

**People are more engaged on Facebook as they get older,  
especially in politics: evidence from users in 46 countries**

MARCIO MORETTO

PABLO ORTELLADO

Universidade de São Paulo, Brazil

GABRIEL KESSLER

GABRIEL VOMMARO

Universidad Nacional de San Martín, Argentina

JUAN CARLOS RODRIGUEZ-RAGA

Universidad de los Andes, Colombia

JUAN PABLO LUNA

Universidad Católica de Chile, Chile

EDUARTH HEINEN

Universidade de São Paulo, Brazil

LAURA FERNANDA CELY

Universidad de los Andes, Colombia

SERGIO TORO

Universidad de Concepción, Chile

A growing body of literature has noted an age pattern in the sharing of false news in social media, with older people sharing more often misinformation than younger users. In this article we supplement this literature by documenting two distinct but complementary phenomena: Facebook users share more content as they get older regardless of whether it is political; and that this increment in sharing activity as age increases is more intense with political and partisan URLs. Based on the Facebook Privacy-Protected Full URLs Data Set, a vast Facebook database with demographic information of those who saw and shared links on Facebook in 46 countries, we investigate the impact of age on link-sharing activity. We found that in 43 countries, the average age of people who shared links was considerably higher than the age of those who saw the links. In a more detailed study, with Facebook users in South America, we find that the average age increases consecutively in the sharing of non-political content, in the sharing of political content, in the sharing of partisan sites and in the sharing of right-leaning partisan sites.

*Keywords: Facebook, Latin America, Age*

## Introduction

In this article, we investigate how the sharing of links on Facebook varies according to age and how this variation increases when content is partisan and conservative. Our article is divided into two parts: in the first, we find a notable difference in the age pattern between those who view and those who share links on Facebook. The average age of the user sharing is 10 years older than the average age of the user viewing. The phenomenon is widespread and present in the 43 countries for which we have good data. In the second part, we manually classify links shared in South America and find that the average age of users interacting with links increases when content is political, increases again when content is partisan, and increases further when it is right-leaning.

A large part of the literature on age and sharing has looked at how older adults more often consume and disseminate misinformation online (Grinberg et al. 2019; Guess et al. 2019; Brashier and Schacter 2020; Guess 2021) and how this could be caused by social and psychological dispositions. Our data, however, suggest that the problem goes far beyond misinformation, as we find a clear age pattern in the interaction with links which are not political news. Furthermore, rather than focusing on “fake news”, we investigate interaction with mainstream news and with news from partisan websites,

Márcio Moretto: marciomr@usp.br

Pablo Ortellado: paort@usp.br

Date submitted: 2021-12-22

We would like to thank the Monitor do Debate Político no Meio Digital team—Ana Luiza Aguiar, Alexandre Isaac, Danielle Guia, Gabriel Felix, Isabela Olivieri, Leonardo Zeine, Leticia Oliveira, Nicole McLean, and Rainer Ferreira—for their assistance in the classification of Brazilian domains and for their suggestions throughout the development of the project. We also thank Felipe Alves for calculating the error margins in the data tables protected by differential privacy. Article was copy edited by LetPub.

regardless of their truth or factual status. Thus, our analysis departs from the literature on cognitive and psychological age impairments that could be associated with the spread of misinformation and focuses, on the one hand, on the social effects that accentuate politicization at older age and, on the other, on the difficulties of older users in handling social media technologies

## Dataset

The Facebook Privacy-Protected Full URLs Data Set contains demographic data of users from 46 countries who interacted (viewed, clicked, liked, shared, or commented) with URLs on Facebook between January 1, 2017 and February 28, 2021 (Messing et al. 2020). The database contains data of 57 million unique URLs, with 1,7 trillion rows.

The dataset was produced by a partnership between Facebook and Social Science One. It contains demographic data of users who interacted with web pages—identified by means of URLs. All of the URLs shared at least 100 times by users with a “public” privacy setting—plus a Laplacian (5) noise inserted to prevent information leakage—were included<sup>1</sup>.

The collection consists of two tables. The first (URL Attributes Table) contains data about the URLs: domain, timestamp, webpage title, and blurb (a short text provided by the article's author generally describing its content), spam, false news, and hate speech flags, and the country in which it was shared most frequently. The second (Breakdown Table) contains metrics for user interaction with the URLs: number of views, shares, clicks, comments, likes, and other reactions. These metrics are broken down by month, country, gender, and age range. The entire database was protected by a technique called zero-concentrated differential privacy (zCDP), which was applied at the action level (Bun and Steinke 2016)<sup>2</sup>.

## Results and Methods

In order to investigate the age pattern of views and interactions with URL links on Facebook, we calculated the median age of users who saw the links and the median age of users who shared the links. Since the data in the Facebook database are aggregated by age range (18-24, 25-34, 35-44, 45-54, 55-64, 65+), in order to calculate the median and quartiles, we assume that within each range the distribution of metrics (number of views, shares, clicks, likes, reactions and comments) is uniform.

