

The Dynamics of Peer-Produced Political Information During the 2016 U.S. Presidential Campaign

Brian C. Keegan, Ph.D.

Department of Information Science, University of Colorado Boulder
Wikimedia Research Showcase, December 2019

* This is not a paper about election prediction

Don't Like Palin's Wikipedia Story? Change It

By NOAM COHEN AUG. 31, 2008

ELECTION 2008

Palin's Wikipedia Entry Gets Overhaul

August 29, 2008 · 4:00 PM ET

Heard on [All Things Considered](#)

Politics

Fight brews over Sarah Palin on Paul Revere Wikipedia page

POLITICS

The Wikipedia War of Paul Revere and Sarah Palin

Palin fans attempt to undermine encyclopedia entries (again). Editors upset (again)

ADAM CLARK ESTES JUNE 6, 2011

Harsh truths about fake news for Facebook, Google and Twitter

Digital platforms are urged to take responsibility

How Pro-Trump Twitter Bots Spread Fake News

Heinrich hashtags like #CrookedHillary and #TrumpTrain, automated networks of social-media bots spread information throughout the 2016 campaign, with

TECHNOLOGY 17 NOVEMBER 2016

Did fake news on Facebook swing the US election?

Facebook's failure: did fake news and polarized politics get Trump elected?

Facebook's fake news problem, explained

The Hoaxes, Fake News and Misinformation We Saw on Election Day

By KATIE ROGERS and JONAH ENGEL BROMWICH NOV. 8, 2016





RQ1: How does Wikipedia's production and consumption of political information vary during campaigns?

RQ2: Who are the Wikipedia editors revising information about candidates during campaigns?

Hillary Clinton



From Wikipedia, the free encyclopedia

Hillary Diane Rodham Clinton^[2] (born **Hillary Diane Rodham**; October 26, 1947) is an American politician, diplomat, [lawyer](#), writer and [public speaker](#). She was [First Lady of the United States](#) from 1993 to 2001, a [United States senator](#) from [New York](#) from 2001 to 2009, and the [67th United States secretary of state](#) from 2009 until 2013. Clinton became the first woman to be nominated for [president of the United States](#) by a major political party when she won the [Democratic Party](#) nomination in [2016](#). She was the first woman to win the popular vote in an American presidential election.

Raised in the Chicago suburb of [Park Ridge](#), Clinton graduated from [Wellesley College](#) in 1969 and earned a [Juris Doctor](#) from [Yale Law School](#) in 1973. After serving as a [congressional](#) legal counsel, she moved to [Arkansas](#) and married future president [Bill Clinton](#) in 1975; the two had met at Yale. In 1977, she co-founded [Arkansas Advocates for Children and Families](#). She was appointed the first female chair of the [Legal Services Corporation](#) in 1978 and became the first female partner at [Little Rock's Rose Law Firm](#) the following year. Clinton was the first lady of Arkansas from 1979 to 1981 and again from 1983 to 1992.

Hillary Clinton



67th United States Secretary of State

In office

January 21, 2009 – February 1, 2013

President [Barack Obama](#)

Deputy [John Negroponte](#)
[James Steinberg](#)
[William Joseph Burns](#)

Preceded by [Condoleezza Rice](#)

Succeeded by [John Kerry](#)

Category:Hillary Clinton



From Wikipedia, the free encyclopedia



This is a **topic category** for the topic [Hillary Clinton](#).



Wikimedia Commons has media related to [Hillary Rodham Clinton](#).



Wikisource has original text related to this article:
[Author:Hillary Clinton](#)

Contents

[Top](#) · [0–9](#) · [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Subcategories

This category has the following 8 subcategories, out of 8 total.

B

► [Books by Hillary Clinton](#) (8 P, 3 F)

C

► [Hillary Clinton controversies](#) (1 C, 22 P)
► [Cultural depictions of Hillary Clinton](#) (33 P)

P

► [Hillary Clinton 2008 presidential campaign](#) (17 P, 1 F)

► [Hillary Clinton 2016 presidential campaign](#) (44 P)

S

► [Speeches by Hillary Clinton](#) (3 P)

W

► [Works about Hillary Clinton](#) (1 C, 8 P)

I

► [Images of Hillary Clinton](#) (1 P, 4 F)

Pages in category "Hillary Clinton"

The following 65 pages are in this category, out of 65 total. This list may not reflect recent changes ([learn more](#)).

