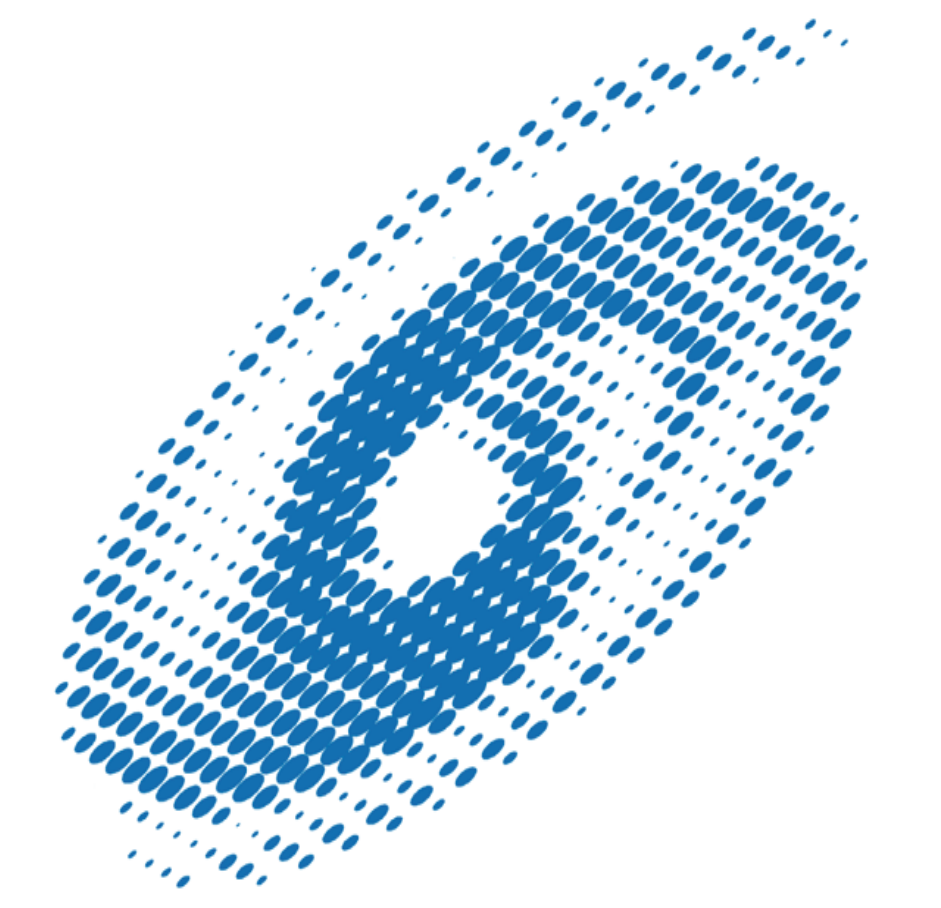


# Why leave Wikipedia ?

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## Motivation

- Discover why editors of Wikipedia stop contributing.
- Design incentives to motivate content creation.

## Method

Statistical analysis of Wikipedia server data, which look like:

```
<page>
<title>Duncan J. Watts</title>
<id>73650</id>
<revision>
<id>337279</id>
<timestamp>2002-08-20T08:08:11Z</timestamp>
<contributor>
<username>Ed Poor</username>
<id>188</id>
</contributor>
<comment>6 degrees guy</comment>
<text xml:space="preserve">'Duncan J. Watts is a professor of sociology at [[Columbia University]] and the author of the forthcoming book [[Six Degrees: The Science of a Small World]], is the principal investigator of the ongoing project</text>
</revision>
</page>
<id>805308</id>
```

Time period:  
From the beginning of Wikipedia till Nov 5, 2006

80,586,570 edits

643,141 editors made at least one edit to the main articles. Bots and anonymous contributors are excluded.