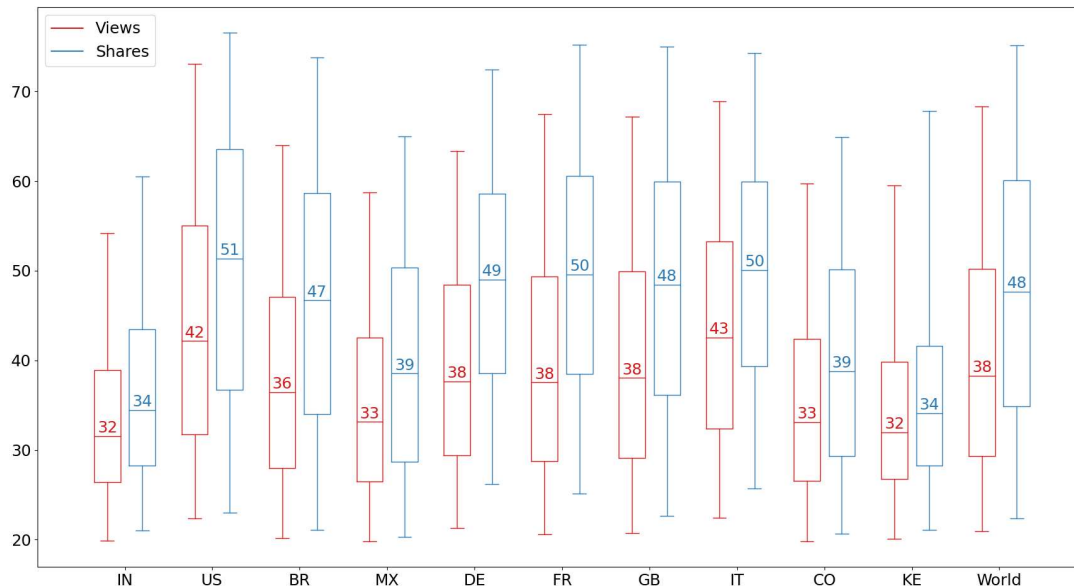
In every country but three (Zimbabwe, Sierra Leone and Malta), for which we didn't have enough data, the age of the people who shared the links was significantly higher than the age of the people who saw the links. The difference between the median ages of those who saw the links and

---

<sup>1</sup> On September 8, 2021, Facebook informed its academic partners that data from U.S. users who did not indicate their political leanings were inadvertently deleted from the database. On October 6th a new version of the database (URLs-v2-1) was released (<https://doi.org/10.7910/DVN/TDOAPG>) with the problem fixed. In our study, we use data extracted from the database in November 2021 and, therefore, the error did not impact our results.

<sup>2</sup> See Appendix 2 for more details.

those who shared the links in the full dataset was 10 years. Figure 1 is a boxplot with the median age of the people who viewed and the median age of the people who shared links on Facebook in the 10 largest countries in our dataset (those with populations over 45 million)<sup>3</sup>. We applied the chi-square test on the shares contingency table in which the expected value was calculated following the proportion of the number of views. The tests show us that the difference between the distributions is significant (p-value < 0.001) in all cases, except for those three countries for whom the test is not applicable<sup>4</sup>.



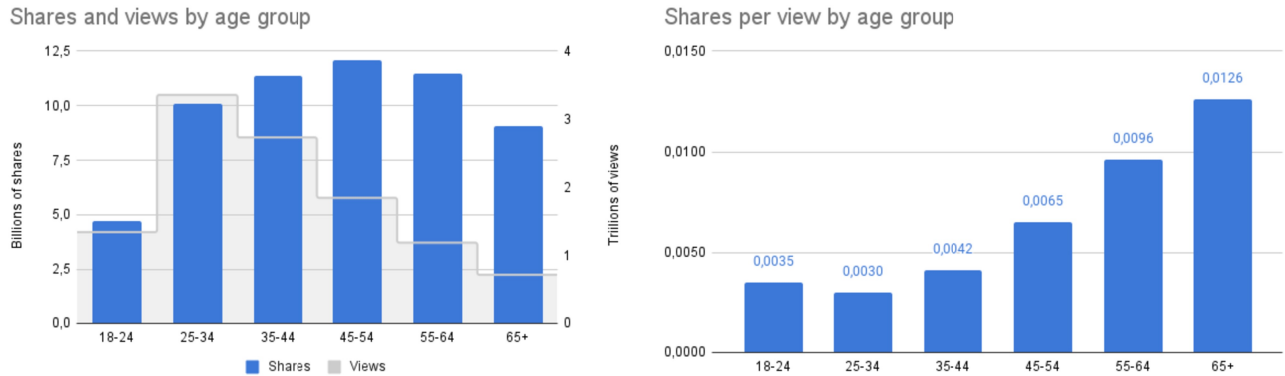
**Figure 1. Boxplot of age distribution of those who viewed and shared links on Facebook in 10 selected countries.**

The first chart of Figure 2 presents a comparison of the age distribution of views and shares for all 46 countries aggregated. The number of views is a good proxy for how long users spend on Facebook. While the peak of views occurs in the range of 25 to 34 years old, the peak of shares occurs in the range of 45 to 54 years old. The second graph shows the ratio of shares per view in each age group with the ratio increasing as users get older.

Our results differ from previous studies which found that old adults share false news and disinformation on social media more frequently (Grinber et al. 2016; Guess et al. 2019; Brashier and Schacter 2020). Unlike those studies, the links from our database are mixed, and most of them are from non-political and non-journalistic websites. Thus, if users interact more frequently with disinformative partisan websites as age increases, our data shows that this propensity for sharing disinformative partisan content is heightened and amplified by the propensity of users sharing more heavily every kind of content on Facebook as age increases.

<sup>3</sup> Table A5 of the Appendix 3 shows the medians of shares and views for all 46 countries and their differences.

<sup>4</sup> Due to a very small population of older Facebook users, Sierra Leone, Zimbabwe and Malta data contain negative numbers in certain age groups after noise is introduced. This prevents us from testing our hypothesis in these countries.



**Figure 2.** Comparison of age distributions of views and shares of links and the ratio of shares per view by age group on Facebook, 2017–2019.

To investigate how the two phenomena concur, we looked more closely at the age distribution of views and link sharing on Facebook in the four South American countries for which we have data: Brazil, Argentina, Colombia, and Chile. These four countries together have 328 million inhabitants and 203 million Facebook users, which corresponds to 76% and 82% of South America, respectively<sup>15</sup>.

Our unit of analysis are domains that we assume to aggregate content with a cohesive editorial line. We therefore discarded platform domains (such as Youtube or Tumblr) that are intended to be neutral mediators. The URLs were divided by the country where they were most shared and were grouped by domain. We manually categorized the domains. Domains with at least 100 occurrences in the database were selected. This corresponds to those that produced on average slightly less than one relevant publication per week. Thus, we restrict ourselves to analyzing websites with constant content production over time. There were 3,791 domains that were manually analyzed and classified: 720 from Argentina, 2,526 from Brazil, 193 from Chile, and 352 from Colombia. Although these amounts correspond to a small fraction of the domains in these countries, they cover 84% of the URLs and 89% of the URL shares in the database (Table 1).

