

Pablo Barberá

CONTACT INFORMATION	Dept. of Political Science and International Relations University of Southern California 3518 Trousdale Parkway, VKC 330 Los Angeles, CA 90089	pbarbera@usc.edu  www.pablobarbera.com  @p_barbera  github.com/pablobarbera 
PROFESSIONAL APPOINTMENTS	Facebook Research Scientist, Core Data Science, 2019– University of Southern California Assistant Professor, Dept. of Political Science and International Relations, 2016– Principal Investigator, Networked Democracy Lab (netdem.org) London School of Economics and Political Science Visiting Fellow, Department of Methodology, 2019– Assistant Professor of Computational Social Science, Department of Methodology, 2018–2019 New York University Moore-Sloan Fellow, Center for Data Science, 2015–2016	
EDUCATION	New York University Ph.D. in Political Science, May 2015 * Committee: Jonathan Nagler, Joshua A. Tucker, Patrick Egan, Neal Beck, Richard Bonneau * Lab: Social Media and Political Participation (SMaPP) laboratory European University Institute Master of Research in Political Science, 2010 Pompeu Fabra University M.A. in Political and Social Sciences, 2009 B.A. in Political Science and Administration (with highest honors), 2008	
RESEARCH INTERESTS	<i>Methodological:</i> Computational Social Science, Social Network Analysis, Text as Data Methods, Bayesian Data Analysis, Ideal Point Estimation. <i>Substantive:</i> Social Media and Elections, Comparative Electoral Behavior, Political Corruption and Accountability.	
PEER-REVIEWED PUBLICATIONS	<ol style="list-style-type: none">17. Barberá, P., Casas, A., Nagler, J., Egan, P., Bonneau, R., Jost, J. & Tucker, J. “Who Leads? Who Follows? Measuring Issue Attention and Agenda Setting by Legislators and the Mass Public Using Social Media Data”, <i>American Political Science Review</i>, 2019, 113(4): 883-901.16. Jost, J. T., Barberá, P., Bonneau, R., Langer, M., Metzger, M., Nagler, J., Sterling, J. & Tucker, J. A. “How Social Media Facilitates Political Protest: Information, Motivation, and Social Networks”, <i>Political Psychology</i>, 2018, 39(S1), 85-118.15. Barberá, P. & Zeitzoff, T. “The New Public Address System: Why Do World Leaders Adopt Social Media?”, <i>International Studies Quarterly</i>, 2018, 62 (1): 121–130.14. Bauer, P., Barberá, P., Ackerman, K. & Venetz, A. “Is the Left-Right Scale a Valid Measure of Ideology? Investigating the Meaning of ‘Left’ and ‘Right’ and Its Impact on Measurement”, <i>Political Behavior</i>, 2017, 39 (3): 553-583.13. Riera, P., Gómez, R., Mayoral, J.A. Barberá, P. & Montero, J.R. “Local Elections in Spain: The Personalization of Voting Behavior”, <i>Revista Internacional de Sociología</i>, 2017, 75 (2): e062. <p style="text-align: center;">* 2017 Best Article Award, given by the Editorial Board of the journal.</p>	

12. Theocharis, Y., **Barberá, P.**, Popa, S., Fazekas, Z. & Parnet, O. “[A Bad Workman Blames His Tweets. The Consequences of Citizens’ Uncivil Twitter Use when Interacting with Party Candidates](#)”, *Journal of Communication*, 2016, 66 (6): 1007-1031.

* 2016 [Best Information Technology & Politics Conference Paper Award](#)
11. Vaccari, C., Valeriani, A., **Barberá, P.**, Bonneau, R., Jost, J., Nagler, J., Tucker, J. “[Of echo chambers and contrarian clubs: Exposure to political disagreement among German and Italian users of Twitter](#)”, *Social Media + Society*, 2016, 2 (3): 1–24.
10. Riera, P., Gómez, R., **Barberá, P.**, Mayoral, J.A. & Montero, J.R. “[Local Elections in Spain: A Multilevel Analysis of the Individual and Contextual Determinants of Voting](#)”, *Revista de Estudios Políticos*, 2016, 172, 47–82.
9. Fernández-Vázquez, P., **Barberá, P.** & Rivero, G. “[Rooting out corruption or rooting for corruption? The Heterogenous Electoral Consequences of Scandals](#)”, *Political Science Research and Methods*, 2016, 4 (2), 379–397.
8. **Barberá, P.**, Jost, J., Nagler, J., Tucker, J. & Bonneau, R. “[Tweeting from Left to Right: Is Online Political Communication More Than an Echo Chamber?](#)”, *Psychological Science*, 2015, 26 (10), 1531–1542.
7. **Barberá, P.** “[Birds of the Same Feather Tweet Together. Bayesian Ideal Point Estimation Using Twitter Data](#)”. *Political Analysis*, 2015, 23 (1), 76–91.

