



A New Home for Scholarly Communication? Shedding Light on the Academic #TwitterMigration

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Figures created with Midjourney / DALL-E

[https://en.wikipedia.org/wiki/File:Elon_Musk_\(3018710552\).jpg](https://en.wikipedia.org/wiki/File:Elon_Musk_(3018710552).jpg)



The Verge

TECH / TWITTER - X / ELON MUSK

More than two million users have flocked to Mastodon since Elon Musk took over Twitter

The Twitter alternative has skyrocketed in popularity, leaping from 300,000 monthly active users to 2.5 million between October and November.

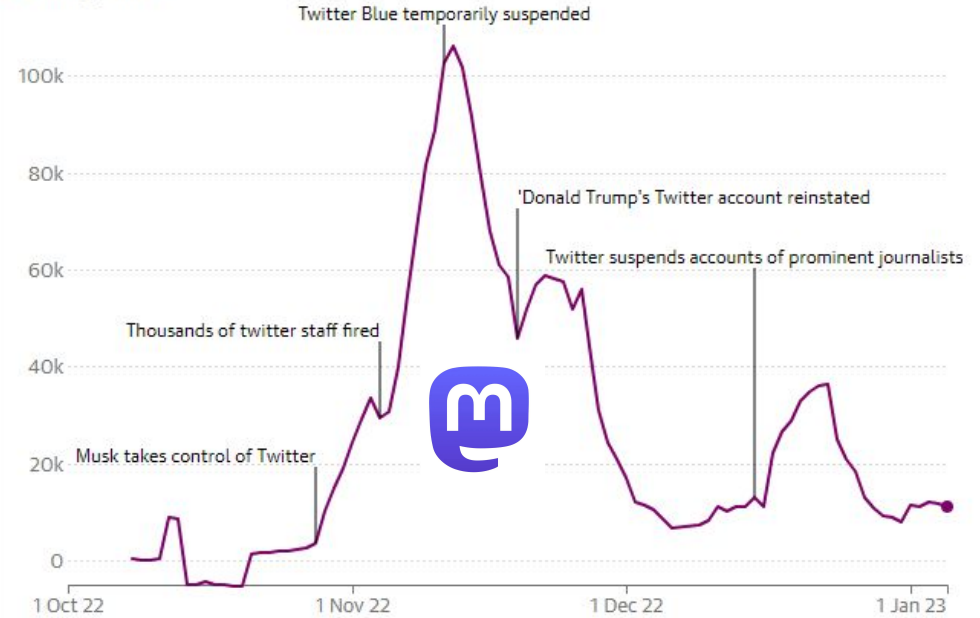
By [Jay Peters](#), a news editor who writes about technology, video games, and virtual worlds. He's submitted several accepted emoji proposals to the Unicode Consortium.

Dec 20, 2022, 7:31 AM GMT+1 | [47 Comments](#) / [47 New](#)

Change in total users registered on Mastodon servers

Showing the seven day rolling average in the increase or decrease in total Mastodon users. Only showing days for which there is complete data.

● Change in users



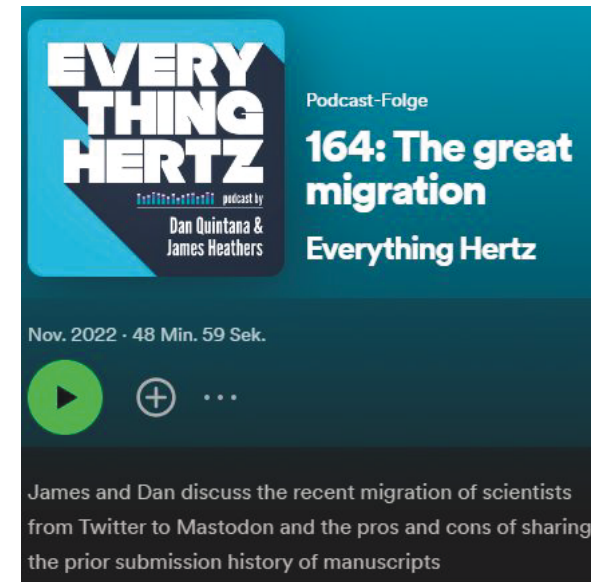
Guardian graphic | Source: Joinmastodon.org, Wayback Machine

Related work

2.26% of Twitter users have **left** Twitter **completely**
(Zia et al., 2023)

Users are **shifting their attention back** to Twitter after creating a Mastodon account (Jeong et al., 2023)

30% of highly cited scientists have Twitter accounts, and **only 1% have Mastodon accounts** (Siebert et al., 2023)



