Game-changers:

Detecting shifts in the flow of campaign contributions

Matthew Blackwell
University of Rochester

October 6th, 2012

RocData Forum

Nate Silver

NAME OF COMMITTEE (In Full)
Obama for America

A. Full Name (Last, First, Middle Initial)
Sharon Anderson

Mailing Address 1668 finwick dr

City: pfafftown | State: NC | Zip Code: 27040-9043

FEC ID number of contributing federal political committee. C

Name of Employer: The Norman Group

Occupation: Intl Consultant

Receipt For: 2012
[X] Primary [ ] General
[ ] Other (specify) ▼

Election Cycle-to-Date ▼ 271.00

Transaction ID : C19176830

Date of Receipt: 08 / 12 / 2012

Amount of Each Receipt this Period: 11.00

B. Full Name (Last, First, Middle Initial)
Riaz Hussain

Mailing Address 540 N Webster Ave

City: Scranton | State: PA | Zip Code: 18510

FEC ID number of contributing federal political committee. C

Name of Employer: University of Scranton

Occupation: Professor

Receipt For: 2012
[X] Primary [ ] General
[ ] Other (specify) ▼

Election Cycle-to-Date ▼ 225.00

Transaction ID : C20196560

Date of Receipt: 08 / 30 / 2012

Amount of Each Receipt this Period: 35.00

C. Full Name (Last, First, Middle Initial)
Dave Baird

Mailing Address 1376 Lincoln St

Transaction ID : C20090710

Date of Receipt: M M / D D / Y Y Y Y

A measurement question

When do campaigns take off or fall flat?

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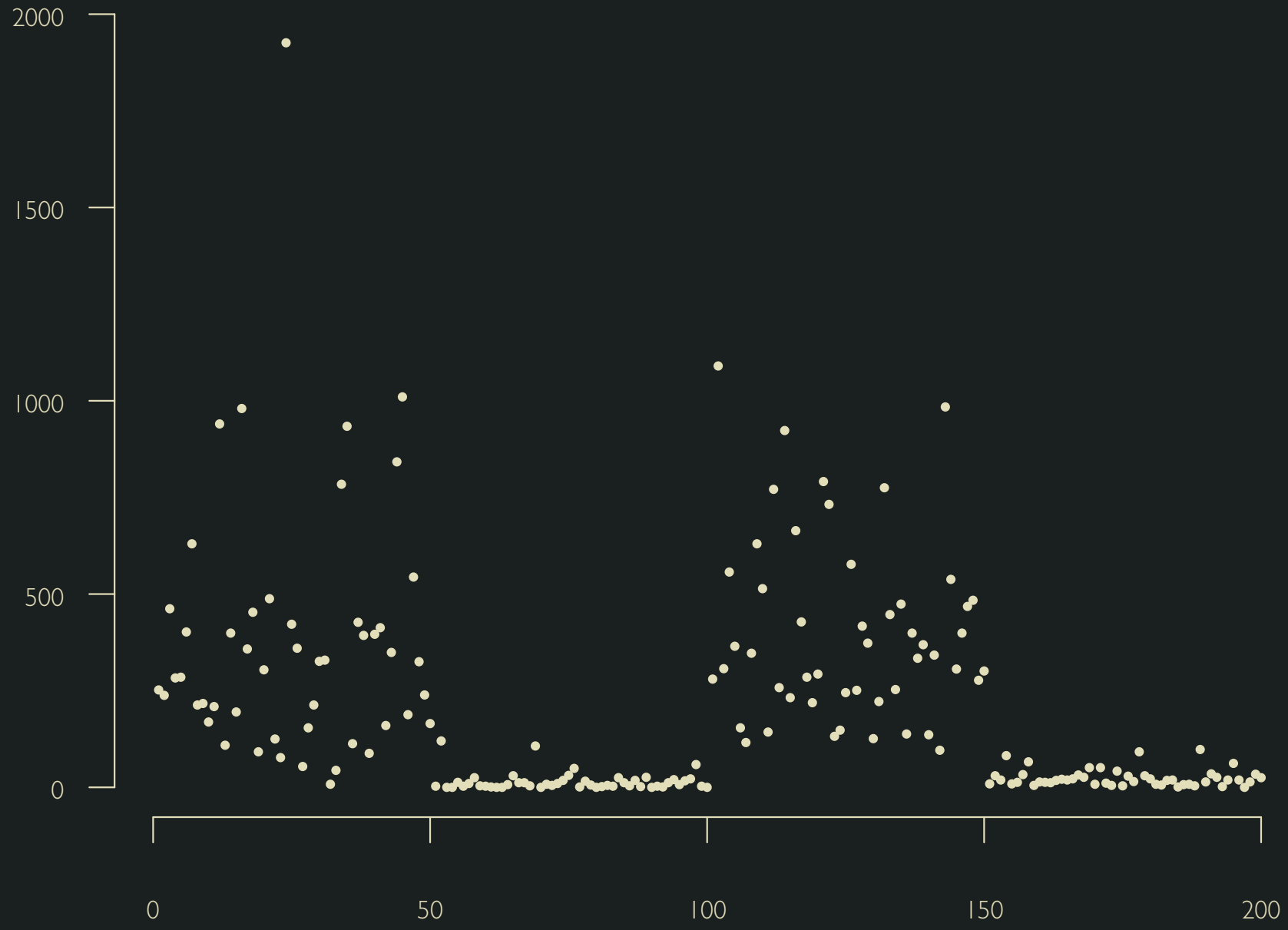
When do campaign contributions take off or fall flat?

