

Keeping up on Current Events! A Case Study of Newcomers to Wikipedia

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Wikipedia responds to 2017 Las Vegas shooting

▶ 10PM, October 1, 2017

(8 hours)

▶ Wikipedia created the page at 6:30AM, October 2, 2017

(12 hours)

▶ Wikipedia has a comprehensive page on the topic

9:00PM, October 2, 2017

Among all the articles, this shooting event article involved the largest number of contributors in Oct. 2017



Revision

Revision as of 06:36, 2 October 2017

On October 1, 2017 A shooting occurred at the [Mandalay Bay](#) at the [Las Vegas Strip](#). The shooting occurred at the Harvest Festival, a 3-day country music festival, where multiple shooters were reported firing into the crowd, at multiple shooting scenes. Over 20 have been wounded, including a police officer.

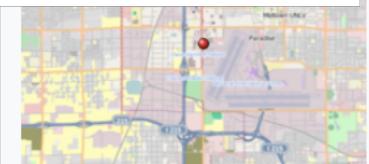
David Becker/Getty Images

opened fire
The shooter
Mesquite, N
People take cover at the Route 91 Harvest country music festival after apparent gun fire was heard on Oct. 1, 2017 in Las Vegas.

a self-inflicted gunshot wound. With at least 58 fatalities and 515 injuries, the shooting is the [deadliest](#) by a single gunman in the United States. Due to the enormous number of casualties a final death toll has yet to be officially finalized.

Contents [hide]

- 1 Background
- 2 Shooting
- 3 Casualties
- 4 Perpetrator



Show map of Downtown Las Vegas

Show map of Nevada

Show map of the US

Show all

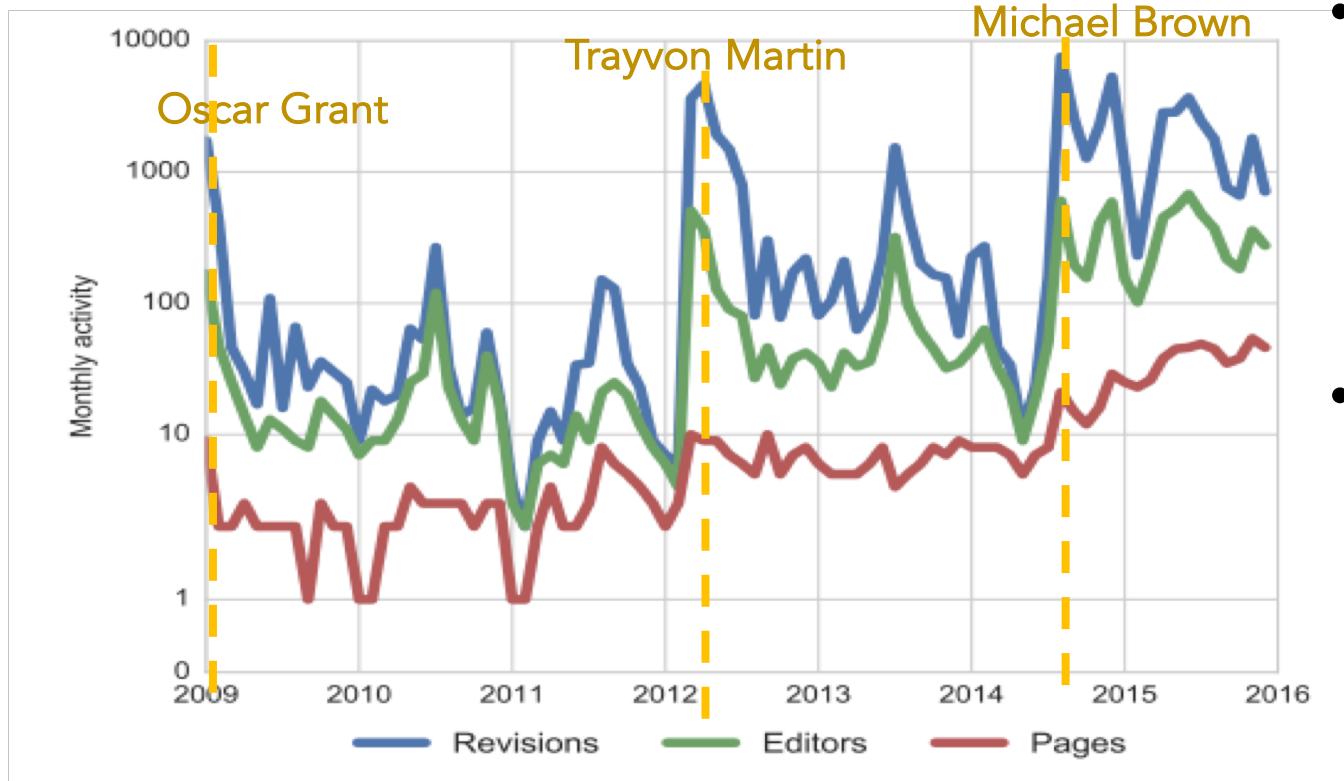
Location Las Vegas Strip, Paradise, Nevada, U.S.