- *
 - [Hillary Clinton](#)
 - [List of Hillary Clinton 2016 presidential campaign non-political endorsements](#)
 - [List of Hillary Clinton 2016 presidential campaign political](#)

Donald Trump

From Wikipedia, the free encyclopedia

For other uses, see [Donald Trump \(disambiguation\)](#).

Donald John Trump (born June 14, 1946) is the **45th** and current **president of the United States**. Before entering politics, he was a businessman and television personality.

Trump was born and raised in the New York City borough of [Queens](#), and received a [B.S.](#) degree in economics from the [Wharton School](#) at the [University of Pennsylvania](#). He took charge of his family's real-estate business in 1971, renamed it [The Trump Organization](#), and expanded its operations from Queens and [Brooklyn](#) into [Manhattan](#). The company built or renovated skyscrapers, hotels, casinos, and golf courses. Trump later started [various side ventures](#), mostly by licensing his name. He owned the [Miss Universe](#) and [Miss USA](#) beauty pageants from 1996 to 2015, and produced and hosted *[The Apprentice](#)*, a [reality television](#) show, from 2003 to 2015. *[Forbes](#)* estimates his net worth to be \$3.1 billion.^[a]

Donald Trump



Trump in 2017

45th President of the United States

Incumbent

Assumed office
January 20, 2017

Vice President [Mike Pence](#)

Category:Donald Trump

From Wikipedia, the free encyclopedia



This is a **topic category** for the topic [Donald Trump](#).

See also the preceding *[Category:Barack Obama](#)*.



Wikimedia Commons has media related to [Donald Trump](#).



Wikisource has original text related to this article:
Author:Donald Trump



[United States portal](#)



[Politics portal](#)

Subcategories

This category has the following 11 subcategories, out of 11 total.

B

- [Books by Donald Trump](#) (15 P)
- [Business career of Donald Trump](#) (2 C, 11 P)

C

- [Donald Trump controversies](#) (4 C, 23 P)
- [Criticism of Donald Trump](#) (2 C, 18 P)

D

- [Donald Trump interviews](#) (1 P)

L

- [Donald Trump-related lists](#) (28 P)

P

- [Political career of Donald Trump](#) (3 C, 9 P)
- [Donald Trump in popular culture](#) (2 C, 13 P, 2 F)

S

- [Donald Trump and social media](#) (16 P)

T

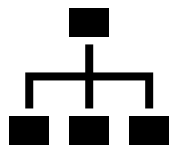
- [Donald Trump-related templates](#) (21 P)

W

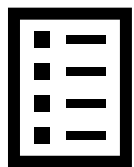
- [Works about Donald Trump](#) (3 C, 10 P)

Pages in category "Donald Trump"

The following 42 pages are in this category, out of 42 total. This list may not reflect recent changes ([learn more](#)).



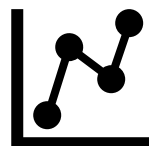
Retrieved 1,336 articles for Clinton, 949 for Trump, by category



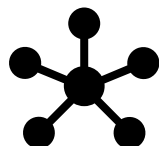
Complete revision histories: 375k for Clinton and 366k for Trump