Changepoint models detect changepoints



The challenges

Modeling daily contribution counts

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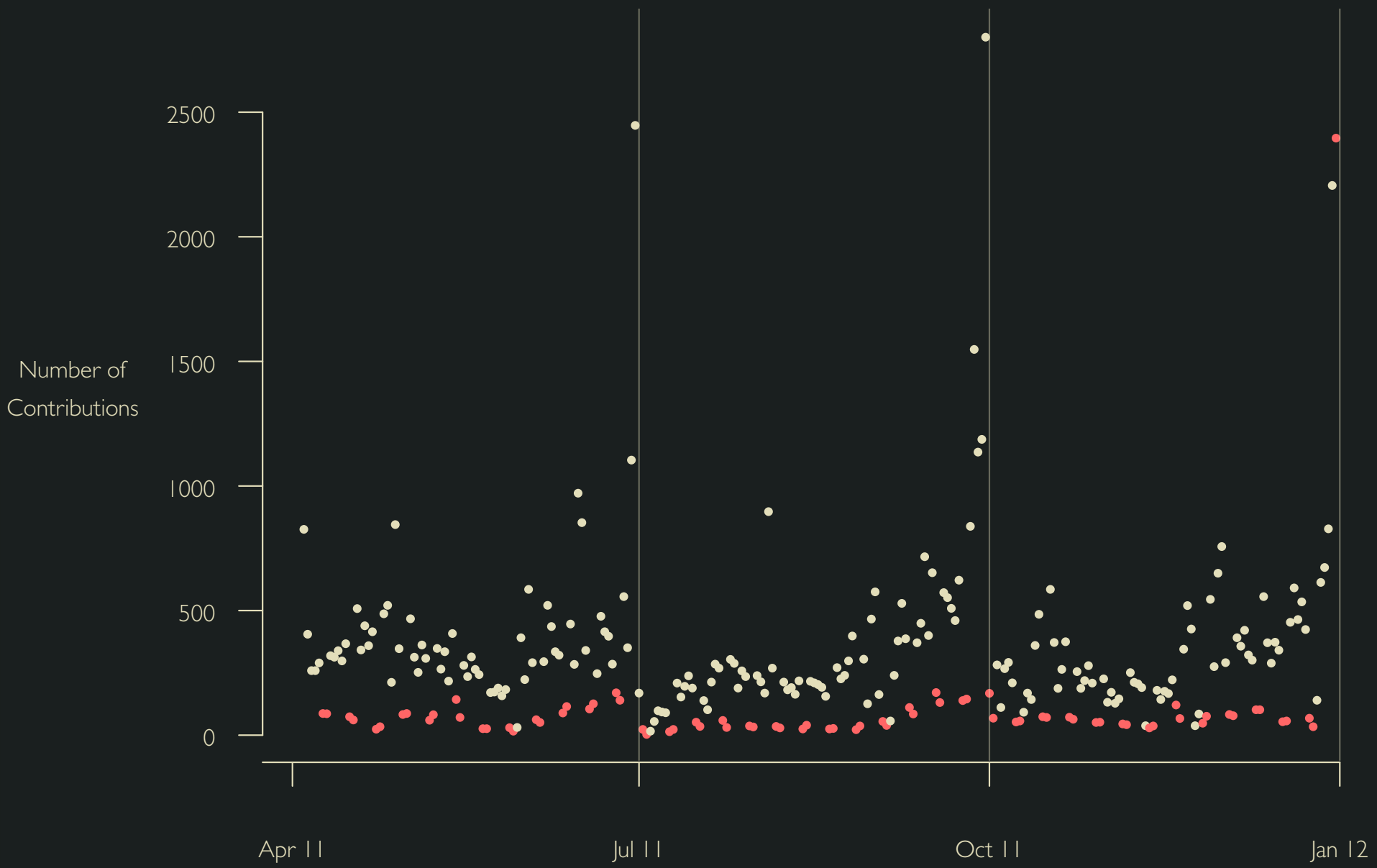
Choosing the number of changepoints