## The Wikipedia Population

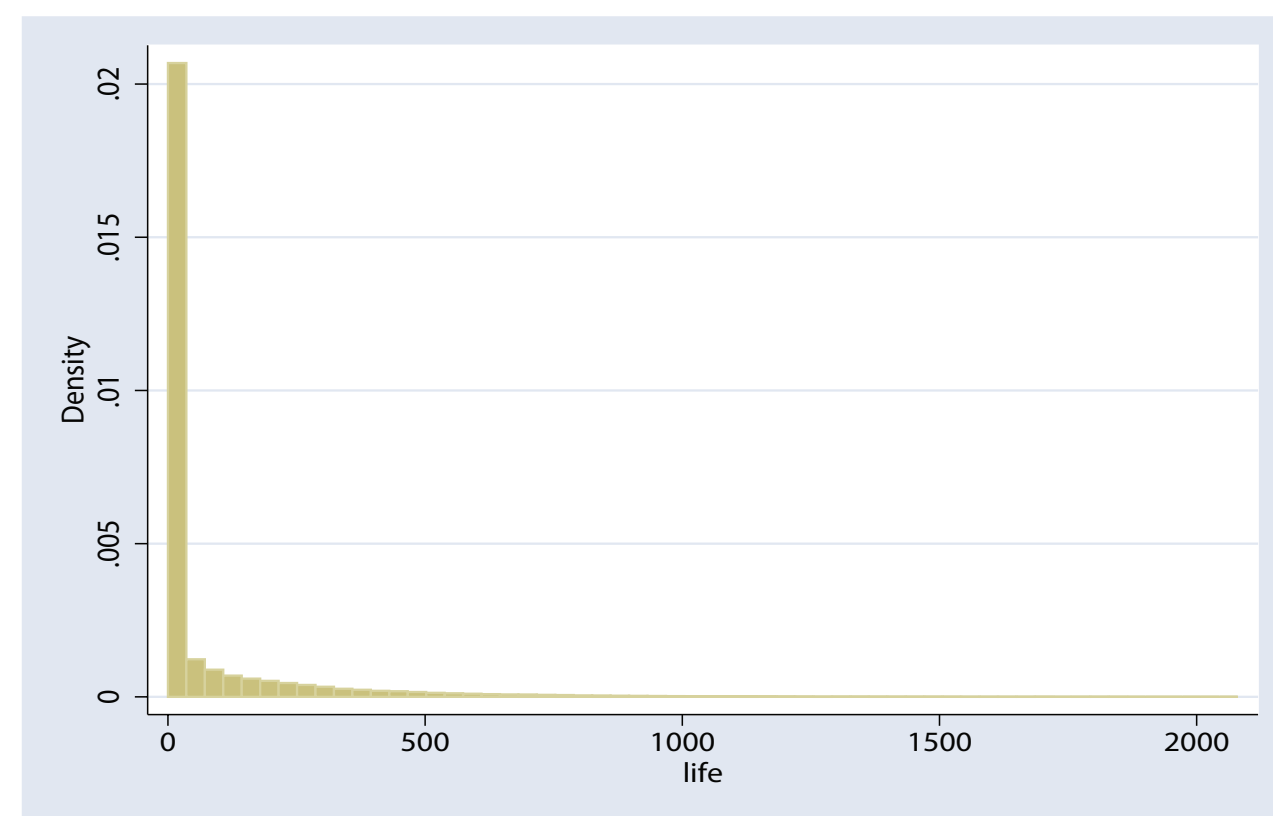


Figure 1. The distribution of Wikipedia editors' life time.