**Table 1.** Number of URLs, views, shares, clicks, likes and comments and the percentages that we manually classified for Argentina, Brazil, Chile and Colombia.

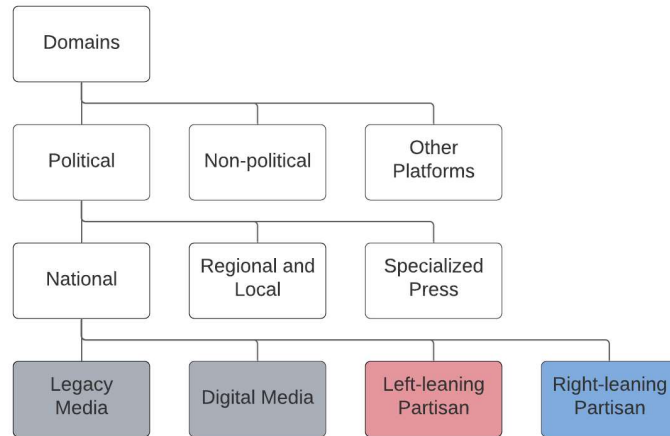
Country	URLs (Thousands)	Views (Billions)	Shares (Millions)	Clicks (Millions)	Likes (Millions)	Comments (Millions)
Argentina	1208 (84%)	1650 (81%)	1002 (85%)	8616 (87%)	2098 (87%)	458 (88%)
Brazil	4449 (86%)	1161 (84%)	6710 (91%)	44441 (87%)	22037 (92%)	3849 (92%)
Chile	324 (83%)	60 (81%)	283 (84%)	34618 (87%)	554 (89%)	154 (91%)
Colombia	628 (82%)	126 (81%)	576 (86%)	5967 (86%)	1033 (89%)	202 (89%)

<sup>5</sup> To estimate the number of Facebook users, Latin American Public Opinion Project data from 2019 were used, which does not include Venezuela, Suriname, and Guyana.

These domains were then classified hierarchically as shown in Figure 3. At the top of the hierarchy, domains dealing with political themes, non-political themes, and from other platforms were distinguished. We considered political issues to be everything that concerns the three powers at the national level, including not only their own actions but also attempts to influence them. In addition, we also consider political issues debates about economic models and foreign policy; the initiatives, campaigns, and debates of the movements of students, peasants, workers, LGBTQ+, feminist, black, and indigenous people; migration; drugs; human rights; political insurgencies; animal rights; and environmentalism as well as movements that defend the traditional family; religious freedom; conservative values; possession of weapons; harsher punishment for criminals and those who fight corruption; abortion; and gender ideology. We also consider conceptual and ideological debates on these topics as political issues.

Among the political sites, the domains of national scope, regional and local journalism (including blogs and hyperlocal opinion sites), and specialized media—which deals with specific issues, such as trade, religion, racial issues, political humor, and the environment among other things—were distinguished. The political domains with national scope were classified into four categories: 1) legacy media: national press produced by traditional publishing groups that put out daily printed newspapers, weekly printed magazines or have radio or TV concessions, as well as traditional foreign press and foreign news agencies; 2) digital media: digital newspapers that investigate the news and pursue editorial balance; 3) left-leaning, and 4) right-leaning websites. These last two categories include digital newspapers with marked editorial position, partisan news sites (digital newspapers without their own investigation and with a marked editorial position), and opinion blogs and websites.

The classification was made by social scientists from the four South American countries striving to find common ground for a coherent classification that worked across national boundaries. Our definition of what politics comprises, for instance, had to be enlarged to include armed insurgencies (relevant to the Colombian context) and indigenous independentism (important to the Chilean context). In order to accommodate different national contexts, our definition of legacy media combined traditional (old) media groups and financial capacity to put out a daily print edition or to have a TV or radio concession. The classification as left leaning and right leaning followed the partisan website's self-descriptions. We reviewed each national dataset with teams from two countries to ensure that the classification presented in Figure 3 was homogeneously applied across the four different countries.