Coordinates 36.0953°N 115.1718°W

Date October 1, 2017 approx. 10:08 p.m. (PDT; UTC-07:00)

This is not the single case!

Black Lives Matter Events Vs.
Wikipedia editors activities



- Offline events drive high online participations
- **Wikipedia:** In any given month since 2003, the *most page views, edits and contributors* in are all current event articles
- **OpenStreetMap** (the Wikipedia of Maps): was catalyzed by offline natural disaster events to provide many humanitarian aids online

Where does the increased participants come from?



Existing members who just shift their work to another set of articles?

Can current events also attract new members?



Newcomers are essential for online communities



- Contribute **new** opinions
- Ensure the **diversity** perspectives
- Ensure community **sustainability**

In this research, we want to understand:



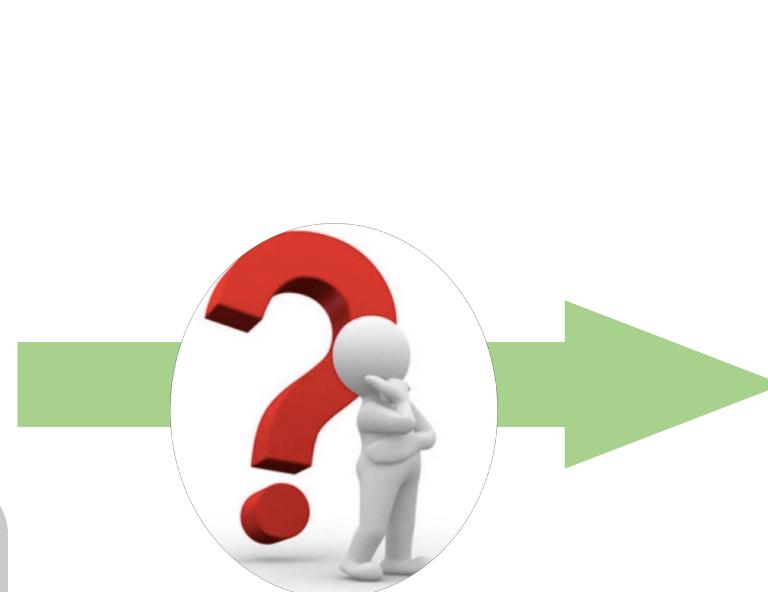
Whether and how the **strong connection** b/w offline events and online participation can be related to **newcomers' behavior** in the online production communities?

RQ1: At what level the popularity of current events are associated with newcomers participation in Wikipedia?