Overdispersion in campaign contributions



The model

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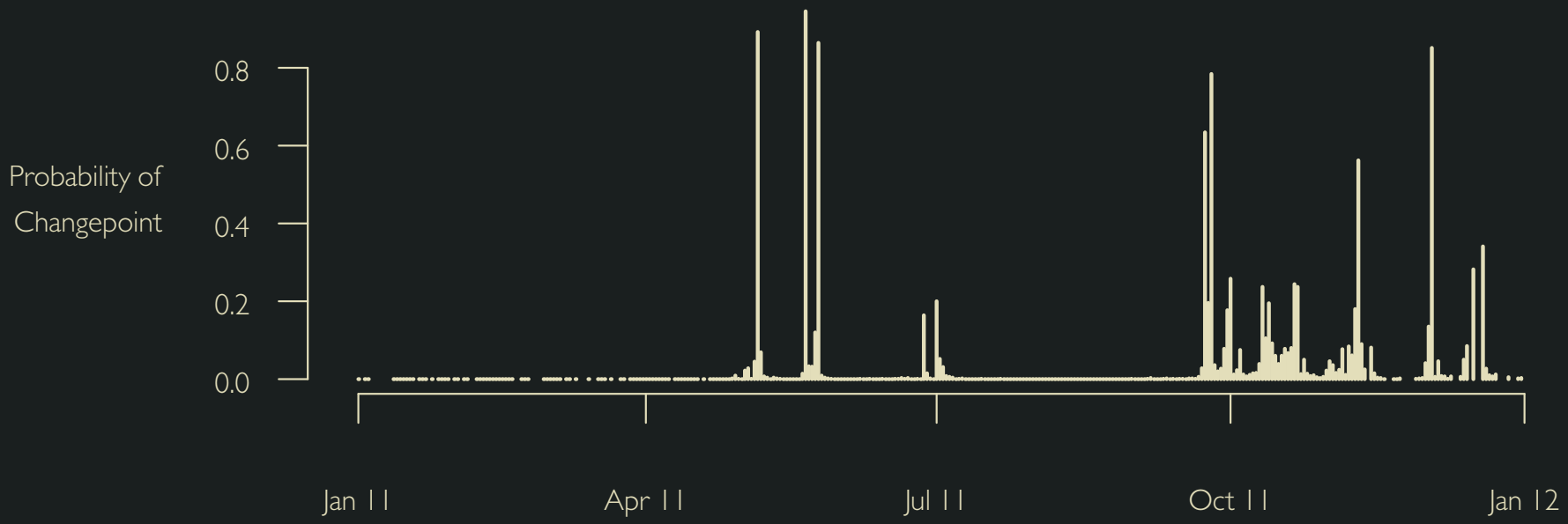
Use a Bayesian nonparametric prior to estimate the number of regimes.