**Figure 3. Hierarchical Classification Scheme**

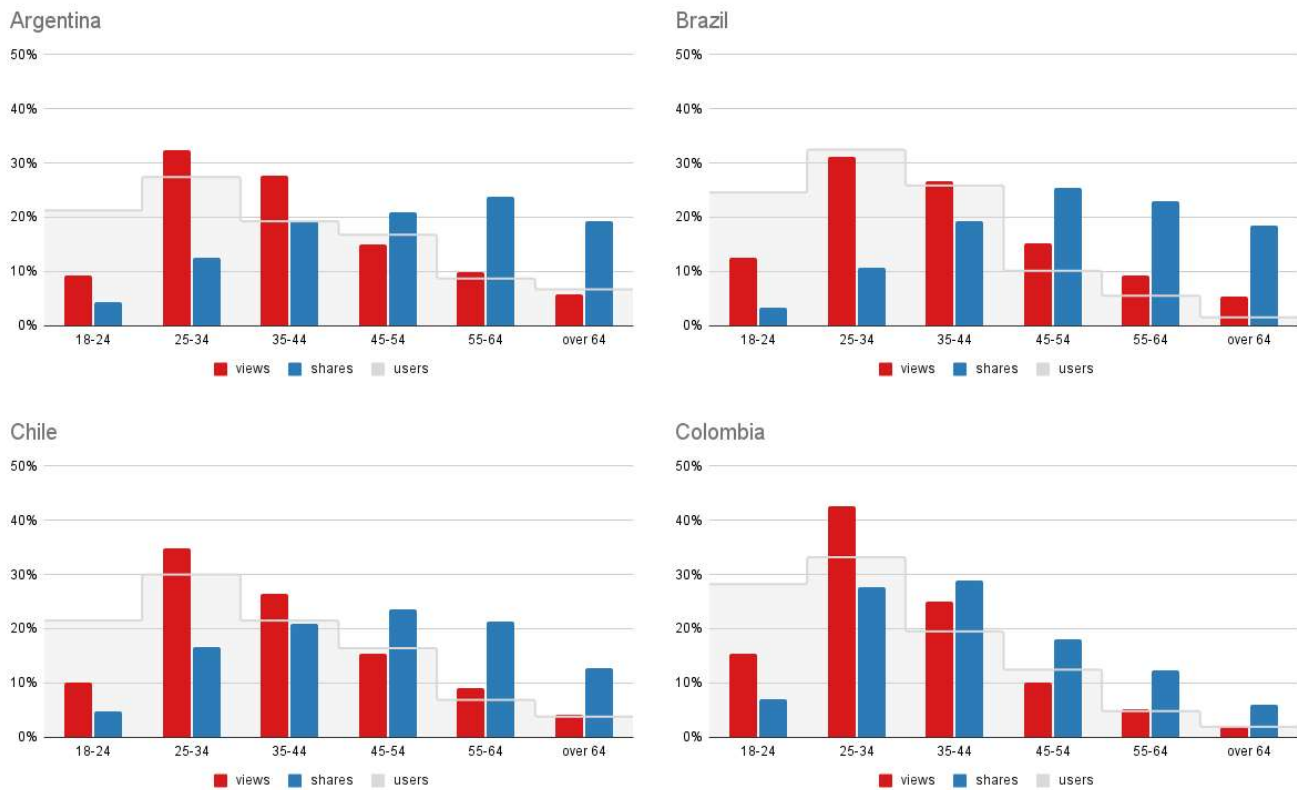
Table 2 shows the median age and interquartile of all users, those who view non-political and political links, and those who share non-political and political links. Political links are further divided by mainstream media, left-leaning partisan sites, and right-leaning partisan sites. Across these four countries, there is a clear upward trend in the median age of individuals who use Facebook, view content, and share content<sup>6</sup>. These age-related trends are also evident in the content of links that are both viewed and shared, increasing as content becomes more partisan in each case. As age increases, users engage more on Facebook, in general, engage even more with political content, and engage even further when the content is partisan and leaning to the right.

**Table 2. Median and interquartile of the age of Facebook users, those who view links and those who share links of non-political and political websites on Facebook in selected South American countries.**

		Argentina	Brazil	Chile	Colombia
Facebook accounts		35 (23)	33 (17)	34 (20)	31 (18)
Non-political websites (views)		38 (19)	37 (19)	36 (17)	34 (15)
Political websites (views)	Mainstream media	38 (19)	37 (18)	35 (16)	34 (15)
	Left leaning websites	41 (20)	42 (22)	39 (19)	33 (15)
	Right leaning websites	46 (22)	45 (23)	41 (21)	42 (19)
Non-political websites (shares)		50 (24)	47 (23)	43 (21)	41 (20)
Political websites (shares)	Mainstream media	51 (25)	48 (23)	42 (22)	40 (20)
	Left leaning websites	54 (21)	55 (18)	48 (21)	41 (22)
	Right leaning websites	57 (19)	57 (18)	52 (22)	52 (19)

*Note.* Facebook account data is from the Latin American Public Opinion Project (LAPOP) 2019 survey.

<sup>6</sup> In the four countries, all eight distributions (non-political, left, right views and shares) are significantly different from the Facebook account distribution: p-value of chi-square less than 0.001.



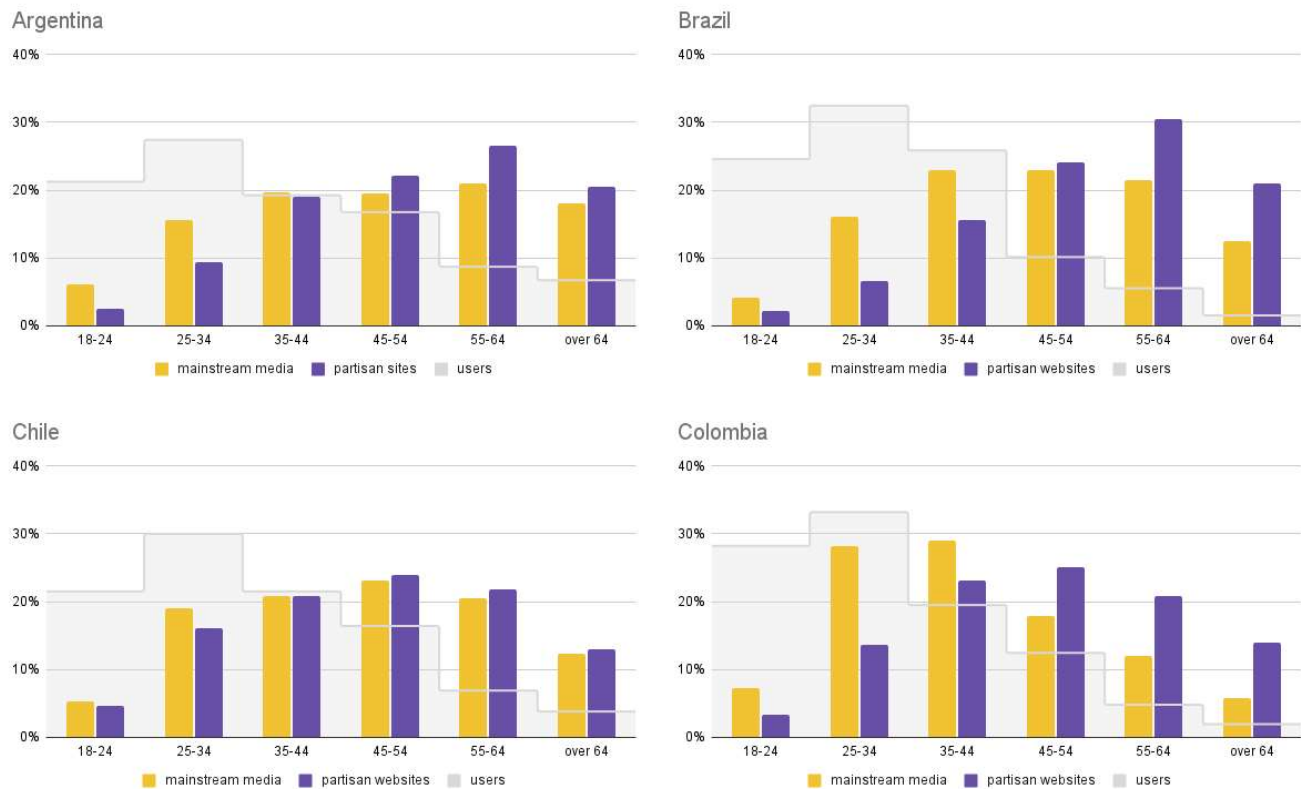
**Figure 4.** Age distribution of Facebook users and those who view and share political links on Facebook in selected South American countries, 2017–2019.