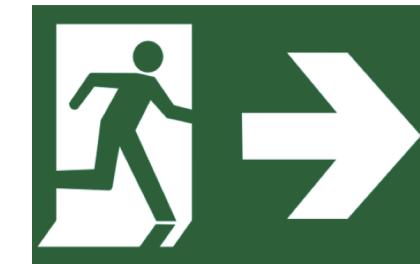


Initial motivation may explain their subsequent behavior

- Interest in Wikipedia
- Directly motivated by Events



high level commitment



stop contributing soon after
events are outdated

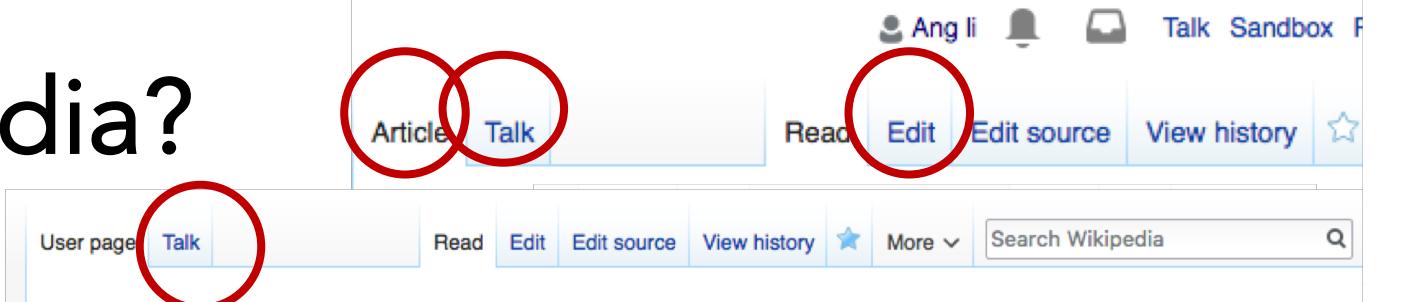


- RQ2: What are the newcomers **entry paths**?
- How does their entry path explain the **subsequent behavior**?
- RQ3: What **factors from their early-on experiences** play a role in their continued participation?

Research Platform, Data and Method

What is like in Wikipedia?

- **Everyone** can join and edit almost any articles on Wikipedia
- Technology to support production and coordination
 - Articles pages + Article talk pages
 - User pages + User talk pages
 - Complete edit history



The screenshot shows a Wikipedia page for "Black Lives Matter: Revision history". At the top, there are two red circles around the "Article" and "Talk" tabs. Below the tabs, another red circle surrounds the "Edit" button in the toolbar. The main content area displays the revision history with several recent edits listed.

Black Lives Matter: Revision history

View logs for this page

Search for revisions

From year (and earlier): 2018 From month (and earlier): all Tag filter:

For any version listed below, click on its date to view it.

For more help, see [Help:Page history](#) and [Help>Edit summary](#).

External tools: [Revision history statistics](#) · [Revision history search](#) · [Edits by user](#) · [Number of watchers](#) · [Page view statistics](#) · [Fix dead links](#)

(cur) = difference from current version, (prev) = difference from preceding version,
m = minor edit, → = section edit, ← = automatic edit summary
(newest | oldest) View (newer 50 | older 50) (20 | 50 | 100 | 250 | 500)

Compare selected revisions

- (cur | prev) 15:39, 23 January 2018 Pharos (talk | contribs) m . . (159,964 bytes) (-5) . . (intro wording)
(undo | thank) (Tag: Visual edit)
- (cur | prev) 16:32, 22 January 2018 Innisfree987 (talk | contribs) . . (159,969 bytes) (-162) . . (per talk page discussion, subtitle "Quote from David Clarke (sheriff) in Lead") (undo | thank) (Tag: Visual edit)
- (cur | prev) 23:19, 12 January 2018 RobGo (talk | contribs) . . (160,131 bytes) (+2,506) . . (Summary of arguments responding to the the 'lack of focus on intraracial violence' criticism.) (undo | thank)
- (cur | prev) 16:46, 11 January 2018 InternetArchiveBot (talk | contribs) . . (157,625 bytes) (+43) . .

In this research, we analyze:

- Three major current events which happened in the year 2014 across the topics of politics, health, and sport.
 - 2014 West African Ebola outbreaks
 - 2014 Black Lives Matter shootings and protests events
 - 2014 FIFA World Cup
- 133 event related articles
- 8,560 event editors
- 82,299 total edits

The screenshot shows a Wikipedia category page for "Category:West African Ebola virus epidemic". The page header includes links for "Not logged in", "Talk", "Contributions", "Create account", and "Log in". Below the header, there are buttons for "Category", "Talk", "Read", "Edit", "View history", and a search bar. The main title is "Category:West African Ebola virus epidemic" with a help link. A sidebar on the left contains links to "Main page", "Contents", "Featured content", "Current events", "Random article", "Donate to Wikipedia", and "Wikipedia store". Another sidebar on the right includes links for "Medicine portal" and "Viruses portal". The main content area describes the West African Ebola virus epidemic, stating it occurred from December 2013 to June 2016, affected 10 countries in West Africa and others like the U.S., U.K., and Spain, and links to the "Family Filoviridae". Below this, a section titled "Pages in category 'West African Ebola virus epidemic'" lists 27 pages, starting with "West African Ebola virus epidemic" and "West African Ebola virus epidemic timeline". The page is organized into sections labeled O, P, and R.

