

# PARTICIPACIÓN CIUDADANA EN TWITTER: POLÉMICAS ANTI-VACUNAS EN TIEMPOS DE COVID-19

Dr. Rafael Carrasco-Polaino  
Dr. Miguel-Ángel Martín-Cárdaba  
Dr. Ernesto Villar-Cirujano

<https://doi.org/10.3916/C69-2021-02>

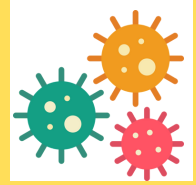
## INTRODUCTION



### Twitter

collects opinions and exchange of information on environmental and social policy issues

**Controversy and opposition**  
around covid-19 vaccines in a post-modern cultural context of mistrust



## METHODOLOGY

### research questions

Which are the most relevant vaccines?  
Which one generates the most participation and dialogue?  
What is the sentiment or favorability towards the main COVID-19 vaccines?  
What is the specific activity carried out by the verified accounts?  
Are there differences in favorability for different vaccines by the different professional categories?  
What is the presence of bots in the conversation?  
What is their activity?

### Social Network Analysis (SNA)

Tweets citing any of the vaccines in Phase 3 of their research:  
Moderna, Pfizer, the three Chinese-origin vaccines, Sputnik V and Oxford-AstraZeneca

**49,776 interactions**  
**25,692 Twitter users**  
**2,970 original tweets**

## RESULTS

Table 1. Main indicators for each vaccine analysed

	Moderna	Pfizer	Cansino, Sinovac y Sinopharm	Sputnik V	Oxford-AstraZeneca	Total
Users	1.169	3.911	296	22.122	611	28.109
Interactions	5.546	21.083	810	170.954	2.669	201.987
Responses	40	216	97	2.236	49	2.638
Retweets	965	3.374	223	25.874	485	30.921
Favourites of the original tweets	4.367	16.927	465	133.267	2.091	157.117
Tweets	107	343	38	2.356	40	2.884
Mentions in retweets	113	251	4	7.575	24	7.967
Mentions	61	315	21	2.002	20	2.419

The vaccine that attracts the most attention is the Russian Sputnik V, which is also the most controversial behind those of Chinese origin

Moderate favorability is shown for the COVID-19 vaccines, with Oxford-AstraZeneca, Pfizer and Moderna being the most accepted, and Sputnik V in the case of the of the verified accounts

## CONCLUSIONS



The analysis of citizen participation collected on Twitter could have a certain diagnostic capacity about the opinions of the general population and is a faster and less expensive method than traditional surveys



The presence of bots that could distort the analysis of the conversation is almost marginal, and almost all of the accounts that matched the profile of a bot were related to vaccines of Chinese origin

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