When we analyze the age distribution, the evidence is clearer. Figure 4 shows the age distribution of Facebook users (shadow) and those who view (red bar) and share (blue bar) political links in the four countries we examined. The age distribution of users and those who view links are similar, as expected. Facebook presents political links more or less proportionally. The distribution peaks at the 25–34-year-old range and gradually descends as age rises<sup>7</sup>.

The distribution of the shares of political links, however, follow a different pattern. It peaks at higher age ranges than views. In Colombia and in Chile, the peak of those who share political links is in the range of 35–44 years but in the range of 55–64 years the difference between users and those who share is the largest. In Argentina and in Brazil the peak of those who share political links is in the range of 55–64 years. Argentina represents the most extreme case with 45% of the shares concentrated among users over 55 years old, a subgroup that represents only 16% of users. Older users are not only proportionally sharing more political links; they are sharing more political links in absolute terms as well.

<sup>7</sup> In the four cases the distributions are significantly different: p-value of chi-square less than 0.001.





**Figure 5. Age distribution of Facebook users and those who share mainstream media and partisan site links in selected South American countries, 2017–2019.**

When we compare the age distribution of shares between mainstream media and partisan sites (Figure 5) we can see that the participation of older subgroups is more striking<sup>8</sup>. As age grows, the proportional interaction with partisan sites also increases, peaking at the 45–54 or the 55–64 age range and then gradually descending. In all of the four South American countries studied, people over 45 are responsible for most of the shares of partisan websites.

## Discussion

Our evidence suggests two concurring processes: first, that users are more engaged on Facebook as they get older, regardless of the type of content they engage with; second, as age increases users are more intensely engaged with political content and, especially, with partisan and more conservative content. We now explore reasons that may explain those descriptive results. We begin with two potential explanations as to why older adults share more links, whether they are political or not.

The first one is that older adults' social media connections are not only fewer (Cornwell et al. 2008), but they are also more focused on people they trust, especially family members. In fact, the

<sup>8</sup> In the four cases the distributions are significantly different: p-value of chi-square less than 0.001

main use of social media by older adults is to keep in touch with younger family members, such as their children and grandchildren (Nef et al. 2013). Younger people's connections are broader and more heterogeneous, including acquaintances from school and work colleagues. We conjecture that such diversity in their networks might act as a deterrent to sharing and commenting because a mistaken interaction could jeopardize their reputation and social approval. Older adults' smaller and more intimate network on social media, however, would encourage a much looser sharing and commenting behavior.

Our second line of explanation is that a noted difficulty among older generations in using computers attached with a lower and later use of social media (Nef et al. 2013) would make them less experienced and less proficient, with lower levels of social media literacy. We conjecture that this inexperience and inability might make them more vulnerable to the strong stimuli to interact that is built into social media platforms (Fogg and Iizawa 2008; Fogg 2009), making them more prone to share links. This could also explain why old adults tend to more often be "super sharers" on Twitter (Grinberg et al. 2016).

To explain why older adults share more links from partisan websites on Facebook, we think that older adults might simply be more engaged in traditional political activities as can be seen in the age patterns in voting, party identification, and newspaper consumption. Research has consistently shown over the years that in most countries, voter turnout increases with age until physical debilities reduce participation (Goerres 2007). Party identification has also been found to increase with age (Shively 1979). Newspaper consumption has been linked to advanced age with older adults reading newspapers much more frequently (Lauf 2001), even in digital format (Thurman and Fletcher 2019). To validate this explanation, we used data from the 2018 and 2019 rounds of the Americas Barometer from the Latin American Public Opinion Project. We identified similar age patterns for voter turnout (Table 3) and newspaper consumption (Table 4) in the four South American countries we studied. Although older adults tend to be more engaged in traditional political activities, younger people tend to be more often involved in non-institutional forms of political participation, such as protests (Melo and Stockemer 2014). We also found an age pattern in protesting in the countries we studied (Table 5).

**Table 3. Ballot turn out in selected South American countries.**

Age	Argentina	Brazil	Chile	Colombia
18 - 24	65%	68%	31%	50%
25 - 34	90%	80%	56%	68%
35 - 44	92%	86%	55%	65%
45 - 54	93%	82%	64%	70%
55 - 64	92%	88%	73%	80%
65 - 90	79%	68%	79%	80%

*Note.* Source: LAPOP 2018.

**Table 4. People following news daily in selected South American countries.**

Age	Argentina	Brazil	Chile	Colombia
18 - 24	48%	54%	52%	38%
25 - 34	56%	72%	55%	56%
35 - 44	62%	73%	68%	55%
45 - 54	73%	74%	67%	61%
55 - 64	77%	74%	72%	68%
65 - 90	80%	71%	77%	73%

*Note.* Source: LAPOP 2018.