Defining Newcomers in our dataset

- Editors who *edit event related articles*
- *Registered and edited event articles* within **2 weeks** after each event
- Exclude the blocked users

<i>Event</i>	<i># of newcomers</i>
BLM	174
Ebola	197
FIFA	135
<i>Total</i>	506

Evaluating contribution and commitment

Contribution quality of each edit

- The goodfaith edit quality measure is able to assess the quality *for each edit* by giving a score from 0-1
- The revert revision refers to whether an edit made by an editor was removed and reverted to previous version by another Wikipedia editor

(newest | oldest) View (newer 50 | older 50) (20 | 50 | 100 | 250 | 500)
Compare selected revisions

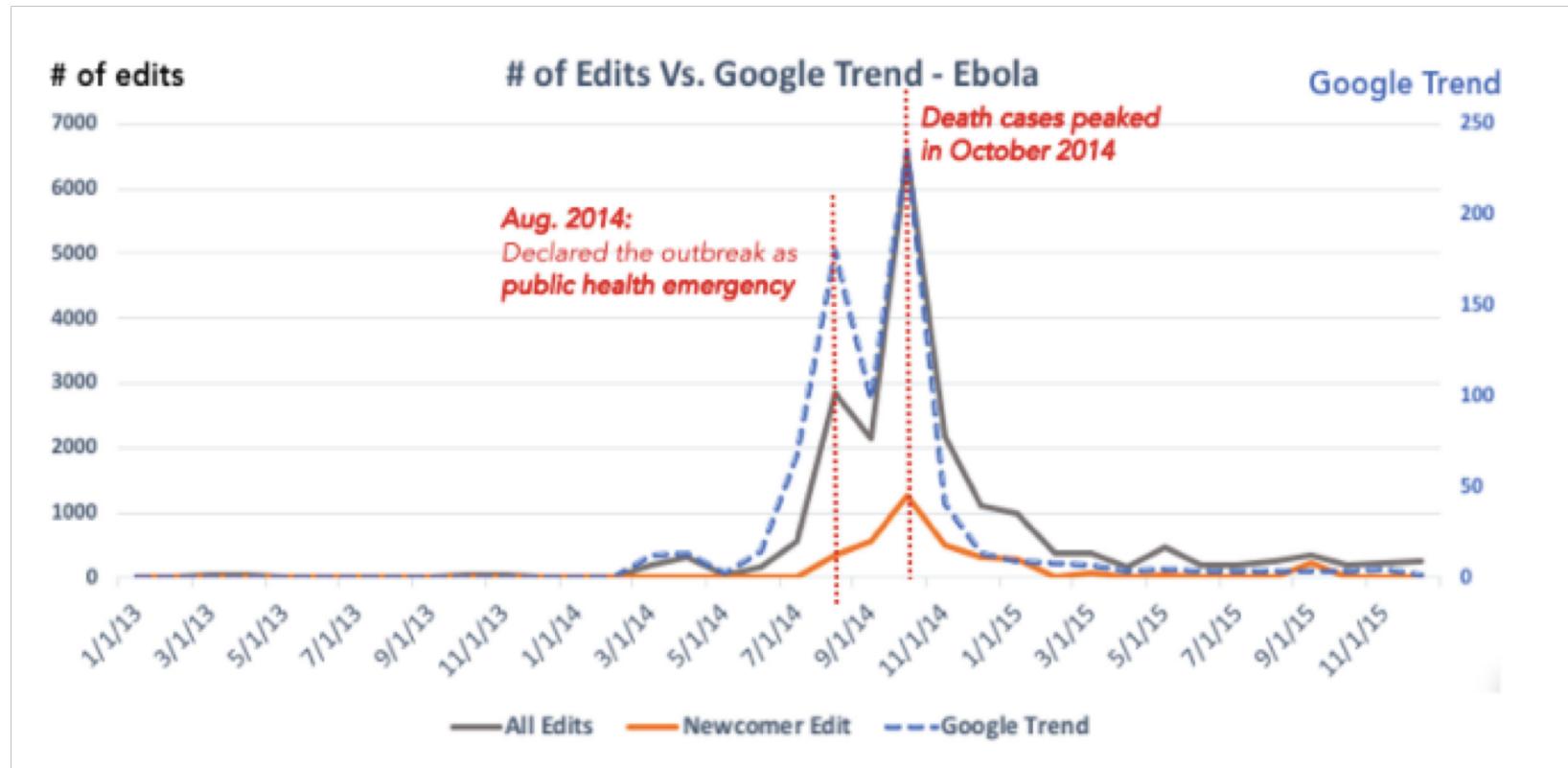
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- (cur | prev) ● 23:19, 12 January 2018 RobGo (talk | contribs) . . (160,131 bytes) (+2,506) . . (Summary of arguments responding to the the 'lack of focus on intraracial violence' criticism.) (undo | thank)
- (cur | prev) ○ 16:46, 11 January 2018 InternetArchiveBot (talk | contribs) . . (157,625 bytes) (+43) . . (Rescuing 1 sources and tagging 0 as dead. #IABot (v1.6.1) (Ost316)) (undo)
- (cur | prev) ○ 15:14, 8 January 2018 Emir of Wikipedia (talk | contribs) . . (157,582 bytes) (+24) . . (Reverted good faith edits by Shintaraguru (talk): Why delete? (TW)) (undo | thank) (Tag: Undo)
- (cur | prev) ○ 14:03, 8 January 2018 Shintaraguru (talk | contribs) . . (157,558 bytes) (-24) . . (→Criticism) (undo | thank) (Tags: Mobile edit, Mobile web edit)
- (cur | prev) ○ 12:28, 6 January 2018 Certes (talk | contribs) m . . (157,582 bytes) (+30) . . (Disambiguating links to Take Back the Night (link changed to Take Back the Night (protest)) using DisamAssist.) (undo | thank)