* 2015 [Editors’ Choice article Award](#) for an article published in *Political Analysis* that represents a “especially significant contribution to political methodology.”
* 2016 [Best Information Technology & Politics Article Award](#), given for the best published article about information technology and politics in 2015.
* 2016 [Warren Miller Article Award](#), given by the Society of Political Methodology for the best article published in *Political Analysis* in 2015.
* Featured in *Political Analysis* virtual issue on [Innovative Methods in Online Research](#)
6. **Barberá, P.**, Wang, N., Bonneau, R., Jost, J., Nagler, J., Tucker, J. & González-Bailón, S. “[The Critical Periphery in the Growth of Social Protests](#)”, *PLOS ONE*, 2015, 10 (11).
5. Vaccari, C., Valeriani, A., **Barberá, P.**, Bonneau, R., Jost, J., Nagler, J., Tucker, J. “[Political Expression and Action on Social Media: Exploring the Relationship Between Lower- and Higher-Threshold Political Activities Among Twitter Users in Italy](#)”, *Journal of Computer-Mediated Communication*, 2015, 20 (2), 221–239.
4. **Barberá, P.** & Rivero, G. “[Understanding the Political Representativeness of Twitter Users](#)”, *Social Science Computer Review*, 2015, 33 (6), 721-729.
3. Vaccari, C., Valeriani, A., **Barberá, P.**, Bonneau, R., Jost, J., Nagler, J., Tucker, J. “[Social Media and Political Communication. A survey of Twitter users during the 2013 Italian general election](#)”, *Italian Political Science Review*, 2013, 43 (3), 381–410.
2. Riera, P., **Barberá, P.**, Gómez, R., Mayoral, J.A. & Montero, J.R. “[The Electoral Consequences of Corruption Scandals in Spain](#)”, *Crime, Law and Social Change*, 2013, 60 (5), 515–534.
1. **Barberá, P.** “[Voting for Parties or for Candidates? The Trade-Off Between Party and Personal Representation in Spanish Regional and Local Elections](#)”, *Revista Española de Investigaciones Sociológicas*, 2010, 132: 35–63.

BOOK
CHAPTERS

6. **Barberá, P.** “[Social Media, Echo Chambers, and Political Polarization](#)”, forthcoming. *Social Media and Democracy: The State of the Field*, edited by Nate Persily and Joshua Tucker. Cambridge University Press.
5. **Barberá, P.** & Steinert-Threlkeld, Z. “[How to Use Social Media Data for Political Science Research](#).” 2019. *Sage Handbook of Research Methods in Political Science and International Relations*, edited by Robert Franzese and Luigi Curini. Sage, forthcoming.
4. Klasnja, M., **Barberá, P.**, Beauchamp, N., Nagler, J. & Tucker, J. “[Measuring Public Opinion with Social Media Data](#).” 2018. *The Oxford Handbook of Polling and Polling Methods*, edited by M. Alvarez. Oxford University Press, pp. 555–582.
3. **Barberá, P.**, “[The Trade-Off Between Reproducibility and Privacy in the Use of Social Media Data to Study Political Behavior](#)” 2018. *The Practice of Reproducible Research*, edited by Justin Kitzes. University of California Press, pp. 103–108.
2. **Barberá, P.**, Vaccari, A. & Valeriani, A. “[Social Media, Personalisation of News Reporting, and Media Systems’ Polarisation in Europe](#)”. 2017. *Social media and European politics: Rethinking power and legitimacy in the digital era*, edited by M. Barisione and A. Michailidou. Palgrave Macmillan, pp. 25–52
1. Tucker, J., Nagler, J., Metzger, M., **Barberá, P.**, Penfold-Brown, D. & Bonneau, R. “Big Data, Social Media, and Protest: Foundations for a Research Agenda”. 2016. *Computational Social Science. Discovery and Prediction*, edited by R. Michael Alvarez. Cambridge University Press, pp. 199–204.