**Table 5. Participation in demonstrations in selected South American countries.**

Age	Argentina	Brazil	Chile	Colombia
18 - 24	15%	10%	17%	19%
25 - 34	18%	15%	15%	12%
35 - 44	13%	10%	9%	10%
45 - 54	13%	11%	5%	6%
55 - 64	11%	6%	6%	10%
65 - 90	9%	5%	2%	5%

*Note.* Source: LAPOP 2018.

Finally, to elucidate why partisan content from right-leaning websites is shared more often by older users, we present two complementary explanations. The first one is that people become more conservative with age. Older adults are less flexible to new stimuli and are therefore less inclined to attitudinal change (Carlsson and Karlsson 1970). Moreover, those who do shift political attitudes across their lifespan tend to grow more conservative (Peterson et al. 2020). The second explanation is generational. The advance of liberal social values, especially among younger generations, seems to have aroused resentment among portions of the older generations, making them more intensely conservative. This produced a distinctive age pattern in which older adults are more often conservative in different countries across the world (Norris and Inglehart 2019).

### Conclusion

Recent research investigating the connections between social media and politics has emphasized the use of social media as a mobilizing tool for young people to organize street protests (Castells 2015; Gerbaudo 2012). Our findings about link-sharing activity on Facebook suggest that social media is also a powerful political tool for older generations, albeit in a different manner: first, a more active use of political content on Facebook was particularly prevalent in middle-age and older generations, not in the

younger cohorts; and secondly, such use was oriented towards reinforcing, rather than challenging established political positions.

Our research suggests that more attention should be paid to the impact on older people of the stimuli to interact that are embedded in social media platforms. Behavioral experiments, for example, could investigate whether an older population give in to these stimuli more easily than younger users. Our findings also suggest a reorientation in current media literacy efforts. While media literacy projects usually target children and the young, we suggest that such efforts should also target older generations. While media literacy projects usually focus on developing receptive skills to critically analyze content, we suggest that such projects should also focus on the ethics and the responsibility of sharing content. Finally, our findings suggest future research would improve significantly if data access frameworks enable researchers to: a) track relational interactions; b) simultaneously access and triangulate data across social media platforms; and c) combine systematic data on online and offline behavior.

### References

- Alabrese E.; Becker S.; Fetzer T.; Novy D. Who voted for Brexit? Individual and regional data combined. *European Journal of Political Economy*. 2019; vol. 56, p. 132-150.
- Boxell L.; Gentzkow M.; Shapiro J. Greater Internet use is not associated with faster growth in political polarization among US demographic groups. *Proceedings of the National Academy of Sciences*. 2017; vol. 114(40), p. 10612-10617.
- Brashier N.; Schacter D. Aging in an era of fake news. *Current Directions in Psychological Science*. 2020; vol. 29(3), p. 316-323.
- Bun M.; Steinke T. Concentrated differential privacy: simplifications, extensions, and lower bounds. In: Hirt M., Smith A., editors. *Theory of Cryptography. TCC 2016. Lecture Notes in Computer Science*, vol 9985. Berlin: Springer; 2016. p. 635–658.
- Carlsson G.; Karlsson K. Age, cohorts and the generation of generations. *American Sociological Review*. 1970; vol. 35(4), p. 710–718.
- Castells M. *Networks of outrage and hope: social movements in the Internet age*. Chichester: Wiley; 2015.
- Cornwell B.; Laumann E.; Schumm L. The social connectedness of older adults: a national profile. *American Sociological Review*. 2008; vol. 73(2), p. 185-203.
- Dwork C. Differential privacy: a survey of results. In: Agrawal M, Du D, Duan Z, Li A, editors. *Theory and Applications of Models of Computation. TAMC 2008. Lecture Notes in Computer Science*, vol 4978. Berlin: Springer; 2008. p. 1-19.
- Fogg B.; Iizawa D. Online persuasion in Facebook and Mixi: a cross-cultural comparison. International conference on persuasive technology In: Oinas-Kukkonen H., Hasle P, Harjumaa M, Segerståhl K.; Øhrstrøm P.; editors. *Persuasive Technology. PERSUASIVE 2008. Lecture Notes in Computer Science*, vol 5033. Berlin: Springer; 2008. p. 35–46.
- Fogg B. A behavior model for persuasive design. *Proceedings of the 4th international Conference on*

- Persuasive Technology. Article 40. 2009. p. 1–7.
- Gerbaudo P. *Tweets and the streets: social media and contemporary activism*. London: Pluto; 2012.
- Grinberg N.; Joseph K.; Friedland L.; Swire-Thompson B.; Lazer D. Fake news on Twitter during the 2016 U.S. presidential election. *Science*. 2019; vol. 363(25), p. 374-378.
- Goerres A. Why are older people more likely to vote? The impact of ageing on electoral turnout in Europe. *The British Journal of Politics and International Relations*. 2007; vol. 9(1) p. 90-121.
- Guess A.; Nagler J.; Tucker J. Less than you think: Prevalence and predictors of fake news dissemination on Facebook. *Science Advances*. 2019; vol. 5(1).
- Lauf E. Research note: the vanishing young reader: sociodemographic determinants of newspaper use as a source of political information in Europe, 1980-98. *European Journal of Communication*. 2001; vol. 16(2) p. 233-243.
- Melo D.; Stockemer D. Age and political participation in Germany, France and the UK: A comparative analysis. *Comparative European Politics*. 2014; vol. 12, p. 33-53.
- Messing S.; DeGregorio C.; Hillenbrand B.; King G.; Mahanti S.; Mukerjee Z.; Nayak C.; Persily N.; State B.; Wilkins A., 2020, "Facebook Privacy-Protected Full URLs Data Set", Harvard Dataverse, V8. Available from: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/TDOAPG>
- Nef T.; Ganea R.; Müri R.; Mosimann U. Social networking sites and older users – a systematic review. *International psychogeriatrics*. 2013; vol. 25(7), p. 1041-1053.
- Norris P.; Inglehart R. *Cultural backlash: Trump, Brexit, and authoritarian populism*. Cambridge: Cambridge University Press; 2019.
- Peterson J.; Smith K.; Hibbing J. Do people really become more conservative as they age? *The Journal of Politics*. 2020; vol. 82(2), p. 600-611.
- Pew Research Center. For Most Trump Voters, ‘Very Warm’ Feelings for Him Endured. The Center; 2018.
- Shively P. The relationship between age and party identification: a cohort analysis. *Political Methodology*. 1979; vol. 6(4), p. 437–446.
- Thurman N.; Fletcher R. Has digital distribution rejuvenated readership? Revisiting the age demographics of newspaper consumption. *Journalism Studies*. 2019; vol. 20(4), p. 542-562