Focus on activity between January 2015 through November 2017



Article pageviews available from July 2015, including redirects



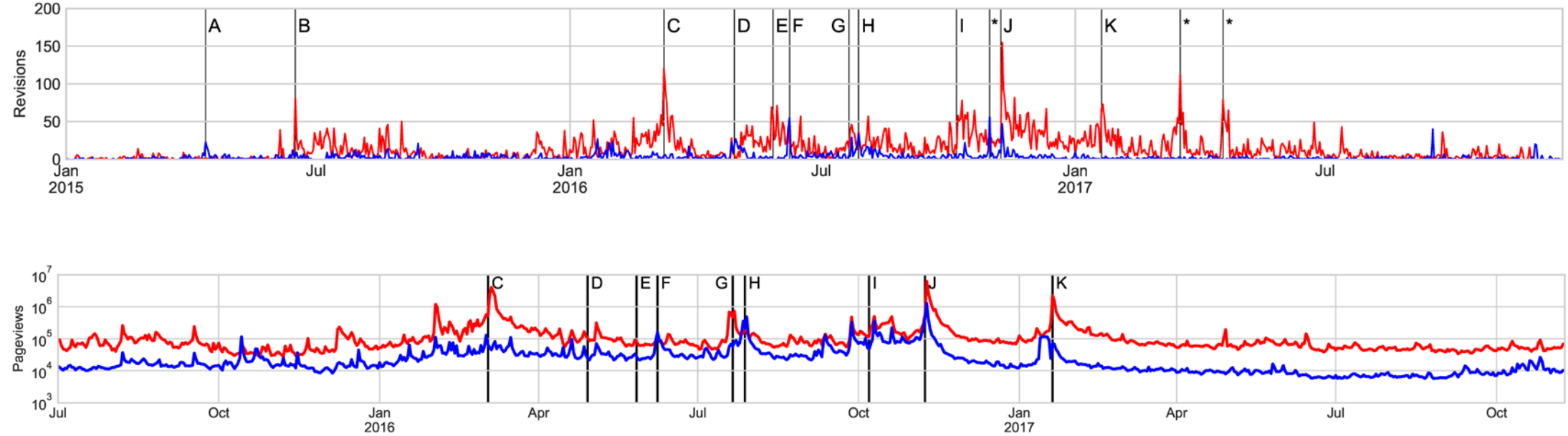
User contribution histories for 2,211 editors, Jan '14-Nov '17

<i>Label</i>	<i>Description</i>	<i>Date</i>
A	Clinton announces candidacy	12 April 2015
B	Trump announces candidacy	16 June 2015
C	Super Tuesday primary elections	3 March 2016
D	“Acela” primary elections	29 April 2016
E	Trump secures nomination	27 May 2016
F	Clinton secures nomination	8 June 2016
G	Republican National Convention	11 July 2016
H	Democratic National Convention	28 July 2016
I	Access Hollywood controversy	7 October 2016
J	Election day	8 November 2016
K	Inauguration	20 January 2017

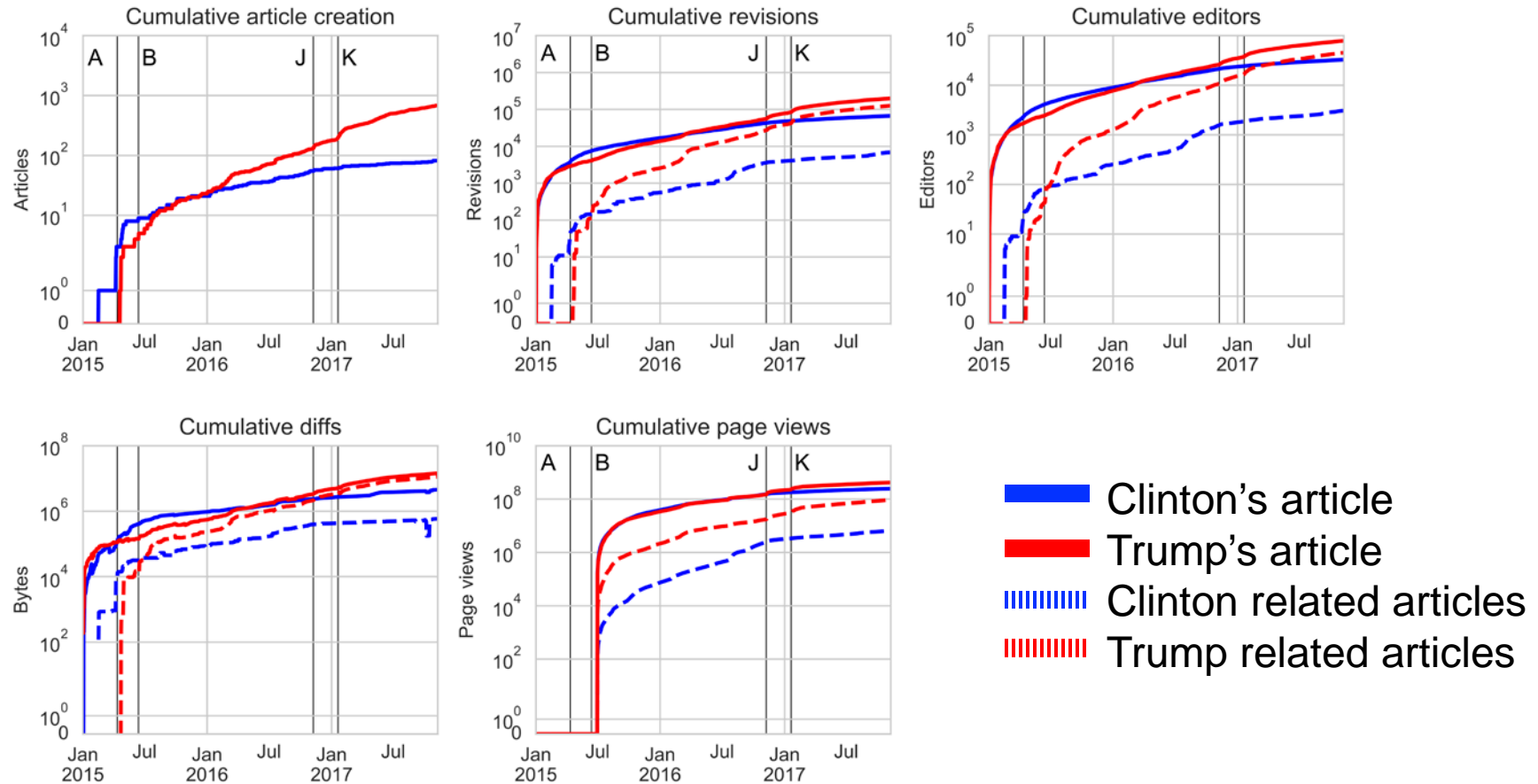
RQ1: How does Wikipedia's production and consumption of political information vary during campaigns?