The rise and fall of Herman Cain



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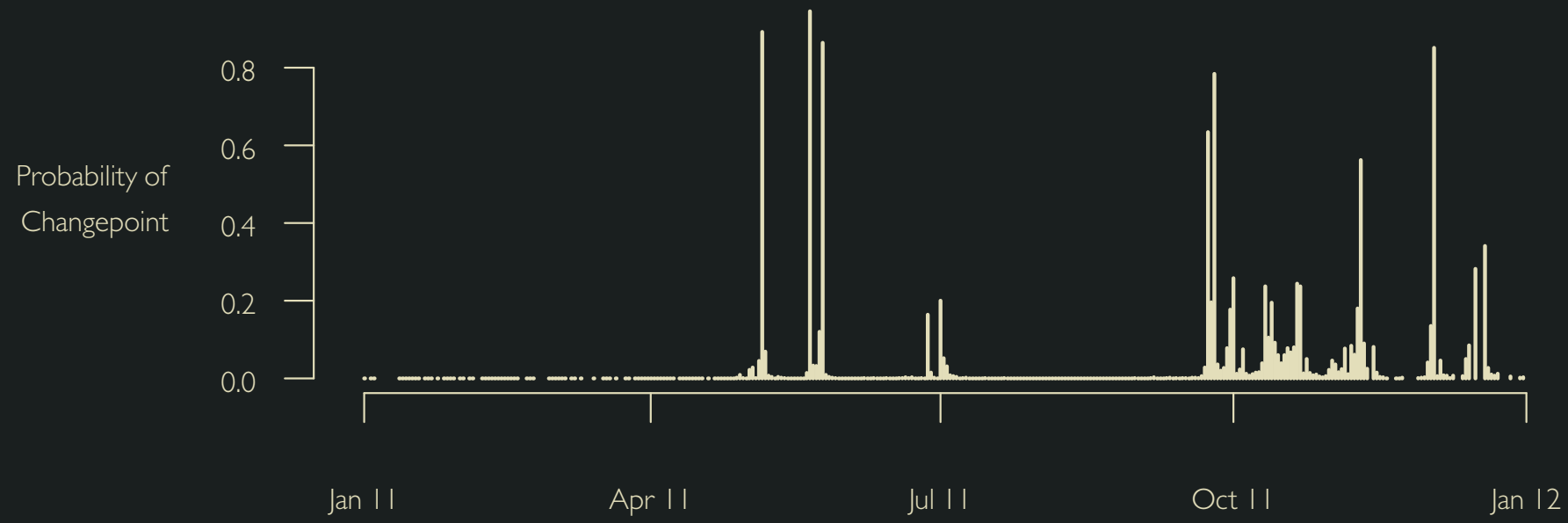