## Appendix

### *Full tables for the 4 South American countries*

**Table A1. Total and partial number of domains, URLs, views, shares, links and comments for Argentina**

category			domains	URLs	views (millions)	shares (thousands)	clicks (thousands)	likes (thousands)	comments (thousands)
Political	National	Right-leaning Partisan	3	3.086	205 ( $\pm 0$ )	4.436 ( $\pm 1$ )	9.822 ( $\pm 2$ )	3.532 ( $\pm 1$ )	1.497 ( $\pm 1$ )
		Left-leaning Partisan	44	161.099	15.537 ( $\pm 1$ )	145.633 ( $\pm 6$ )	851.083 ( $\pm 16$ )	145.633 ( $\pm 9$ )	54.362 ( $\pm 4$ )
		Legacy / Digital Media	43	205.504	54.314 ( $\pm 1$ )	221.292 ( $\pm 6$ )	3.183.036 ( $\pm 18$ )	608.055 ( $\pm 10$ )	160.146 ( $\pm 5$ )
	Total (National)		106	383.571	70.994 ( $\pm 1$ )	382.135 ( $\pm 9$ )	4.077.487 ( $\pm 25$ )	857.249 ( $\pm 14$ )	219.017 ( $\pm 6$ )
	Regional / Local		139	219.238	25.671 ( $\pm 1$ )	176.376 ( $\pm 7$ )	1.495.664 ( $\pm 19$ )	356.616 ( $\pm 10$ )	73.050 ( $\pm 5$ )
	Specialized Media		14	14.529	1.023 ( $\pm 0$ )	11.250 ( $\pm 2$ )	38.627 ( $\pm 5$ )	18.349 ( $\pm 3$ )	3.207 ( $\pm 1$ )
Total (Political)			245	602.809	96.664 ( $\pm 2$ )	558.510 ( $\pm 11$ )	5.573.151 ( $\pm 31$ )	1.213.865 ( $\pm 17$ )	292.067 ( $\pm 8$ )
Non-political			703	226.352	28.844 ( $\pm 1$ )	185.390 ( $\pm 7$ )	1.710.203 ( $\pm 19$ )	413.130 ( $\pm 10$ )	75.357 ( $\pm 5$ )
Other Platforms			101	187.989	9.076 ( $\pm 1$ )	113.291 ( $\pm 6$ )	200.926 ( $\pm 17$ )	191.916 ( $\pm 10$ )	35.678 ( $\pm 4$ )
Total			1049	1.017.150	134.585 ( $\pm 2$ )	857.192 ( $\pm 14$ )	7.484.279 ( $\pm 40$ )	1.818.911 ( $\pm 22$ )	403.102 ( $\pm 10$ )

**Table A2. Total and partial number of domains, URLs, views, shares, links and comments for Brazil**

category			domains	URLs	views (millions)	shares (thousands)	clicks (thousands)	likes (thousands)	comments (thousands)
Political	National	Right-leaning Partisan	93	226.412	33.567 (±1)	529.880 (±7)	1.584.376 (±19)	1.430.043 (±10)	328.123 (±5)
		Left-leaning Partisan	85	342.274	28.134 (±1)	433.937 (±8)	988.539 (±23)	977.807 (±13)	196.403 (±6)
		Legacy / Digital Media	72	404.759	143.361 (±1)	811.972 (±9)	4.940.521 (±25)	3.020.405 (±14)	597.807 (±6)
		Total (National)	262	995.121	211.847 (±2)	1.816.688 (±14)	7.757.353 (±40)	5.568.964 (±22)	1.143.106 (±10)
	Regional / Local	284	381.907	62.664 (±1)	345.775 (±9)	2.912.685 (±25)	1.393.622 (±14)	268.637 (±6)	
	Specialized Media	81	64.278	12.184 (±1)	91.475 (±4)	387.004 (±10)	338.014 (±6)	47.808 (±3)	
	Total (Political)	627	1.441.306	286.694 (±3)	2.253.937 (±17)	11.057.041 (±48)	7.300.601 (±26)	1.459.551 (±12)	
Non-political			2600	1.503.229	587.284 (±3)	2.791.886 (±17)	25.697.102 (±49)	11.484.672 (±27)	1.717.936 (±12)
Other Platforms			135	906.987	98.731 (±2)	1.069.208 (±13)	1.722.844 (±38)	1.566.501 (±21)	368.636 (±10)
Total			3362	3.851.522	972.709 (±4)	6.115.031 (±27)	38.476.987 (±79)	20.351.775 (±43)	3.546.123 (±20)