RQ2: Who are the Wikipedia editors revising information about candidates during campaigns?

Clinton's article
Trump's article



Events drive bursts of collaborative and information-seeking activity

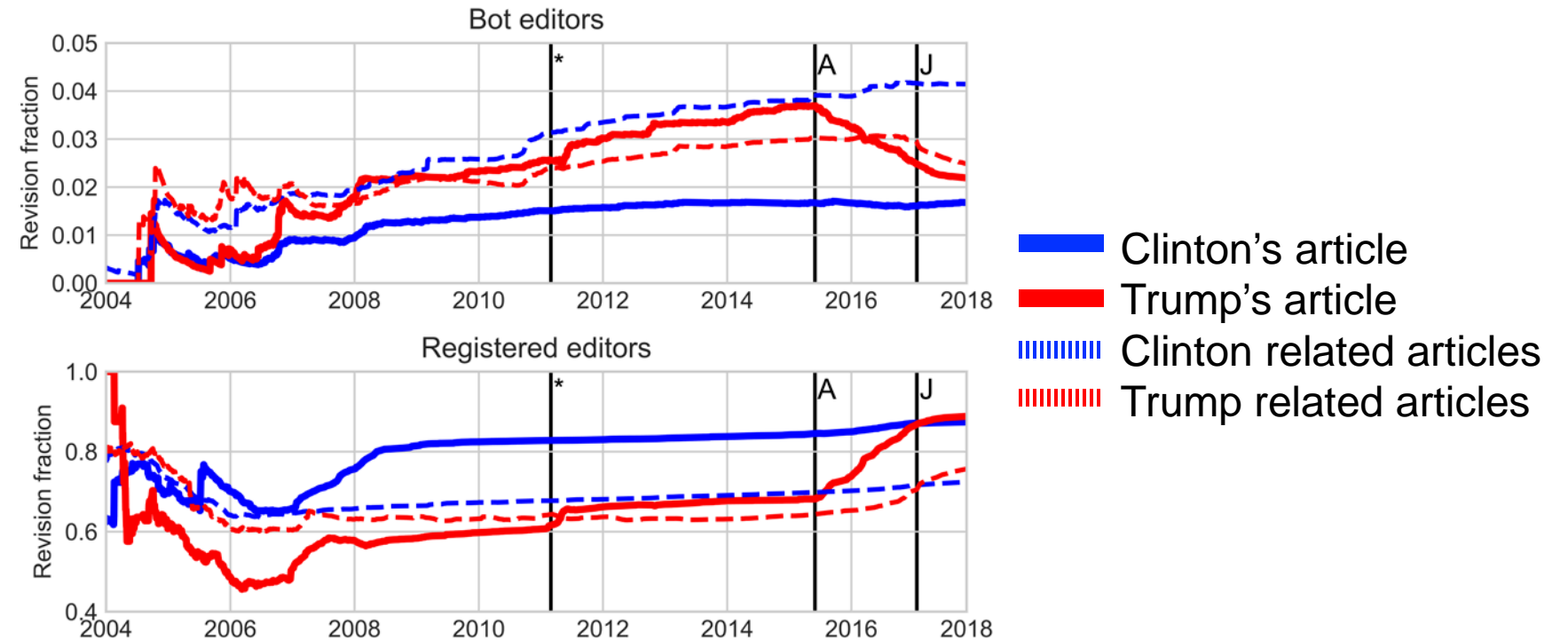


Trump content had more pages