OTHER
PUBLICATIONS

3. **Barberá, P.** “[Explaining the Spread of Misinformation on Social Media: Evidence from the 2016 U.S. Presidential Election](#)”, *APSA Comparative Politics Newsletter*, 2018, 28 (2): 7–11.
2. Tucker, J., Guess, A., **Barberá, P.**, Vaccari, C., Siegel, A., Sanovich, S., Stukal, D. & Nyhan, B. “[Social Media, Political Polarization, and Political Disinformation: A Review of the Scientific Literature](#)”, Report prepared for the *Hewlett Foundation*, 2018.
1. Tucker, J., Theocharis, Y., Roberts, M. & **Barberá, P.** “[From Liberation to Turmoil: Social Media and Democracy](#)”, *Journal of Democracy*, 2017, 28 (4), 46–59.

PAPERS
UNDER REVIEW

Barberá, P., Boydston, A., Linn, S., Nagler, J., McMahon, R., “[Automated Text Classification of News Articles: A Practical Guide](#)”, *Conditionally Accepted at Political Analysis*.

Fazekas, Z., Popa, S., Schmitt, H., **Barberá, P.** & Theocharis, Y. “Elite-Public Interaction on Twitter: The EU Issue in the 2014 EP Campaign”, *R&R at the European Journal of Political Research*.

Siegel, A., Nikitin, E., **Barberá, P.**, Sterling, J., Pullen, B., Bonneau, R., Nagler, J. & Tucker, J. “Trumping Hate on Twitter? Online Hate Speech and White Nationalist Rhetoric in the 2016 US Election Campaign and its Aftermath”, *R&R at the Quarterly Journal of Political Science*.

Munzert, S., **Barberá, P.**, Guess, A. & Yang, J. “Do Online Voter Guides Empower Citizens? Evidence from a Field Experiment with Digital Trace Data,” *R&R at Public Opinion Quarterly*.

Barberá, P., Theocharis, Y., Popa, S., Fazekas, Z. “The Dynamics of Citizen Incivility Towards Politicians”, *R&R at Sage Open*

Barberá, P., Iakhnis, E., Gohdes, A. & Zeitzoff, T. “From Riot Police to Tweets: How World Leaders Use Social Media During Contentious Politics,” *under review*.

Timm, J. & **Barberá, P.** “Incivility Begets Incivility? Understanding the Contagion Dynamics of Uncivil Conversations on Social Media,” *under review*.

WORKING
PAPERS

Barberá, P. “How Social Media Reduces Mass Political Polarization. Evidence from Germany, Spain, and the United States.”

* 2016 Franklin L. Burdette/Pi Sigma Alpha Award for Best Paper Presented at APSA 2015.

Barberá, P. “Less is More? How Demographic Sample Weights can Improve Public Opinion Estimates Based on Twitter Data.”

Hua, W., Abou-Chadi, T. & **Barberá, P.** “Networked Populism: Characterizing the Public Rhetoric of Populist Parties in Europe.”

EXTERNAL
GRANTS

How online incivility affects the interactions between public officials and citizens on Facebook, \$35,000. Facebook Research Faculty Grant. 2018.

Paying Attention to Attention: Media Exposure and Opinion Formation in an Age of Information Overload, 736,600€. Volkswagen Foundation. Co-principal investigator, with Simon Munzert, Andrew Guess, JungHwan Yang. 2017.

Electoral Behavior in Spanish Local Elections: A Multilevel Approach, 10,000€. Spanish Center for Sociological Research (CIS). Co-principal investigator, with José Ramón Montero, Pedro Riera, Raúl Gómez, and Juan A. Mayoral. 2011.

INTERNAL
GRANTS

Center for International Studies, University of Southern California:
Faculty Research Grant, \$5,000. 2016
Research Assistantship Grant, \$22,000. 2017
Conference support, \$15,000. 2017

Dornsife College of Letters, Arts and Sciences, University of Southern California:
Student Opportunities for Academic Research Program, \$3,000. 2016–2017.
Undergraduate Research Associates Program, \$4,500. 2017–2018.