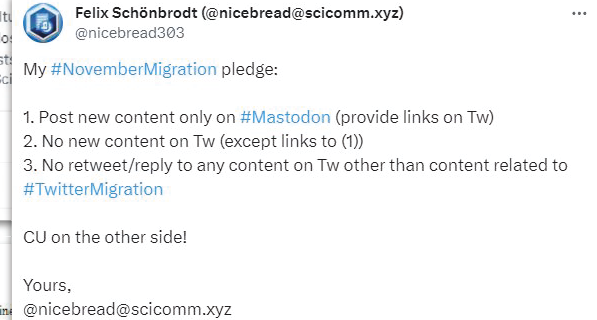
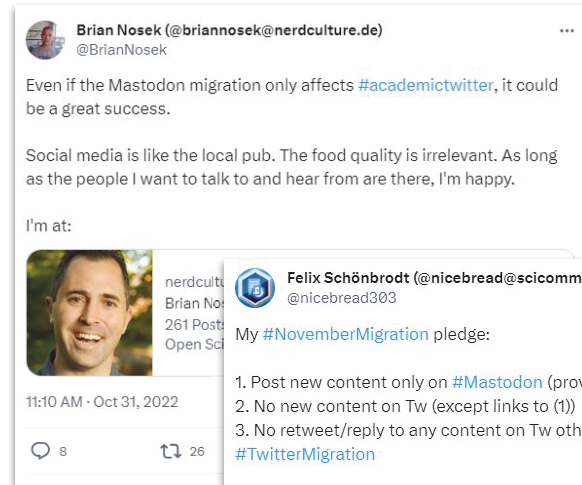
A
“great
migration”
of scientists?

What could motivate researchers to migrate?

Important factors for Twitter migration
(La Cava et al., 2023):

- **Social connections**
- Engagement in **discussions** on Twitter migration
- **Shared identity** in network communities

Open Science
movement



The current study

H1: Researchers who are under higher **social influence from #TwitterMigration influencers** are more likely to migrate to Mastodon than researchers who are under lower social influence.

H2: Researchers who endorse the **open science movement** are more likely to migrate to Mastodon than researchers who do not.