created, revisions, editors, content added, and pageviews than Clinton

RQ1: How does Wikipedia's production and consumption of political information vary during campaigns?

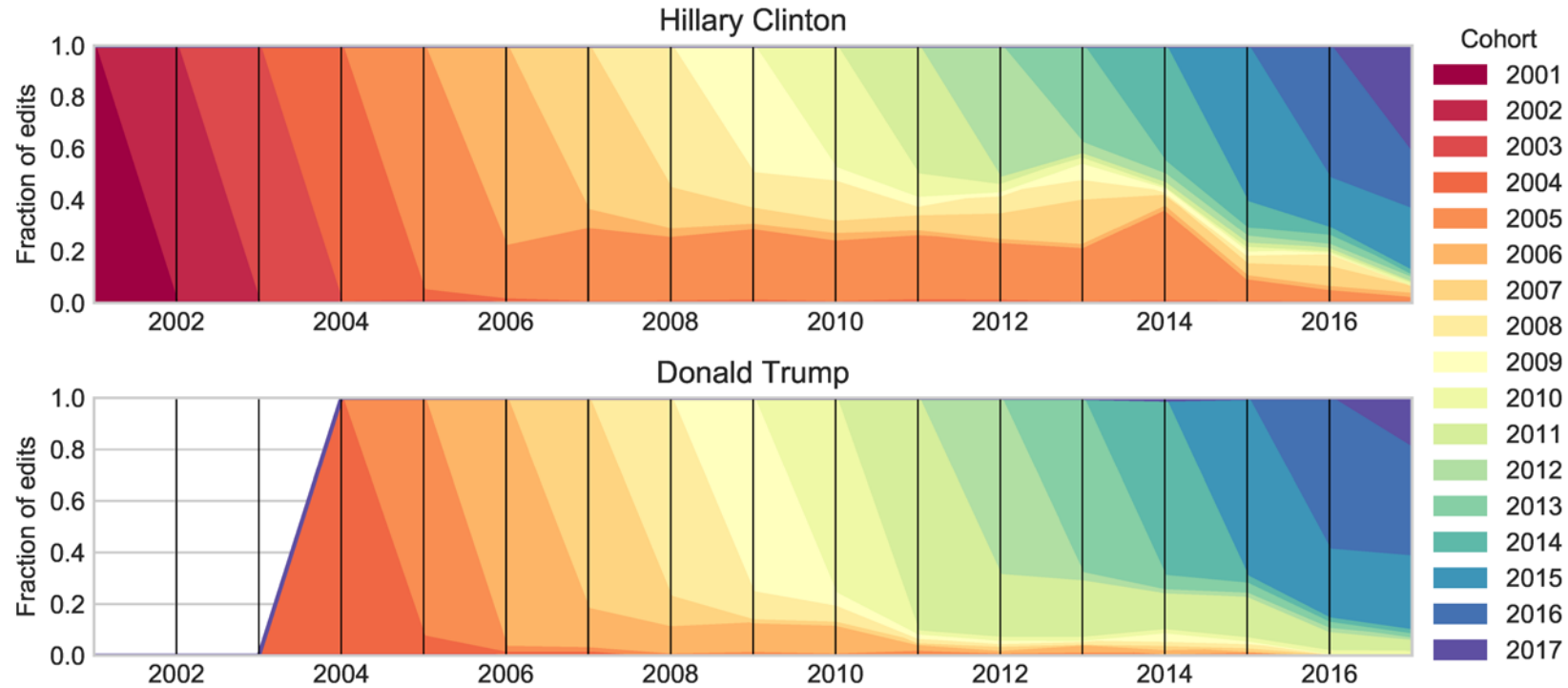
RQ2: Who are the Wikipedia editors revising information about candidates during campaigns?