FELLOWSHIPS
AND AWARDS

Warren Miller Prize, Society for Political Methodology, 2016.

Franklin L. Burdette/Pi Sigma Alpha Award, American Political Science Association, 2016.

“La Caixa” Fellowship for Graduate Studies in the U.S., 2010-2012.

“Salvador de Madariaga” Fellowship, European University Institute, 2009-2010.

2nd National Prize to Excellence in Academic Performance, 2008.

Pompeu Fabra University graduation prize for Exceptional Achievement, 2008.

Instructor

- Fall 2017, 2019: [Computational Social Science](#) (USC POIR 613)
- Lent 2019: [Quantitative Text Analysis](#) (LSE MY 459)
- Michaelmas 2018: [Data for Data Scientists](#) (LSE MY 472, co-taught with Akitaka Matsuo)
- Lent 2018: [Quantitative Text Analysis](#) (LSE MY 459, co-taught with Ken Benoit)
- Fall 2017: International Relations – Approaches to Research (USC IR 211)
- Spring 2017: Introduction to Regression Analysis (USC POIR 611)
- Fall 2016: Introduction to Data Analysis (USC IR 312)
- Fall 2016: European Integration (USC IR 468)

Workshops & Summer Schools

- [Data Science for Decision-Making](#) (10 hours), Executive Education Course, London School of Economics (co-taught with Ken Benoit), 2018
- [Querying large-scale online datasets: SQL and Google BigQuery](#) (4 hours). London School of Economics, 2018.
- [Quantitative Text Analysis with Applications to Social Media Research](#) (20 hours) University of Vienna, 2018
- [Big Data Analysis in the Social Sciences](#) (15 hours) ECPR Summer School, Central European University (2017, 2018)
- [Automated Collection of Web and Social Data](#) (15 hours) ECPR Summer School, Central European University. (2017, 2018)
- [Automated Text Analysis with R](#) (6 hours) Quantitative Methods Working Group, European University Institute, 2016
- [Data Science and Social Science](#) (18 hours) Center for the Promotion of Research Involving Innovative Statistical Methodology (PRIISM), New York University, 2016. (Joint with Alex Hanna and Dan Cervone)
- [Social Media and Big Data Research](#) (12-15 hours)
 - Summer School in Survey Methodology, Pompeu Fabra University, 2017, 2018.
 - EITM Europe Summer Institute, 2018.
- [Collecting and Analyzing Social Media Data with R](#) (2-4 hours)
 - Georgetown University, 2015
 - University of Cologne, 2017
 - London School of Economics, 2018
- [Scraping Twitter & Web Data](#) and [Data Visualization with ggplot2](#) (4 hours) NYU Politics, 2013.

Project Advisor

- Fall 2015: [Capstone Project in Data Science](#), MS in Data Science

Member of dissertation committees: Adam Badawy (USC), Whitney Hua (USC), Fridolin Linder (Penn State), Xinru Ma (USC), Marius Sältzer (Mannheim), Philipp Kling (Konstanz), Joshua Timm (USC), Joe Hoover (USC), Nicolás Albertoni (USC).

INVITED
TALKS

2019:

- Politics Research Colloquium (University of Oxford).
- Instituto Carlos III - Juan March Permanent Seminar (Universidad Carlos III)
- Summer Institute in Computational Social Science (University of Oxford)

2018:

- Political Science Departmental Research Seminar (UCL – University College London)
- Project on Democracy and the Internet Seminar Series (Stanford University)
- Reuters Institute for the Study of Journalism (Oxford University)
- Institute of Social Sciences (University of Lisbon)
- Sage Ocean Speaker Series (Sage)
- Paul Lazarsfeld Guest Professor (University of Vienna)
- Department of Government Seminar Series (University of Essex)
- International Methods Colloquium (Wake Forest University)
- Q-Step Seminar Series (University of Exeter).

2017:

- Symposium on Computational Social Science (Chair of Systems Design, ETH Zürich)
- Center for Public Diplomacy (University of Southern California)
- Seminario sobre Política, Redes Sociales y Big Data (Universidad Central de Chile)
- Department of Methodology (London School of Economics)
- Methods Speaker Series (UCSD)
- Comparative Political Behavior Lecture Series (Humboldt University, Berlin)
- Research Seminar in American Politics (UC Berkeley)
- Lecture Series – Microfoundations of Politics (University of Cologne).