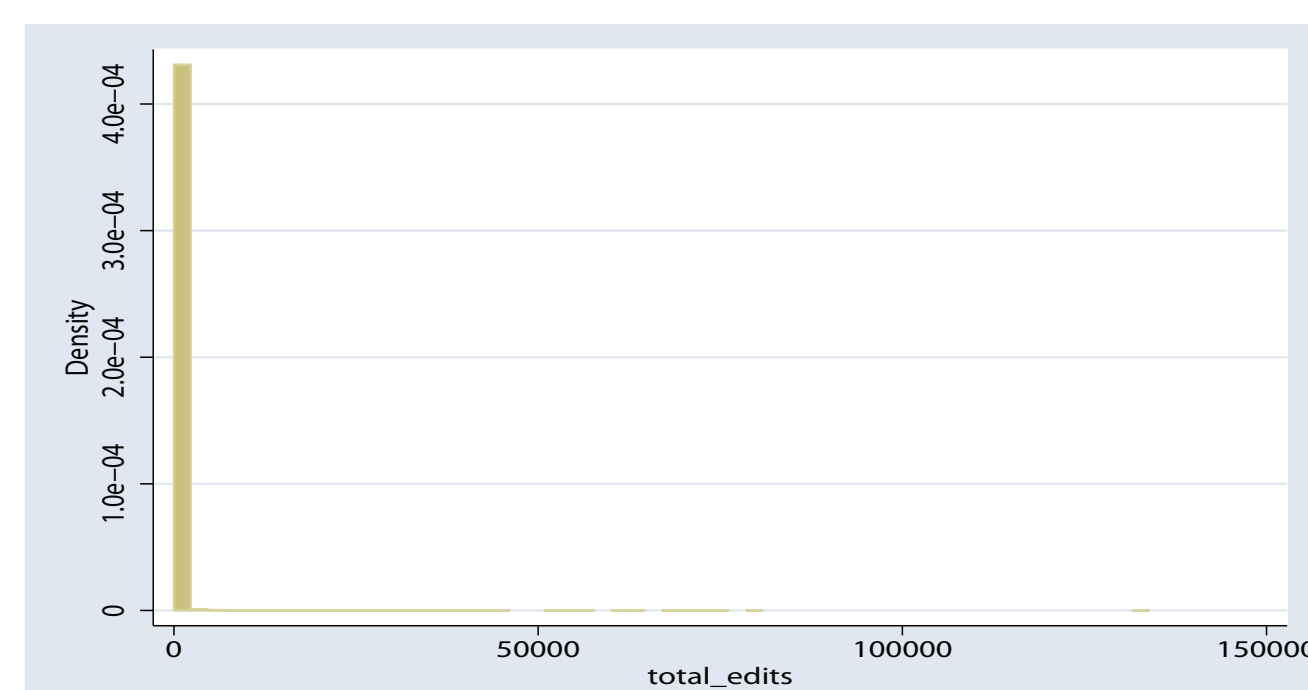


Figure 2. The distribution of Wikipedia editors' number of edits.