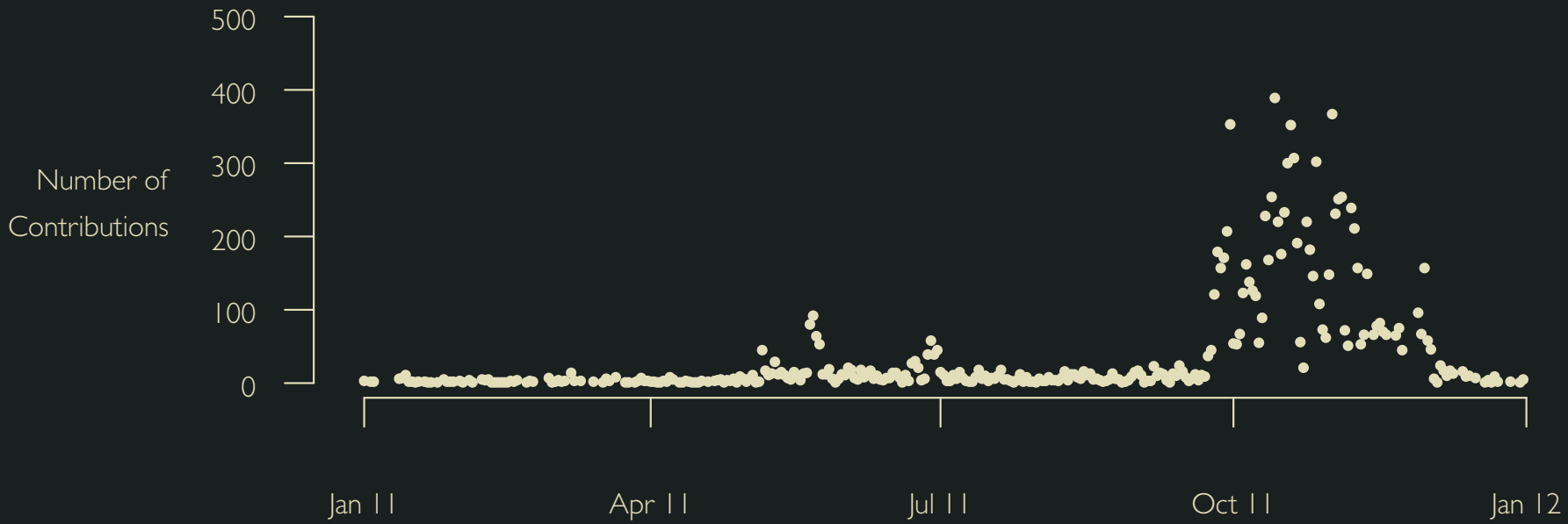

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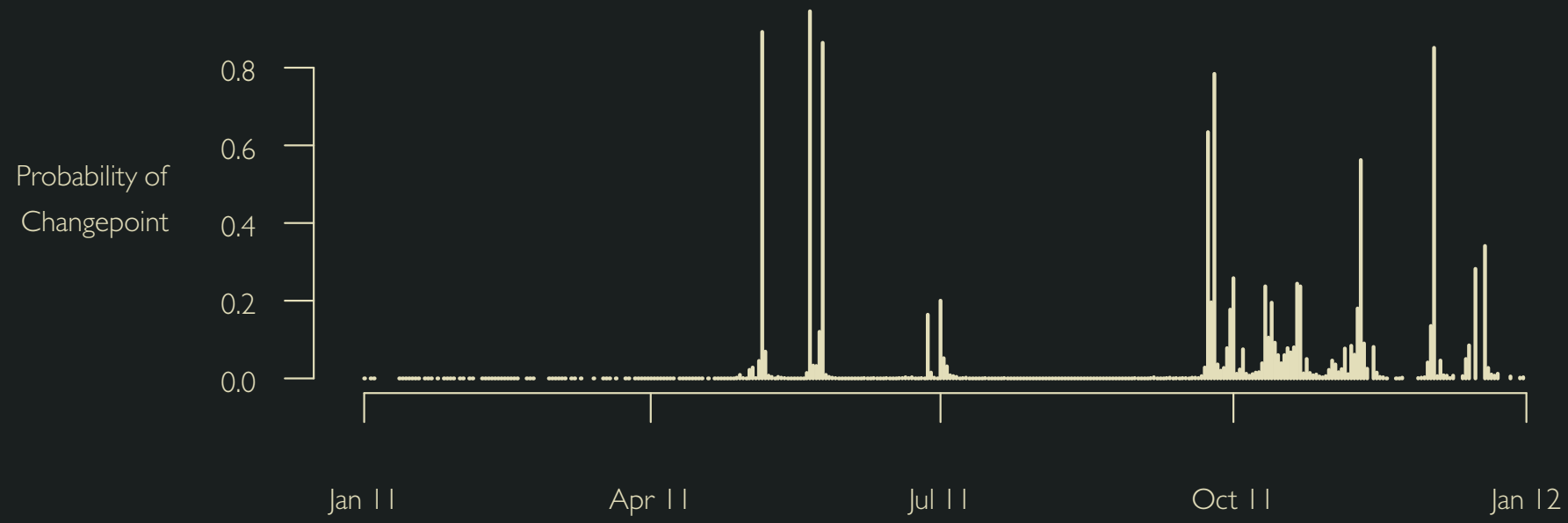