Retention of each editor:

- How long they continued to edit in Wikipedia

Results

RQ1: Current events attract newcomers' contribution



of edits from newcomers (monthly) correspond closely to

- Google Trend
- Current events happened offline

- Same patterns for all three event

RQ2: Newcomers exhibit **distinctive entry paths**, which lead to different level of contribution and commitment

- First action as a proxy for their initial motivation
- Based on the types of Wikipedia page that they **first edited**, we separate newcomers into 2 groups

506 newcomers who ever edited the event pages

Event-Driven

- 296 newcomers:
- Edit in the **event articles** as their **FIRST action**
- Motivated majorly by the **events**

Contrast

- 210 newcomers:
- Edit in **None event articles** as their **FIRST action**
- Less directly motivated by the events to join Wikipedia

Event-Driven Group: *Less* Contribution

- **Event-driven group:**
 - Focused behavior
 - Less unique articles
 - **Rare activities** on user page and talk pages
- **Contrast:**
 - Diverse interesting
 - More unique articles
 - **Higher activities** in user pages and talk pages

First Day		
# of edits	Event	Contrast
Unique articles	1.06	2.31
Article talk page	0.02	0.31
User talk page	0.03	0.93
User page	0.06	1.01

One Week		
# of edits	Event	Contrast
Unique articles	1.37	10.94
Article talk page	0.09	1.69
User talk page	0.15	1.96
User page	0.21	2.83

Event-Driven Group: *Less* social interaction

Event-Driven Group:

Isolated in the network

Least social interaction with others

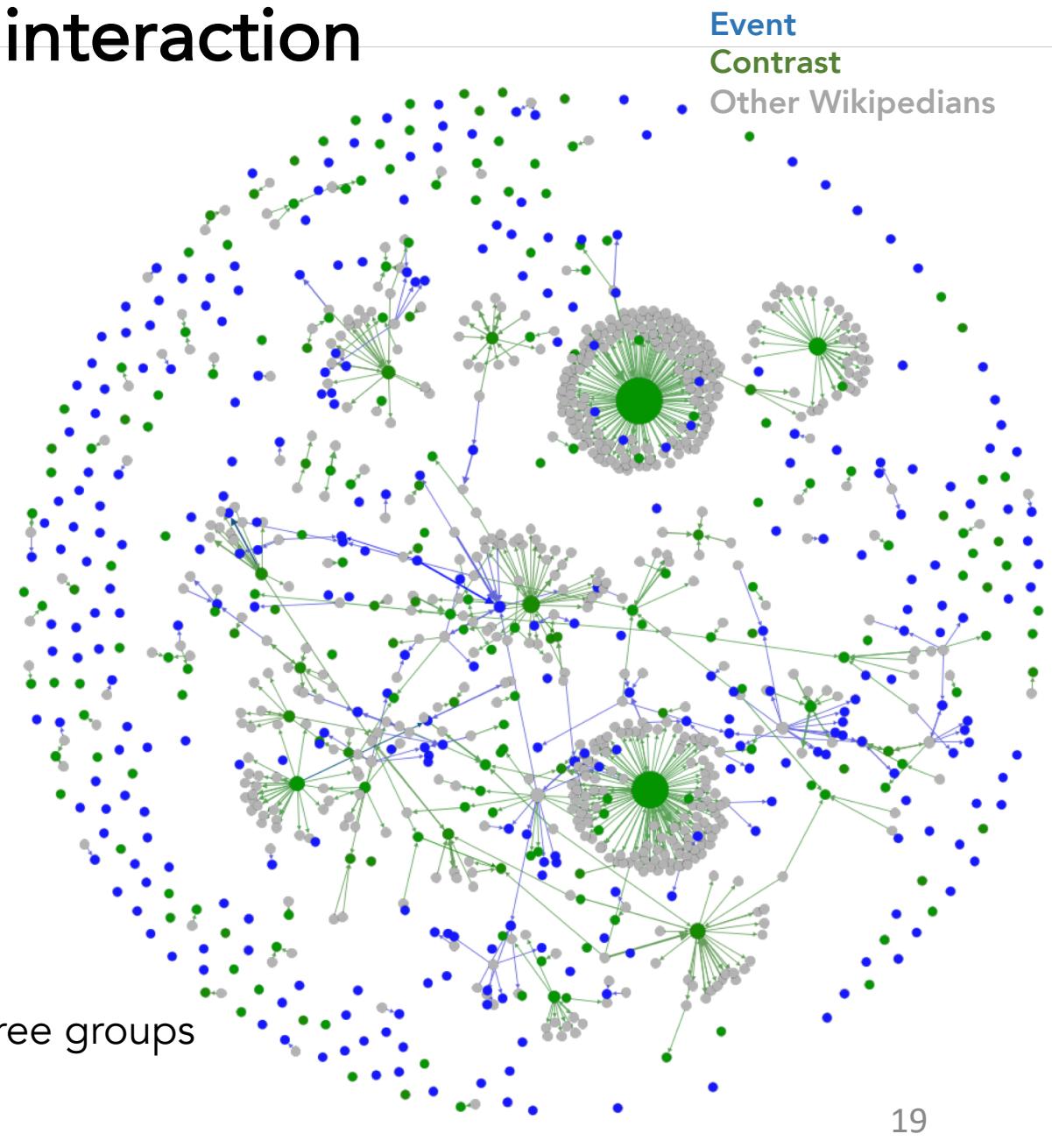
Contrast:

More active in sending/receiving msgs

More connection with important nodes (EV)

Measures /Group	Event	Contrast
Eigen-vector	0.000101	0.00490
Msg-In	0.655	4.519
Msg-Out	0.101	1.543