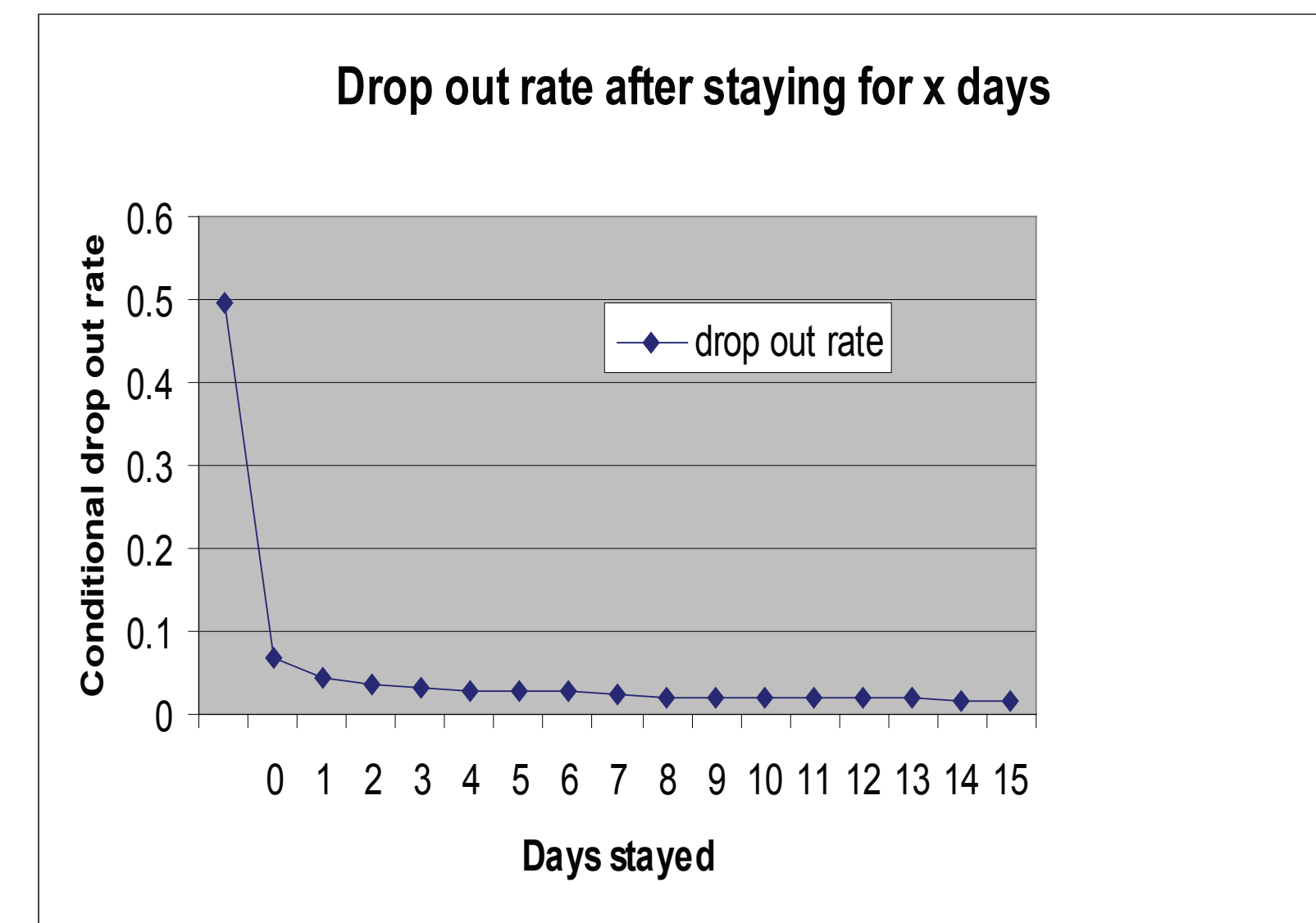


Figure 3. Dropout rates after staying for x days.

Observation: 50% new users decide not to return on their first day. But if they stayed beyond 1 day, there is a good chance they will stay for longer.

