 \times 0-50$ km	-0.00319 (0.0117)				-0.00316 (0.0117)
Instagram connections \times Protest $d-1 \times 50-100$ km		0.0366 (0.0293)			0.0366 (0.0293)
Instagram connections \times Protest $d-1 \times 100-200$ km			0.0330*** (0.0104)		0.0331*** (0.0104)
Instagram connections \times Protest $d-1 \times 200+$ km				0.00792*** (0.00304)	0.00792*** (0.00304)
Protest $d-1$	Y	Y	Y	Y	Y
Muni. pair FE	Y	Y	Y	Y	Y
Day FE	Y	Y	Y	Y	Y
Observations	7,593,054	7,593,054	7,593,054	7,593,054	7,593,054

Discussion: image based social media

- Our results suggest that Instagram connections facilitated the spread of protests
- The effect is strongest for protests that happen in d-1, which suggests a quick diffusion of posts \Rightarrow *aligns with theory that images trigger quick emotional reactions*
- Social media connections are not geographically limited \Rightarrow *may explain the quick geographic diffusion of protests*

- **Leverage posts about the protests**
 1. **Image and text** analysis of the post and comments.
 2. Compare the effect of **different social media platforms**.
 3. Investigate the **network** in more detail.

- **Open for ideas!**

How do social media contribute to the geographic diffusion of riots?



Protests after the death of Nahel Merzouk in June 2023 in France

Main result: Instagram connections are highly predictive for the spread of protests.

- The diffusion through social media is very fast
- Social media platforms facilitate ideas to overcome geographic distances
- Effect sizes follow the sentiment of the protests

APPENDIX

Demographic effects

Variable	N	Mean	sd	min	max
Municipality level					
Total protests	1043	.4746	.8828	0	6
Total Instagram connections	1043	3.717	32.28	0	936.5
Population	1042	33382	81345	10007	2162598
% Immigrants	436	.1238	.08079	.005432	.4553
% Pop. aged 15-24	267	.1115	.02528	.053	.191
% Workers	981	.4855	.07123	.2796	.738
% Unemployed	981	.08237	.03004	.0358	.276
% No Bac	446	.1673	.2535	1.67e-06	.751
Municipality-day level					
Protests	7294	.06786	.2542	0	2
Total comments	7295	.0732	.9828	0	47
Municipality pair level					
Instagram connections	1084722	.003574	.2201	0	114.1
Geographical distance (km)	1084722	1209	2357	.5263	13446
Municipality pair - day level					
Comments	7593054	.0000703	.02578	0	43

Robustness Checks

	Baseline (1)	excl. Paris (2)	excl. Nanterre (3)	excl. both (4)	pair trend (5)
Instagram connections \times Protest $d-1$	0.00876*** (0.00319)	0.0285*** (0.00635)	0.00877*** (0.00319)	0.0286*** (0.00636)	0.00908** (0.00366)
Protest $d-1$	-0.00106** (0.000476)	-0.00111** (0.000476)	-0.00107** (0.000477)	-0.00111** (0.000477)	-0.00107** (0.000545)
Muni. pair FE	Y	Y	Y	Y	Y
Day FE	Y	Y	Y	Y	
Observations	7,593,054	7,578,480	7,578,480	7,563,920	7,593,054