2016:

- Center for Statistics and the Social Sciences (University of Washington)
- Department of Political Science Seminar Series (University of Copenhagen)
- International Political Communication Workshop (Université Laval)
- Artificial Intelligence Seminar (Information Sciences Institute, USC).
- Social Media, Methods, and Politics Seminar (Università degli studi di Milano)

2015:

- Digital Media, Networks, and Political Communication research group (Annenberg School of Communication, UPenn)
- Microsoft Research Seminar Series (Microsoft Research, New York)

WORKSHOP
PARTICIPATION

2019: Workshop on Text Analysis for Asia and Beyond (University of Southern California), Economics of Media Bias Workshop (WZB – Berlin Social Science Center), Causes and Consequences of Populism (London School of Economics), Workshop: Center for Social Media and Politics (New York University).

2018: Social Science Foo Camp (O'Reilly and Facebook), International Workshop on Social Media and Political Participation (SMaPP Global, NYU Shanghai), Academic Workshop on Social Media and Misinformation (Facebook & Harvard University), Workshop: Is there room in National Election Studies for Big Data? (University of Manchester), Symposium: The Consequences of Misinformation (Brookings Institution and Social Science Research Council), Workshop: Political Economy in the Digital Age (Hertie School of Governance).

2017: International Workshop on Social Media and Political Participation (SMaPP Global, NYU Abu Dhabi), Workshop: Navigating bots, algorithms, echo chambers, and disinformation (U.S. State Department & Stanford University), Workshop: The Future of Humans as Sensors for Social Science Research (UCLA), International Workshop on Social Media and Political Participation (SMaPP Global, NYU), Academic Workshop on Social Media and Political Polarization (Facebook & Stanford University).

2016: International Workshop on Social Media and Political Participation (SMaPP Global), Text Analysis Conference (University of Amsterdam).

2015: Conference on Political Polarization: Media and Communication Influences (Princeton University, CSDP), Big Data and Political Science Conference (University of Mannheim), Workshop on Online Politics (University College Dublin), International Workshop on Social Media and Political Participation (SMaPP Global)

CONFERENCE PRESENTATIONS

2018: EPSA, MPSA; 2017: APSA, EPSA, ISA, MPSA; 2016: APSA, EPSA, PolMeth, ISA, MPSA; 2015: APSA, EPSA, PolMeth, MPSA

UNIVERSITY SERVICE

Admin:

- Methods Field co-developer, POIR PhD program, USC 2016–2017.
- Methods Field advisor, POIR PhD program, USC 2016–present.
- Programme Director, MSc in Applied Social Data Science, LSE 2018–2019.

Organizer:

- Networked Democracy Lab Speaker Series (USC, Fall & Spring 2017).
- Workshop on Media Exposure and Opinion Formation (USC, Fall 2017).
- Social Data Science Professionalization Seminar (LSE, 2018).

PROFESSIONAL SERVICE

Journal editor: SAGE Open, [special issue on "Social Media and Politics"](#).

Referee: over 85 reviews for more than 40 different journals or conferences, including American Political Science Review, Proceedings of the National Academy of Sciences, American Journal of Political Science, The Journal of Politics, Political Analysis, British Journal of Political Science, Political Communication, Journal of Communication, ICWSM, WWW, Oxford University Press, Austrian Science Fund. For full list, [see my Publons profile](#).

Conferences: chair (EPSA 2013, 2014, 2016, 2017, 2018; MPSA 2016, 2017, 2018; APSA 2017), discussant (EPSA 2014, 2015; APSA 2015, 2017; MPSA 2016, 2017, 2018).

Service in Conference Program Committees: European Political Science Association Conference (2014), SocInfo: Social Informatics (2016), ICWSM: International Conference on Weblogs and Social Media (2017), IC2S2: International Conference on Computational Social Science (2017, 2019), General Online Research Conference (2018), International World Wide Web Conference – WWW (2018, 2019), ACM Web Science Conference (2019).

Service in Award Committees: chair of APSA Political Networks section Political Ties award committee (2016), chair of APSA Information Technology and Politics section best paper award committee (2017), member of Miller Prize Award committee (2017, 2018), member of ICA Computational Methods interest group best paper award committee (2018), member of APSA Information Technology and Politics section best conference paper award committee (2018), member of PolMeth best poster award committee (2019).