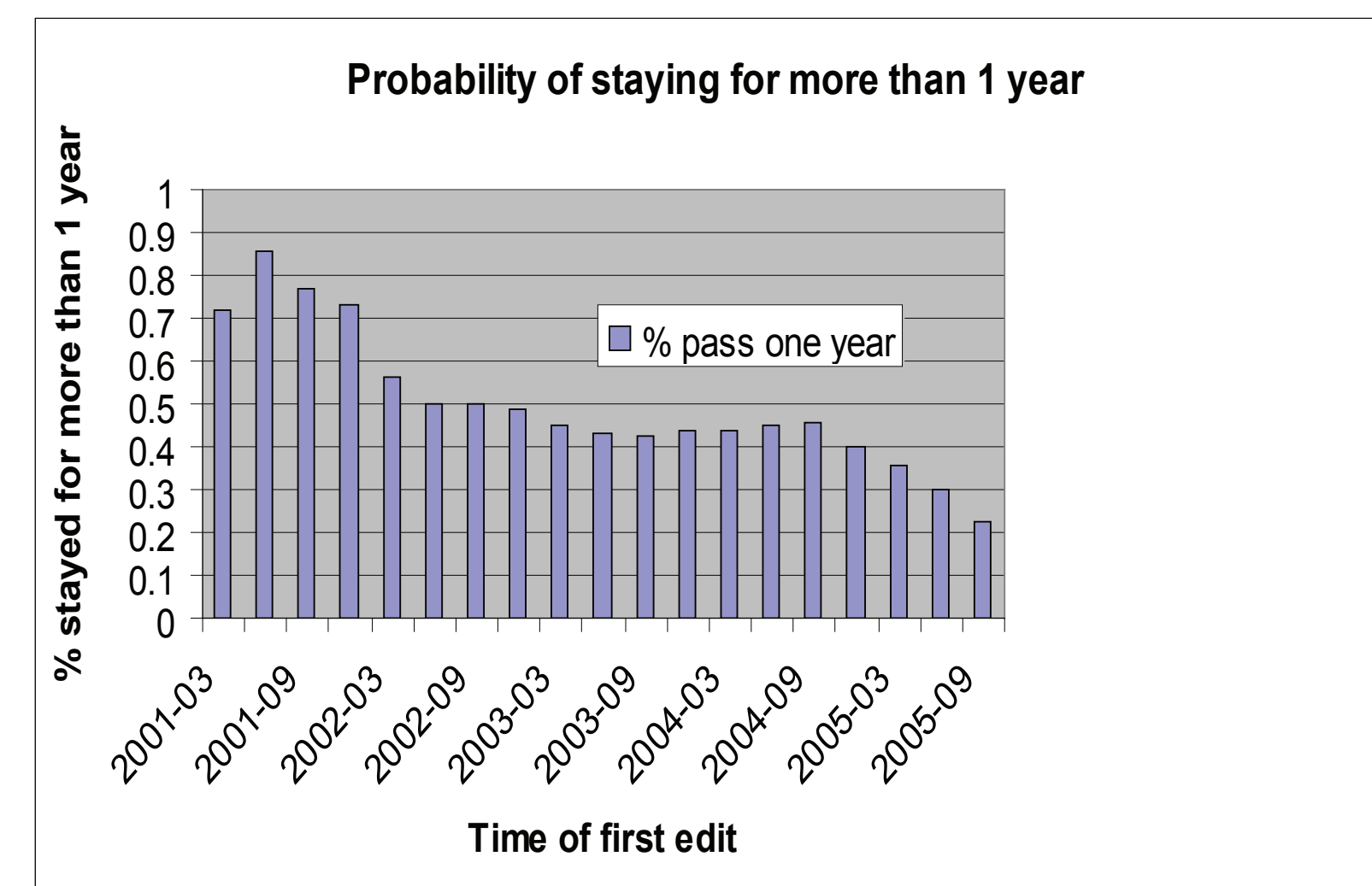


Figure 4. Probability of staying for more than a year, predicted by the time of first edit.

Observation: Early adopters tend to stay for longer than late adopters.