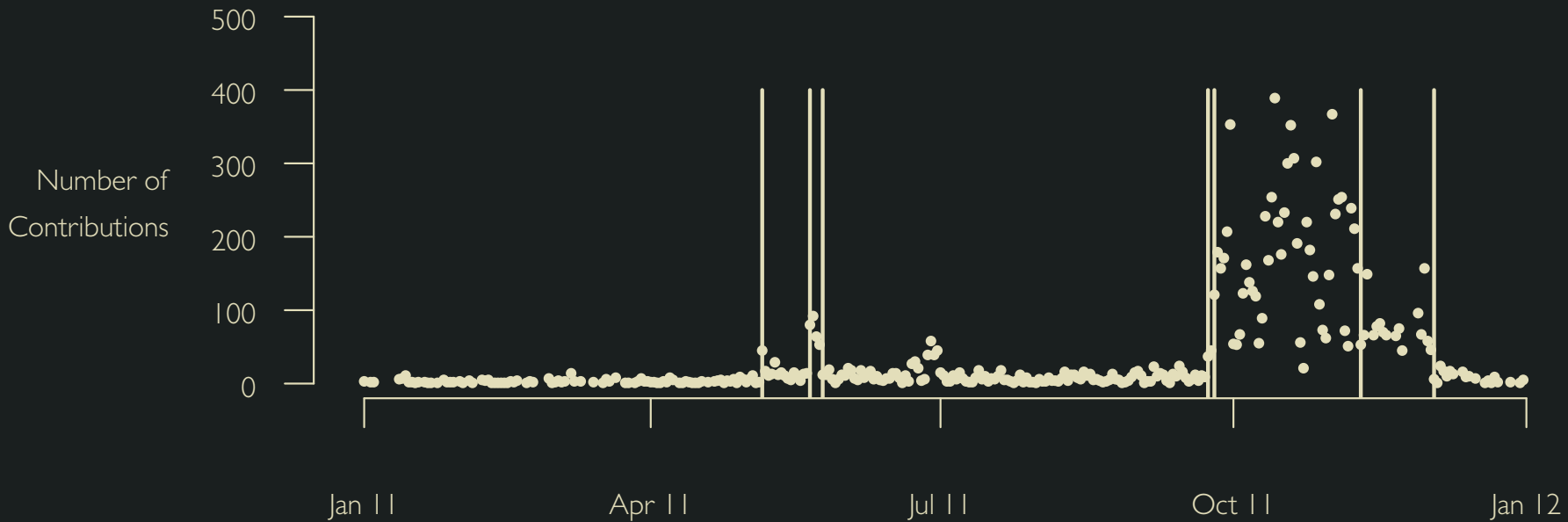

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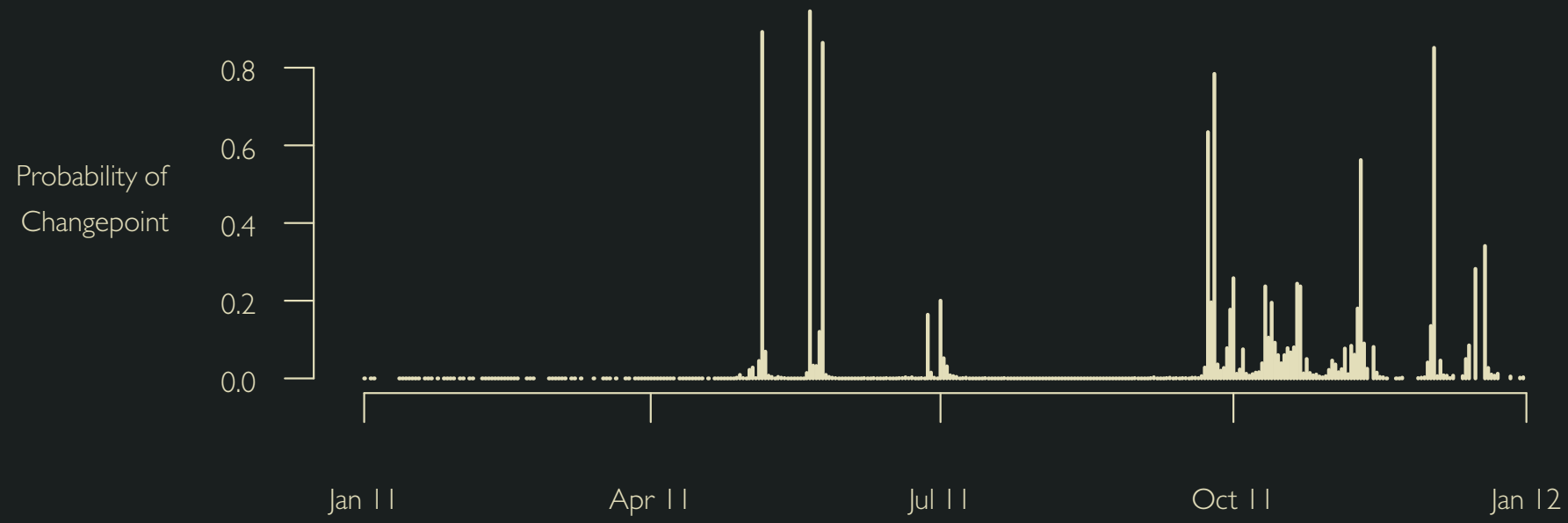