Bots and registered editors



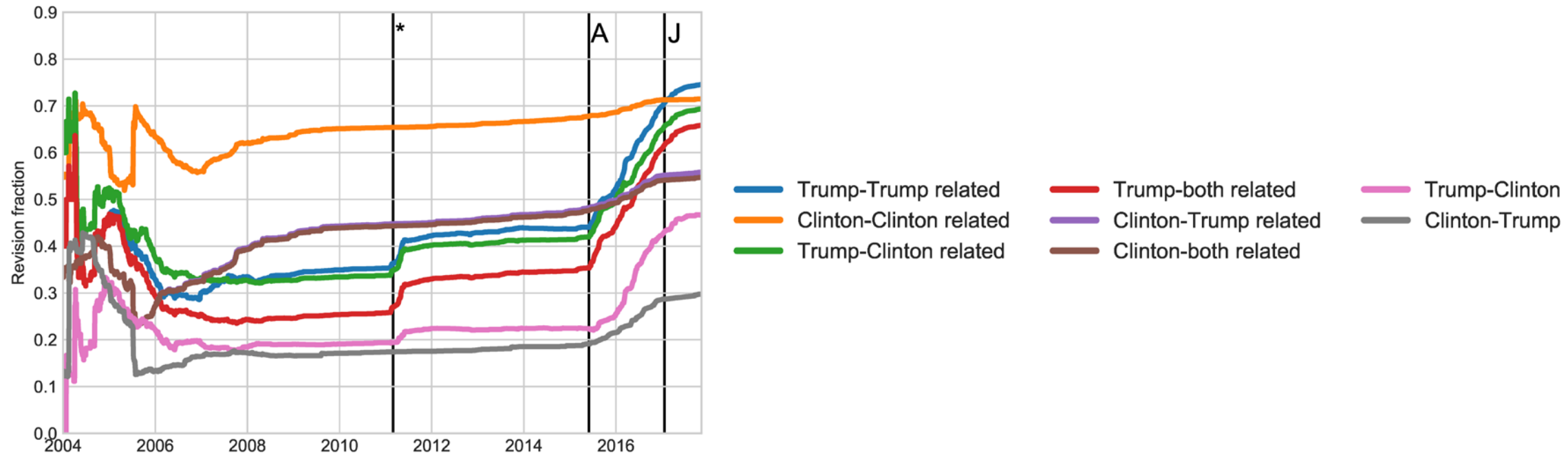
Fewer bots and more registered editors on Trump over campaign

Editor cohorts over time



High churn in composition of editors over time

Fraction of revisions from different editor sets



Increased overlap in biography editors from related pages

Changes in user behavior

<i>Feature</i>	<i>Before</i>	<i>After</i>	<i>H-test</i>
Dates active	153 ± 181	264 ± 214	246.8 *
Entropy	4.7 ± 1.8	5.9 ± 1.8	198.5 *
Latency	0.39 ± 5.4	0.11 ± 1.5	24.0 *
Pages created	183 ± 1437	497 ± 1622	77.4 *
Pages edited	944 ± 4098	3096 ± 8033	217.5 *
Namespaces	6.5 ± 3.6	8.4 ± 4.2	103.8 *
Revisions	2187 ± 5772	5980 ± 12479	226.3 *
Revision size	69.7 ± 384.8	60.4 ± 125.1	0.7

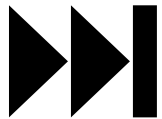
* $p < 0.001$

After contributing to a candidate-related page, users make more edits, are active on more days, edit more quickly, create and edit more pages

RQ1: How does Wikipedia's production and consumption of political information vary during campaigns?



Information production & consumption driven by major events



Clinton's article initially better, but Trump's rapidly caught up



Trump content received more attention over course of campaign

RQ2: Who are the Wikipedia editors revising information about candidates during campaigns?



Major increase in overlap among editors contributing to both



Significant turn-over in editors each year



Contributing to political topics disrupts users' editing behavior



Motivations are not static → theorizing change in collaborators



Wikipedia increasingly imbricated in content moderation strategies



Lessons from (superficial) resilience to 2016 disinformation efforts?



Wikipedians reproduce biases in media ecosystem's coverage



Need for closer analysis of content, references, and discussions

Thank you!

brian.keegan@colorado.edu

@bkeegan