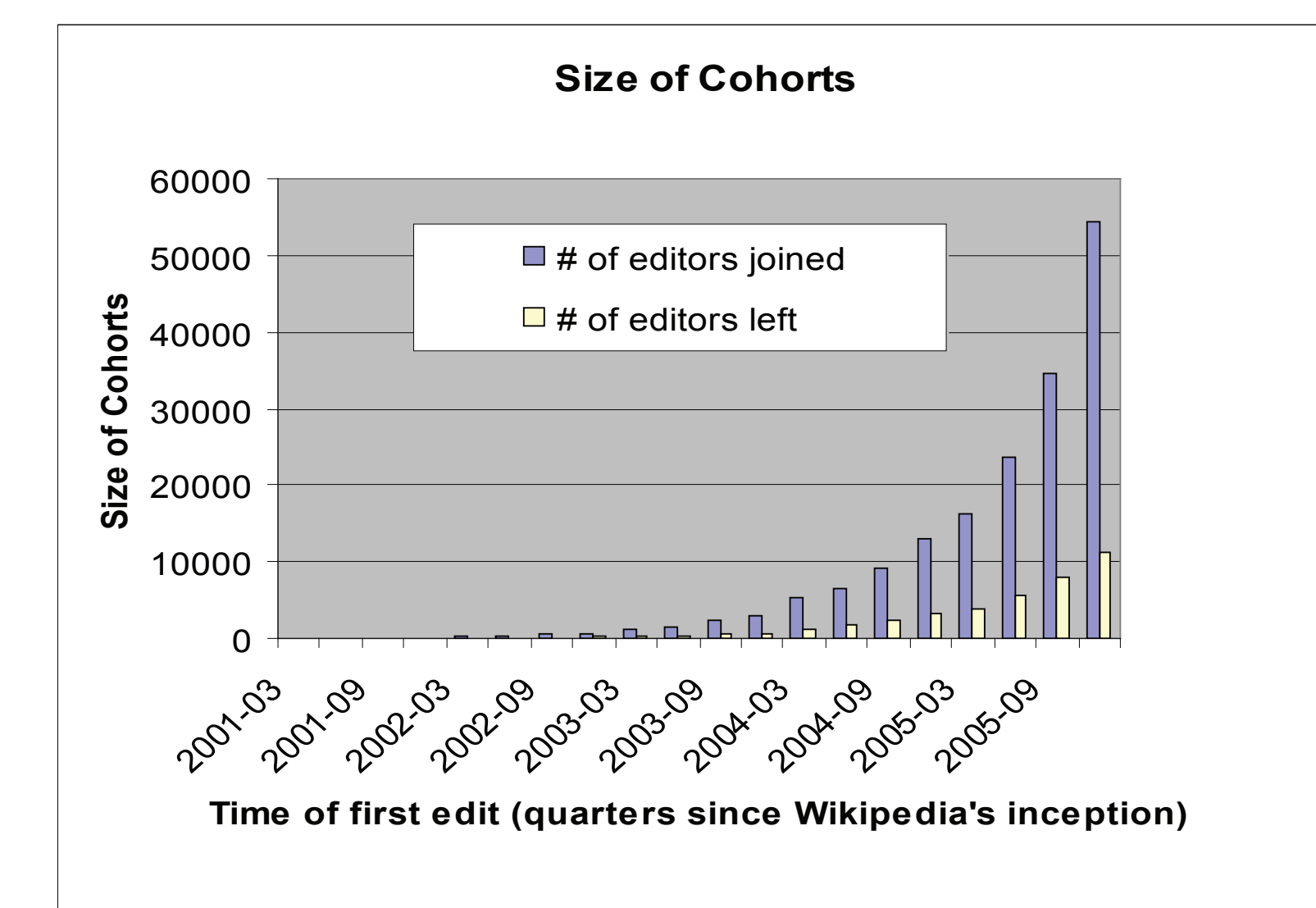


Figure 5. The growth of cohorts, and the portion of each cohort that stayed.

Observation: The number of editors grow fast, but the number of long-term editors grow much slower.

## Why active editors leave?

- We say an editor is "active" if he has made more than 100 edits. There are 31696 such editors. We took a simple random sample of 300.
- We run a logistic regression, predicting if an editor stays for more than one year.

	Odds Ratio
Time_FirstEdit	0.9**
Editfreq	0.36**
#_Page_Edited	1**

Result #1: Earlier adopters stay longer (0.9 < 1).

Result #2: Editors who edits more frequently are more likely to leave (0.36 < 1).

## Drop out on the first day?

- We took a simple random sample of the population, sample size = 1000.
- We run a logistic regression, predicting if an editor stays for more than a day based on the edits they made on their first day.

	Odds Ratio
Time_FirstEdit	0.97***
Creator_dummy	1.35*
Destroyer_dummy	0.55**

- We classified editors into three roles : Creator, Destroyer, and Preserver (borrowed technique from Priedhorsky et al (07)).

Result #1: Creators tend to stay beyond their first days, compared to preservers. (1.35 > 1)

Result #2: Destroyers are more likely to leave on their first days, compared to preservers (0.55 < 1).

Note: destroyers are defined by whether their edits are subsequently reverted by other editors. That is, it is defined based on others' opinions.

## Summary

Among active editors, earlier adopters tend to stay for longer. Higher edit frequency leads to higher likelihood of quitting.

For new users, on their first day, creators are more likely to stay than preservers, and destroyers are more likely to drop out.

## Future Work

Why does high edit frequency lead to active editors' departure? Are they burnt out? Or because they have completed editing the pages they are interested in?

How do editors' talk behavior affect their likelihood to stay?

Is there peer influence on an editor's decision to leave?

## Related work

Bryant et al (2005) found from interview data that small starter tasks help new users become experts.

Kittur et al. (2007) found Wikipedia is becoming democratized over time. The workload shifted from a small number of elite editors to a large number of "common" editors.

Priedhorsky et al (2007) found a small number of elite editors create most value on Wikipedia. They measure "value" by the number of words viewed.