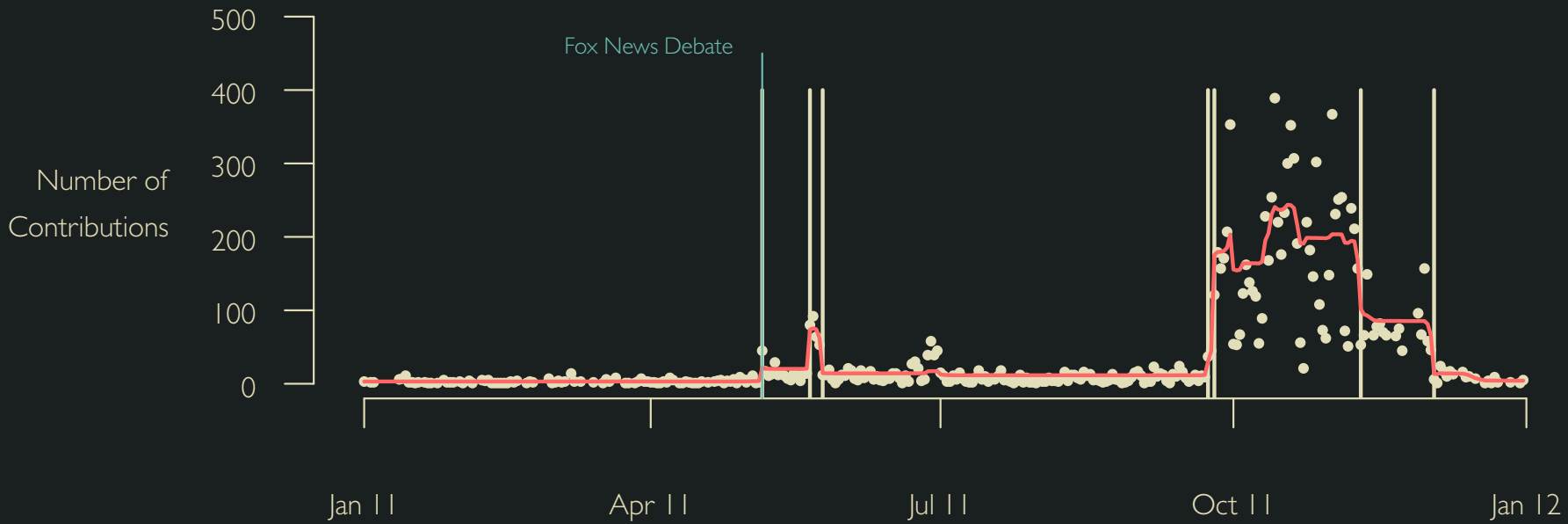

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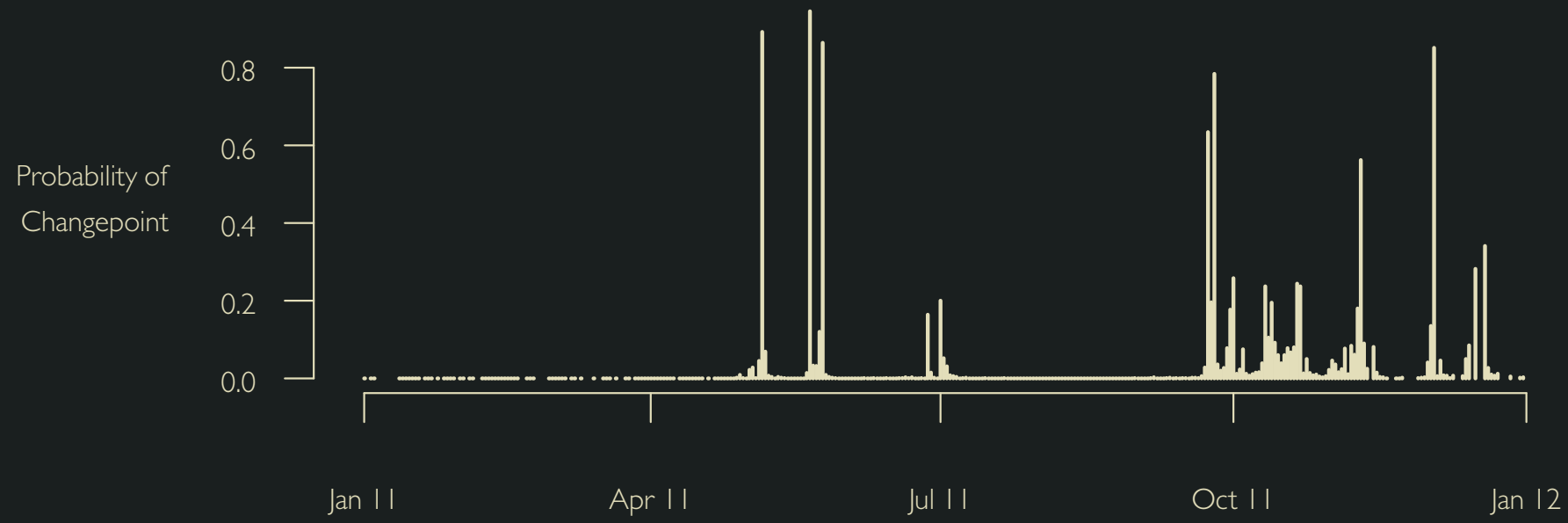