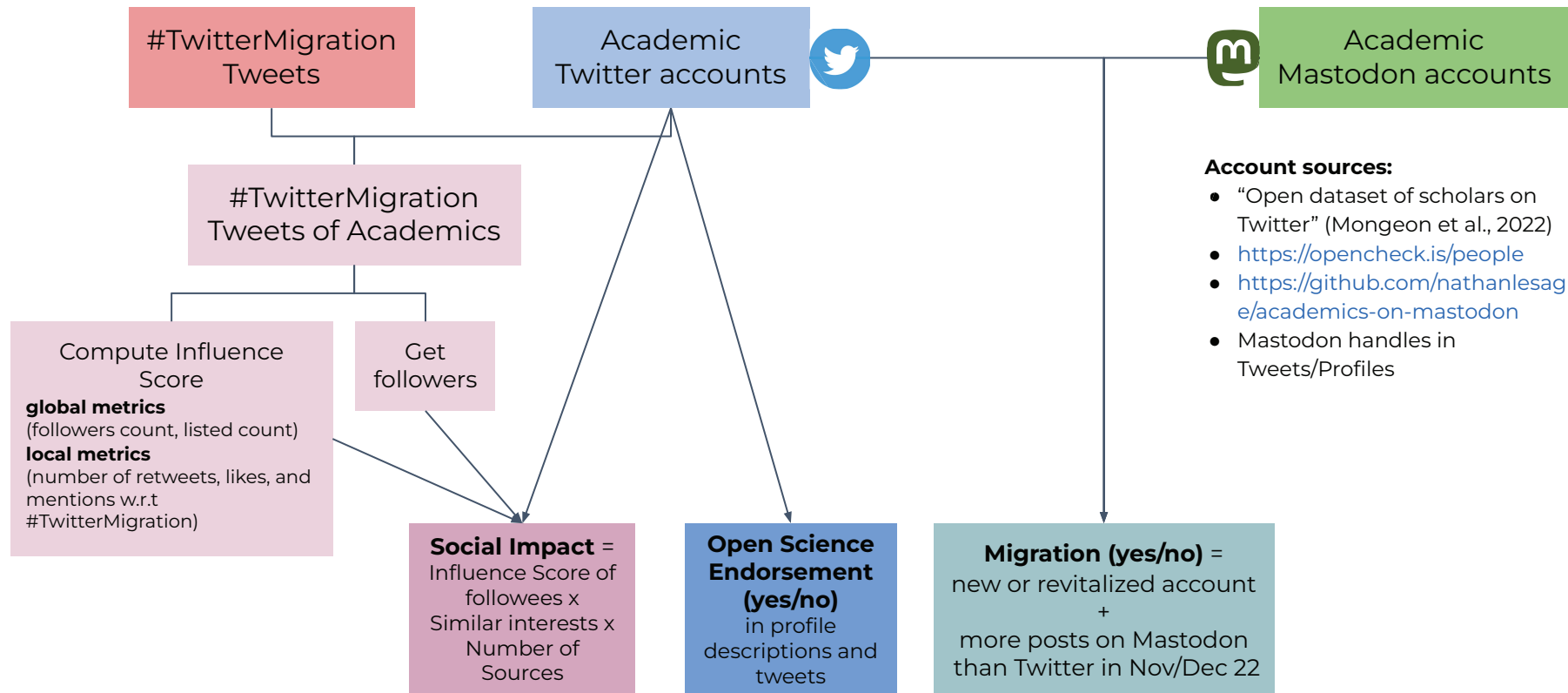
Social Impact Theory

(Latané, 1981):

- Strength
- Immediacy
- Number of sources



<https://doi.org/10.23668/psycharchives.13062>

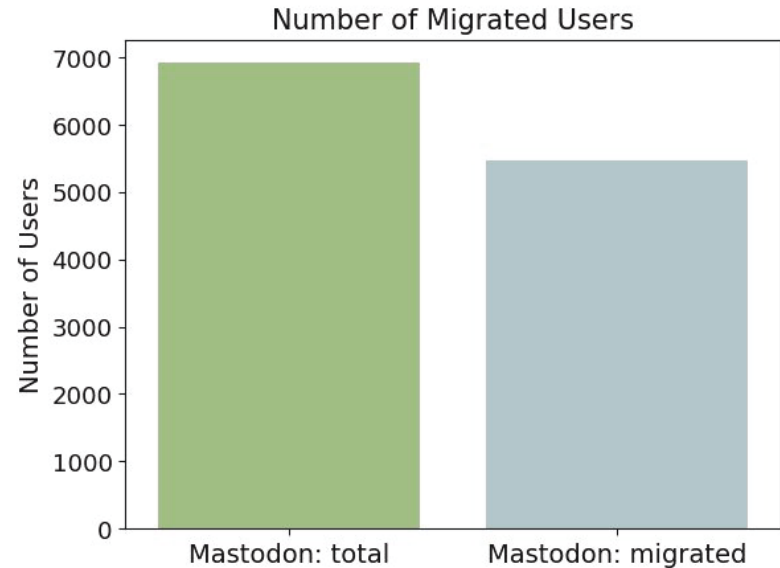
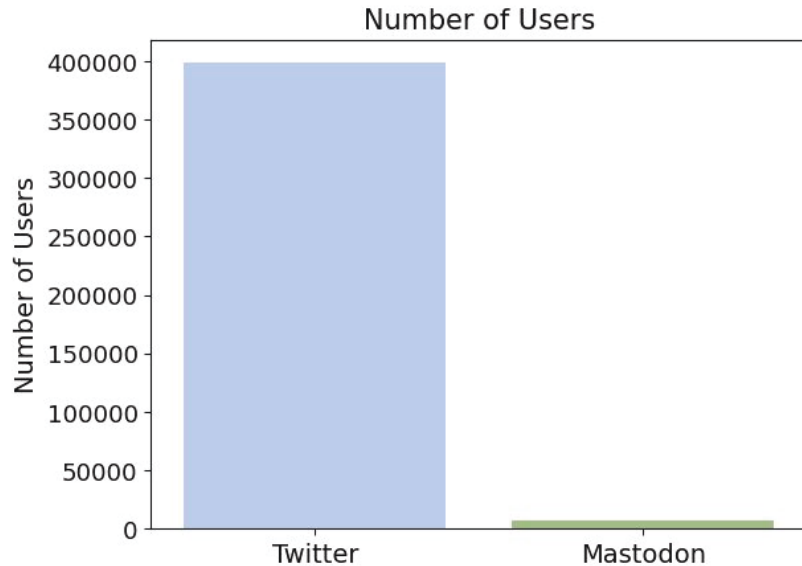


Account sources:

- “Open dataset of scholars on Twitter” (Mongeon et al., 2022)
- <https://opencheck.is/people>
- <https://github.com/nathanlesage/academics-on-mastodon>
- Mastodon handles in Tweets/Profiles

$$\text{Logit}(P(\text{Migration})) = \beta_0 + \beta_1 * (\text{Social Impact}) + \beta_2 * (\text{Open Science Endorsement}) + \beta_3 * (\text{Follower Count}) + \beta_4 * (\text{Following Count}) + \beta_5 * (\text{Account Age}) + \beta_6 * (\text{Tweet Count}) + \varepsilon$$