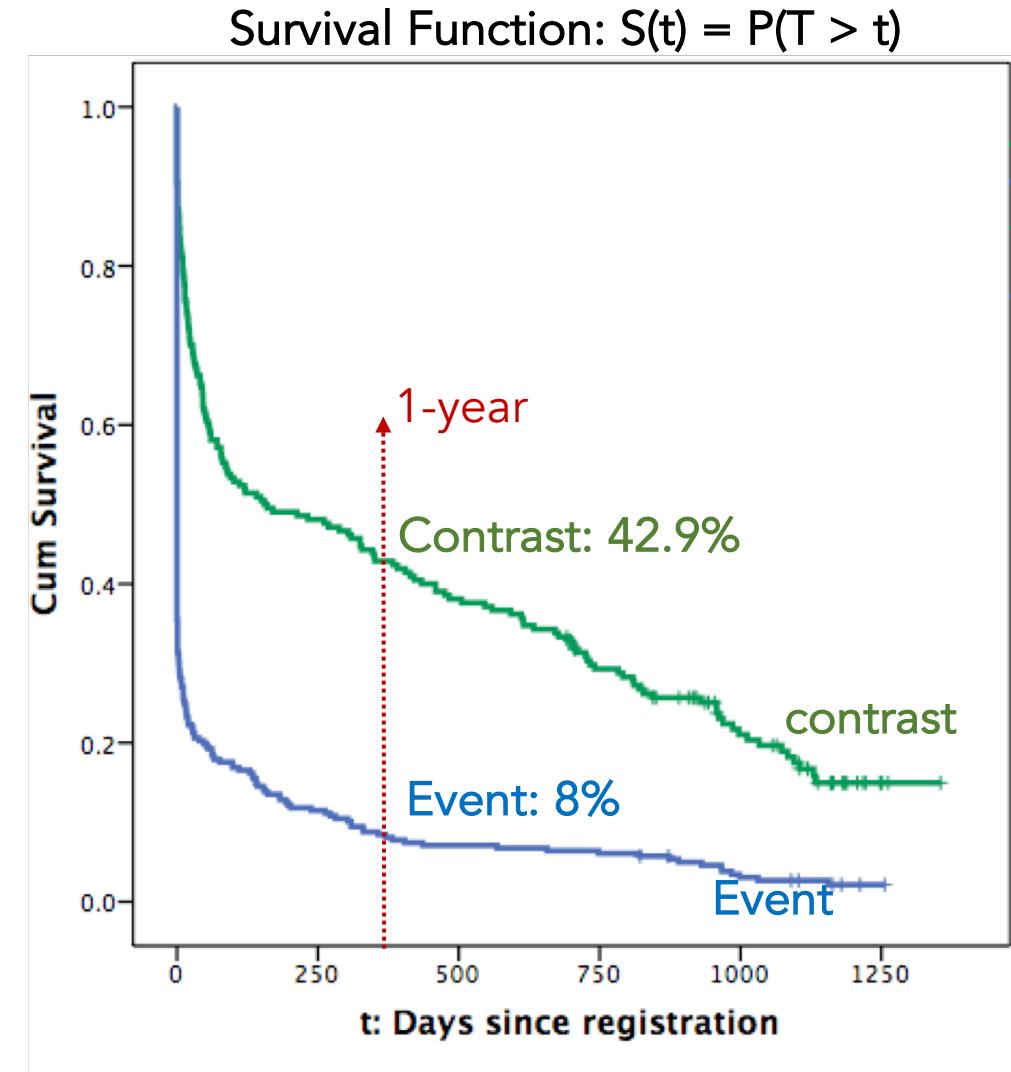
Comparison analysis show statistically difference among three groups



Event-Driven Group: *Lower* contribution and commitment

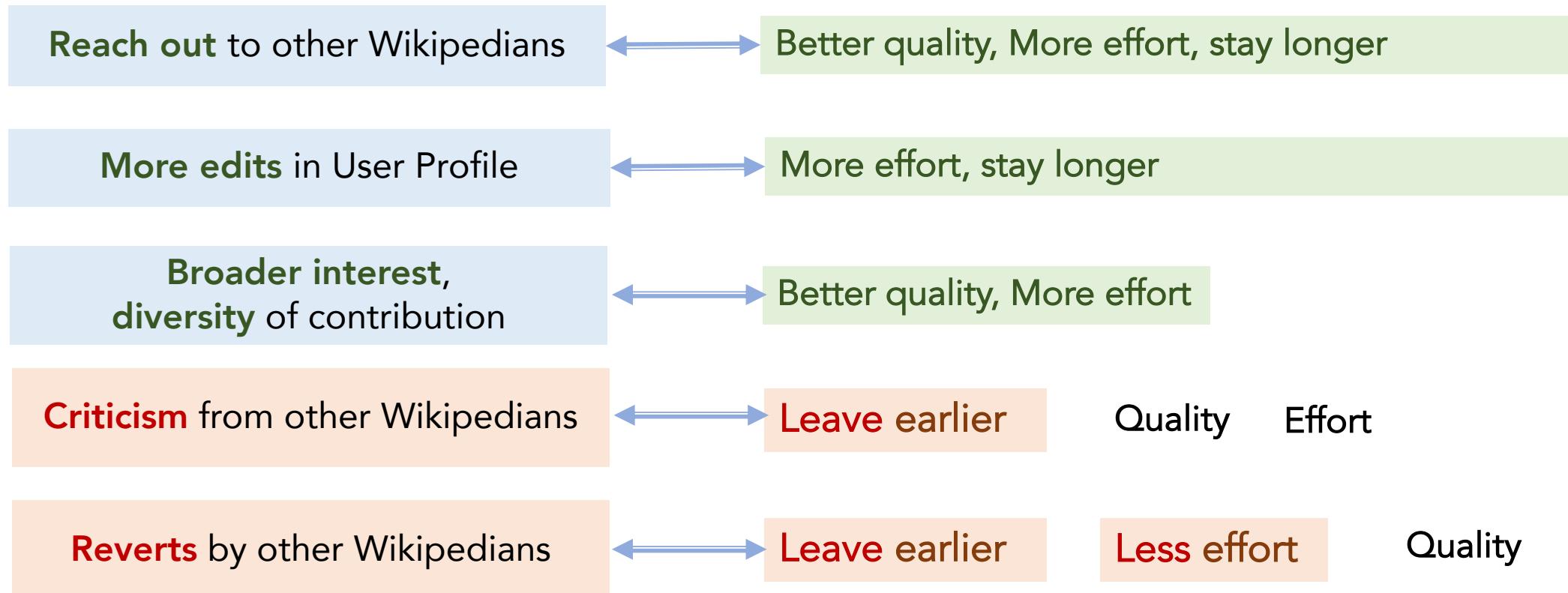
Event-Driven Group has ...