SOFTWARE

[streamR](#): Access to Twitter Streaming API via R. Available on CRAN. 113K total downloads.

[Rfacebook](#): Access to Facebook API via R. Available on CRAN. 137K total downloads.

[instaR](#): Access to Instagram API via R. Available on CRAN. 26K total downloads.

[tweetscores](#): R tools for analysis of Twitter data. Includes functions to estimate ideology of Twitter users.

PROFESSIONAL MEMBERSHIPS

Member: American Political Science Association (Political Methodology, Political Networks, and Information Technology & Politics sections), European Political Science Association.

WRITINGS IN POPULAR MEDIA

[“This explains how social media can both weaken – and strengthen – democracy,”](#) with Joshua Tucker, Yannis Theocharis, and Margaret E. Roberts. Published in The Monkey Cage / Washington Post, 2017.

[“Twitter trolls are actually hurting democracy,”](#) with Yannis Theocharis, Zoltan Fazekas, and Sebastian Popa. Published in The Monkey Cage / Washington Post, 2016.

[“Why everyone in a network is important for movements – even the Slacktivists!”](#) with Sandra González-Bailón. Published in The Monkey Cage / Washington Post, 2015.

[“Who is the most conservative Republican candidate for president?,”](#) Published in The Monkey Cage / Washington Post, 2015.

[“Political discussions on Twitter during elections are dominated by those with extreme views,”](#) with Gonzalo Rivero. European Politics and Policy (EUROPP) Blog, London School of Economics.

[“Tweeting the Revolution: Social Media Use and the #Euromaidan Protests,”](#) with Megan Metzger. Published on The Huffington Post, 2014.

[“How Ukrainian protestors are using Twitter and Facebook,”](#) with Megan Metzger. Published in The Monkey Cage / Washington Post, 2014.

[“A Breakout Role for Twitter? The Role of Social Media in the Turkish Protests,”](#) with Megan Metzger. Published in The Monkey Cage / Washington Post, 2013.

[“The Dynamics of Information Diffusion in the Turkish Protests,”](#) with Sandra González-Bailón. Published in The Monkey Cage / Washington Post, 2013.

[tuitometro.es](#), Real-time tracking of the Spanish 2011 legislative election in Twitter using automated sentiment analysis, with Gonzalo Rivero (NYU). Featured in the major Spanish newspapers.

MENTIONS IN MEDIA OUTLETS

The Atlantic, [“The Problem Isn’t Twitter. It’s That You Care About Twitter,”](#) April 29, 2019.

El País, [“¿Engañan las noticias falsas sobre todo a los más mayores?,”](#) Jan 9, 2019.

C-SPAN, [“Social Media and False Information Panel, Brookings Institution,”](#) May 31, 2018.

Vox, [“Fake news aside, Facebook can help puncture our political bubbles,”](#) Dec 28, 2016.

El País, “[Así influye Facebook en tus opiniones. Las noticias falsas circulan más rápido en cámaras de eco](#),” Nov 27, 2016.

Los Angeles Times, “[Trump’s Twitterfests are meant to further the culture wars that helped win him the presidency](#),” Nov 22, 2016.

The Economist, “[A new kind of weather](#),” Mar 26, 2016.

WIRED, “[Social media is making the debate on guns – and Trump – worse](#),” Dec 16, 2015.

Quartz, “[Slacktivism is having a powerful real-world impact, new research shows](#),” Dec 10, 2015

Vox, “[Changing your Facebook profile picture is doing more good than you might think](#),” Dec 8, 2015

Pacific Standard, “[The Upside of Slacktivism](#),” Dec 3, 2015

New York Times, “[Social Media Deepens Partisan Divides. But Not Always.](#),” Nov 20, 2014.

New York Times, “[Americans Don’t Live in Information Cocoons](#),” Oct 24, 2014

Wall Street Journal, “[Study: Social Media Can Moderate Users’ Politics](#),” Oct 21, 2014

Nieman Lab, “[This study finds that social media use reduces political polarization instead of increasing it](#),” October 20, 2014

The Atlantic, “[These Charts Show How Crucial Twitter Is for the Turkey Protesters](#),” Jun 12, 2013.

Foreign Policy, “[Is Facebook a town square or a shopping mall?](#),” June 3, 2014.

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