**Table A3. Total and partial number of domains, URLs, views, shares, links and comments for Chile**

category		domains	URLs	views (millions)	shares (thousands)	clicks (thousands)	likes (thousands)	comments (thousands)	
Political	National	Right-leaning Partisan	7	4.623	468 (±0)	3.575 (±1)	35.464 (±1)	7.458 (±1)	3.174 (±1)
		Left-leaning Partisan	25	35.294	3.722 (±0)	44.323 (±3)	233.519 (±8)	48.722 (±4)	16.094 (±2)
		Legacy / Digital Media	31	104.267	29.171 (±1)	100.540 (±5)	1.919.817 (±13)	258.453 (±7)	74.749 (±3)
		Total (National)	67	145.542	33.451 (±1)	149.288 (±5)	2.192.878 (±15)	315.716 (±8)	94.316 (±4)
		Regional / Local	26	10.783	1.108 (±0)	6.600 (±1)	74.639 (±2)	12.182 (±2)	3.121 (±1)
		Specialized Media	1	384	54 (±0)	391 (±0)	205 (±1)	583 (±0)	176 (±0)
		Total (Political)	93	156.325	34.560 (±1)	155.888 (±6)	2.2675.18 (±16)	327.897 (±9)	97.437 (±4)
Non-political		121	62.812	10.840 (±1)	48.997 (±4)	665.325 (±10)	108.117 (±6)	28.603 (±3)	
Other Platforms		54	49.194	3.427 (±0)	39.949 (±3)	81.626 (±9)	58.642 (±5)	14.439 (±2)	
Total		268	268.331	48.826 (±1)	244.834 (±7)	3.014.469 (±21)	494.656 (±11)	140.479 (±5)	



**Table A4. Total and partial number of domains, URLs, views, shares, links and comments for Colombia**

category		domains	URLs	views (millions)	shares (thousands)	clicks (thousands)	likes (thousands)	comments (thousands)	
Political	National	Right-leaning Partisan	10	5.067	212(±0)	3.276(±1)	13.285(±3)	3.340(±2)	1.303(±1)
		Left-leaning Partisan	3	1.592	119(±0)	1.373(±1)	2.478(±2)	1.249(±1)	169(±0)
		Legacy / Digital Media	42	169.121	54.945(±1)	227.172(±6)	2.502.507(±16)	460.879(±9)	98.051(±4)
		Total (National)	57	180.621	55.456(±1)	234.671(±6)	2.525.244(±17)	468.698(±9)	100.513(±4)
		Regional / Local	55	63.607	10.524(±1)	49.282(±4)	596.077(±10)	96.749(±6)	19.172(±3)
		Specialized Media	19	17.761	2.614(±0)	16.572(±2)	86.129(±5)	23.181(±3)	2.894(±1)
		Total (Political)	142	285.003	76.019(±1)	340.520(±7)	3.768.913(±21)	658.296(±12)	139.777(±5)
Non-political		290	108.798	19.396(±1)	88.709(±5)	1.232.868(±13)	176.373(±7)	28.003(±3)	
Other Platforms		86	118.928	6.471(±1)	67.962(±5)	139.086(±14)	83.049(±8)	13.165(±3)	
Total		518	512.729	101.885(±2)	497.191(±10)	5.140.867(±29)	917.718(±16)	180.945(±7)	

## *Differential privacy*

Differential privacy ensures that it is impossible to determine with a significant probability whether information about a specific action (like, sharing, commenting, view, and click) is present in the original database, even considering access to other unrelated databases (Dwork 2008). The precise meaning of "significant probability" in the previous statement is given by two parameters and established by the database holder. Differential privacy was achieved by a mechanism that aggregates action data at each URL and inserts a Gaussian noise. The noise produces a margin of error in the measurements.

For each domain of interest the sum of the metrics for each action  $m$  was calculated. These values are protected by the differential privacy mechanism. The observable quantity  $X_m$  presented in the database was produced from a real value by introducing a Gaussian noise with zero mean and variance  $\sigma_m^2$ . For each action,  $\sigma_m$  was calculated in order to guarantee differential privacy at the user level with parameters  $\epsilon=0.45$  and  $\delta=10^{-5}$  ( $\sigma_{view}=2228$ ,  $\sigma_{click}=40$ ,  $\sigma_{share}=14$ ,  $\sigma_{like}=42$  and  $\sigma_{comment}=10$ ). The probability of summing the values of a metric for  $n$  distinct URLs given the observable variables is described by a Gaussian curve (Messing et al. 2020):

$$P(Y_m \in X_m \pm \sigma_m) = G \cdot \sigma_m$$

Thus, the expected value of the sum is  $Y_m = \sum_{j=1}^n X_m^j$  and its standard deviation is  $\sigma_{Y_m} = \sqrt{\sigma_m}$ . The expected values of  $Y_m$ , as well as the margin of error  $\sigma_{Y_m}$ .

### *Median age of shares and views across 46 countries*

**Table A5. Median age of shares and views from 46 countries.**

Country	Median age of shares	Median age of views	Difference	$\chi^2$ p-value
Hong Kong	38	35	+3	< 0.001
Germany	49	38	+11	< 0.001
Netherlands	51	38	+13	< 0.001

Zimbabwe	36	41	-5	*
Cyprus	42	36	+6	< 0.001
Mexico	39	33	+6	< 0.001
Austria	49	37	+12	< 0.001
Taiwan	41	37	+4	< 0.001
Brazil	47	36	+11	< 0.001
Great Britain	48	38	+10	< 0.001
Czech Republic	44	36	+8	< 0.001
Denmark	53	40	+13	< 0.001
Estonia	48	38	+10	< 0.001
Israel	51	38	+13	< 0.001
Sierra Leone	20	26	-6	*
Switzerland	49	39	+10	< 0.001
Portugal	50	41	+9	< 0.001
France	50	38	+12	< 0.001
Malta	46	37	+9	*
Slovenia	42	37	+5	< 0.001
Italy	50	43	+7	< 0.001
Spain	49	42	+7	< 0.001
Greece	46	39	+7	< 0.001
Bulgaria	48	41	+7	< 0.001
Argentina	47	38	+9	< 0.001
Finland	49	40	+9	< 0.001
Syria	42	36	+6	< 0.001
Luxemburg	45	39	+6	< 0.001
Poland	46	36	+10	< 0.001
Chile	42	36	+6	< 0.001
Australia	51	38	+13	< 0.001
Romania	49	40	+9	< 0.001
Canada	51	41	+10	< 0.001
Lithuania	47	38	+9	< 0.001