- **Less** number of edits ($\beta = -4.63$, $p < .001$)
- **Smaller** size of edits ($\beta = -.20$, $p < 0.1$)
- **Lower** Edit quality ($\beta = -.35$, $p < .05$)
- **Less likely** to continue editing



RQ3: Important factors from newcomers' early-on experiences are ...

- Social Interactions, Community Identity, Feedback, Diversity of Contribution



Closer Look into the Contribution of Newcomers

-- Why **reverting**?

For each comment, matching out the short policy template or keywords, and to get the revert reasons

- (cur | prev) ○ 15:36, 17 May 2014 Qed237 (talk | contribs) . . (36,001 bytes) (-354) . . (Reverted 1 edit by Arslan963 (talk): Unsourced and WP:POV. (TW)) (undo)
- (cur | prev) ○ 14:38, 17 May 2014 Arslan963 (talk | contribs) . . (36,355 bytes) (+354) . . (undo) (Tag: Mobile edit)

925 comments with at least one revert reason

Revert reason:
WP:POV → Neutral Point of View
Unsourced → Verifiability



Three top mentioned revert reasons:

- Verification: 587 times
- Vandalism: 223 times
- Neutral point of view: 68 times

Event-driven group were more likely to be reverted due to Vandalism

- Biased, emotional, vandalism type editing
- reflective of newcomers' stronger attachment to the exogenous event than Wikipedia community

BLM -

<code>{{current recent mass shooting date=June 2015}}</code>	<code>{{current recent mass shooting date=June 2015}}</code>
<code> {{Infobox civilian attack</code>	<code> {{Infobox civilian attack</code>
I title = Charleston church shooting	I title = Charleston Church Terrorist Attack
I partof =	I partof =

Good-faith Edit quality: 0.07

Ebola -

The EBOV genome is approximately 19 [[Kilobase#Length measurements|kb]] in length. It encodes seven structural proteins: nucleoprotein (NP), polymerase cofactor (VP35), (VP40), GP, transcription activator (VP30), VP24, and RNA polymerase (L).<ref>{{cite journal|url=http://www.nature.com/srep/2013/130204/srep01206/full/srep01206.html|title=The spatio-temporal distribution dynamics of Ebola virus proteins and RNA in infected cells|journal=Nature|doi=10.1038/srep01206|date=4 Feb 2013|last=Nanbold|first=Asukall|last2=Watanabe|first2=Shinjill|last3=Halfmann|first3=Peter|last4=Kawaokal|first4=Yoshihiro}}</ref> The [[Ebola Virus genetics]] is difficult to study due to the virulent nature of the virus.

Good-faith Edit quality: 0.02

+ God created this virus to send us back to the stone age

What we learned ...

- Popularity of offline current events **can** attract newcomers online
- However, it is not that simple:
 - Newcomers who edit event articles enter Wikipedia through **two major entry-paths**:
 - **Event-driven**: a narrow event-related focus
 - **Contrast**: a broader participation in Wikipedia
 - **Event-driven group** – motivated directly through events:
 - Less desirable subsequent behavior
 - Low quality of work – **harmful** to the community
 - Leave quickly
- **Event-driven group**'s higher level of focus on the events rather than Wikipedia also can hinder their adherence of Wikipedia rules and norms

What should we do...

Design and introduce targeted guidance and socialization strategies
Encourage **event group** to be a better community member:

- **Instructions:** teach them how to be a good community member
- **Social interaction:** improve the social interaction and learn from others
- **Community identity:** guide them to build personal user page
- **Develop their interests:** task routing to give them some other tasks

Thank you!