Results: Academic users



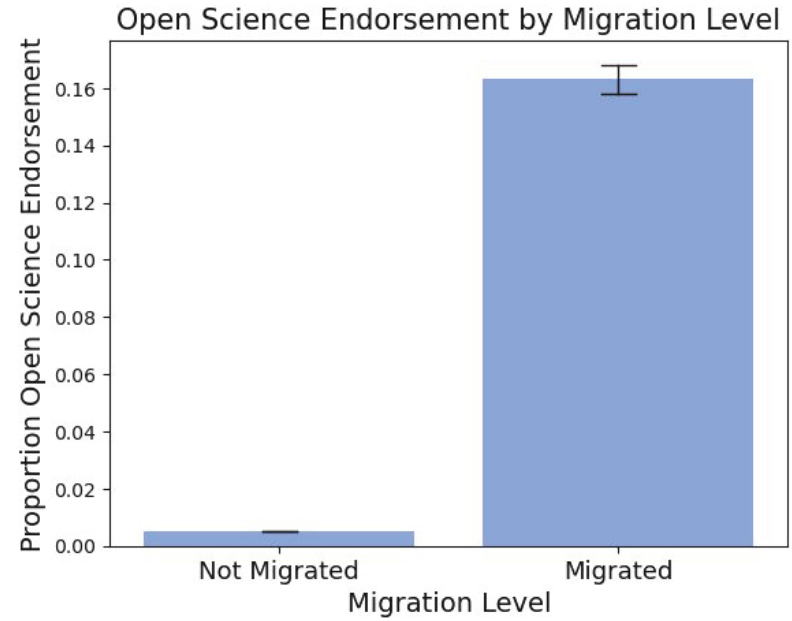
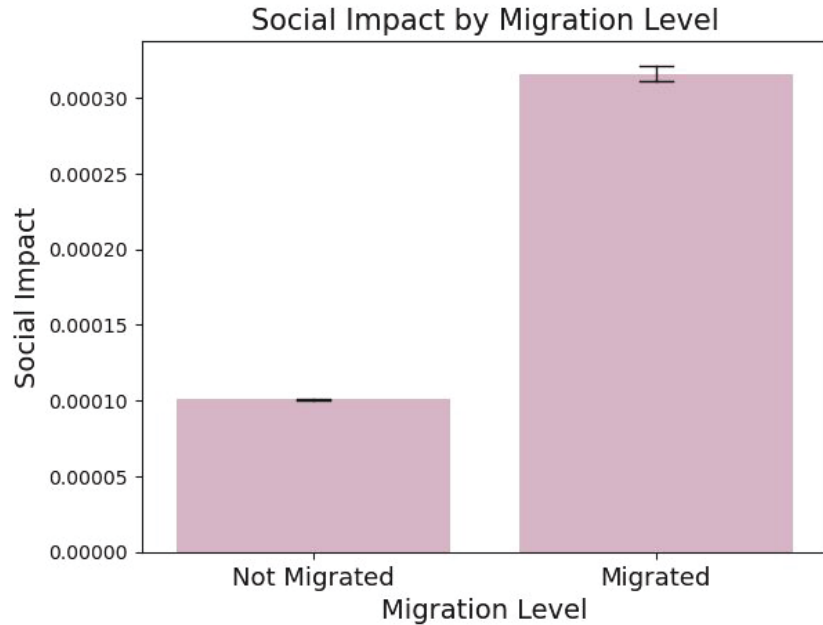
Results: Regression

Generalized Linear Model Regression Results

Dep. Variable:	is_migrated	No. Observations:	405475
Model:	GLM	Df Residuals:	810943.00
Model Family:	Binomial	Df Model:	6
Link Function:	Logit	Scale:	1.0000
Method:	IRLS	Log-Likelihood:	-4.6620e+05
Date:	Tue, 24 Oct 2023	Deviance:	9.3240e+05
Time:	15:47:14	Pearson chi2:	3.81e+13
No. Iterations:	7	Pseudo R-squ. (CS):	0.3769
Covariance Type:	nonrobust		

	coef	std err	z	P> z	[0.025	0.975]
Intercept	-0.4175	0.003	-162.757	0.000	-0.423	-0.412
social_impact_z	0.5854	0.003	190.340	0.000	0.579	0.591
is_os_endorsement	3.5110	0.023	155.473	0.000	3.467	3.555
twitter_followers_count_z	0.0022	0.003	0.640	0.522	-0.005	0.009
twitter_following_count_z	0.0907	0.005	19.118	0.000	0.081	0.100
twitter_account_age_z	0.0178	0.003	6.710	0.000	0.013	0.023
twitter_tweet_count_z	0.2299	0.004	62.871	0.000	0.223	0.237