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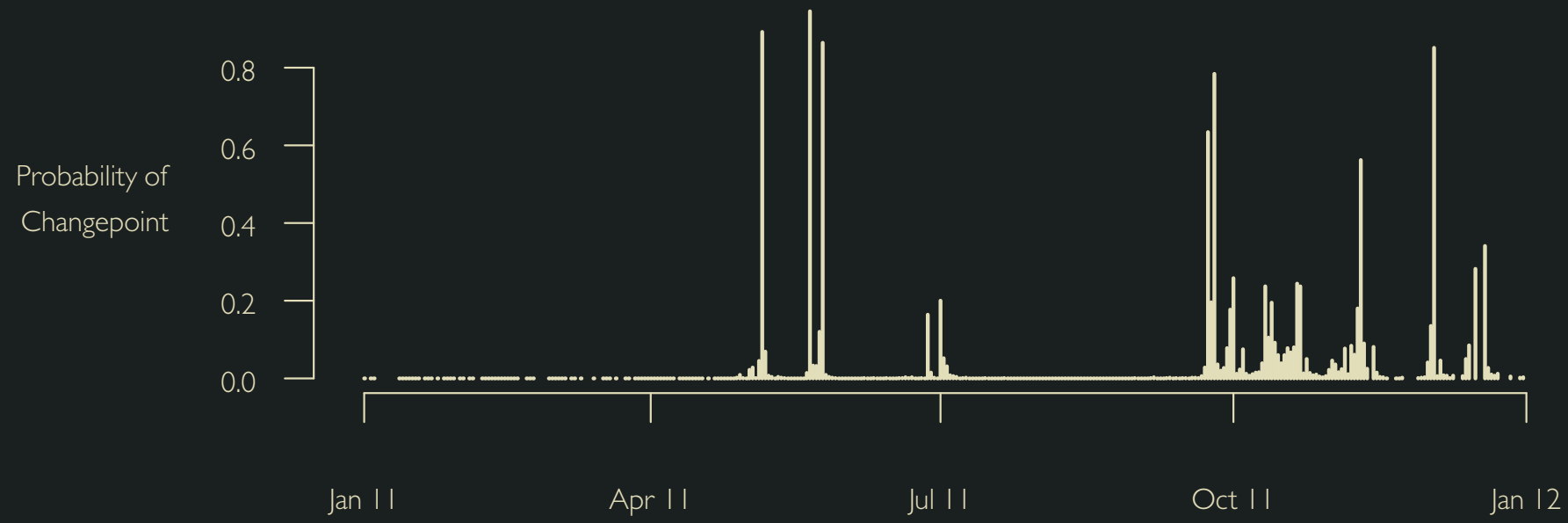

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The path forward.

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2. Collect fundraising event data and compare with change-points.

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1. Run on all (digitzed) Congressional races to find more systematic variation.

2. Collect fundraising event data and compare with change-points.

3. Generalize the Bayesian nonparametric approach beyond count data.