A closer look at the predictors

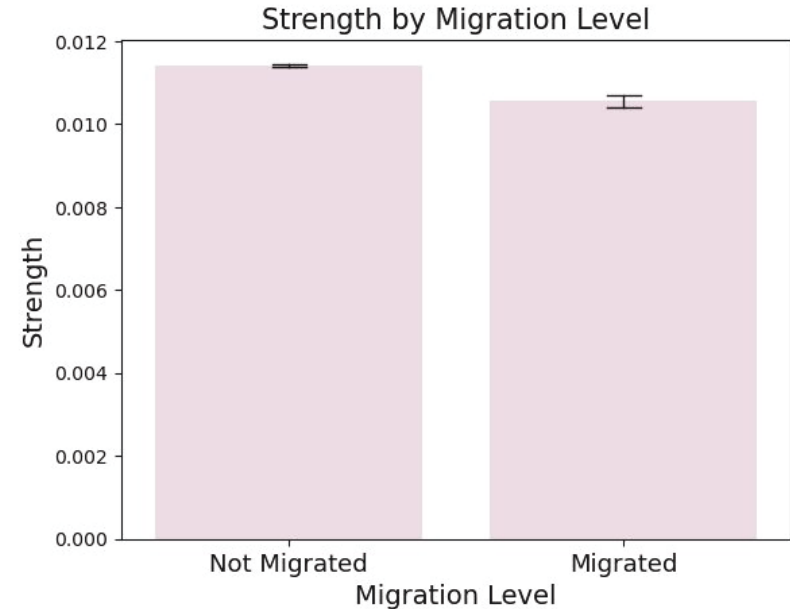
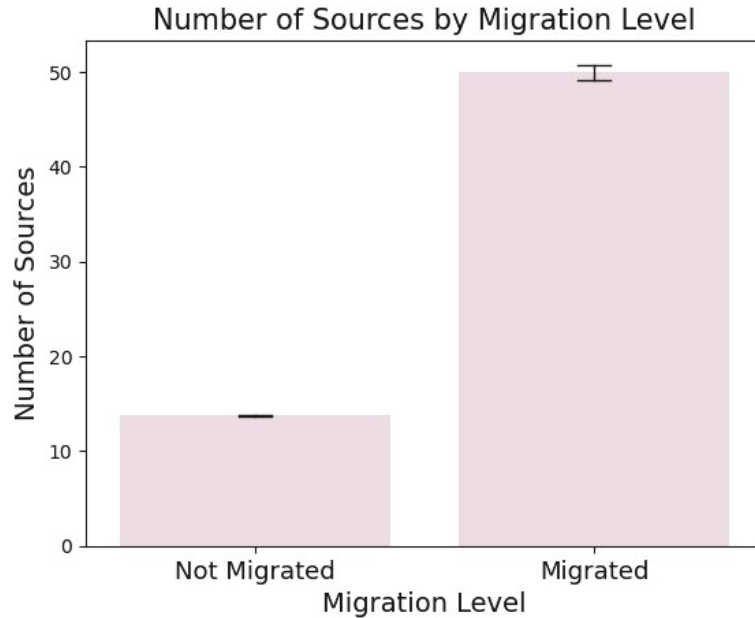


A closer look at social impact

Social Impact Theory

(Latané, 1981):

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Discussion

Both hypotheses could be confirmed, but the results shown are **preliminary**:

The **number of fellow academics** talking about #TwitterMigration was **more important than single influencers**.

The **Open Science** movement has played a significant role in the academic #TwitterMigration to Mastodon.

How **sustainable** was the migration?
How many returned to the “birdsite”?

→ Similar interests (immediacy) have yet to be computed.

→ A mere exposure effect ([Zajonc, 1968](#)) rather than a persuasive influence?

→ Is it just a “great migration” of the open science community?

→ Planned follow-up analysis with data from April 2023

Preliminary conclusion

The current findings suggest that **social influence** in the scientific community occurs at a **collective** rather than individual level.

Targeting groups with a shared identity can be the key to disseminating and implementing academic practices and reforms (see [Matz et al., 2017](#)).

The effect of **individual academic influencers** on group identity and psychological targeting remains an open question.



Thank you for your attention!



Let's get in touch:



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