Trust and online reputation

Technologies for democratic society: Week 4

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Recap
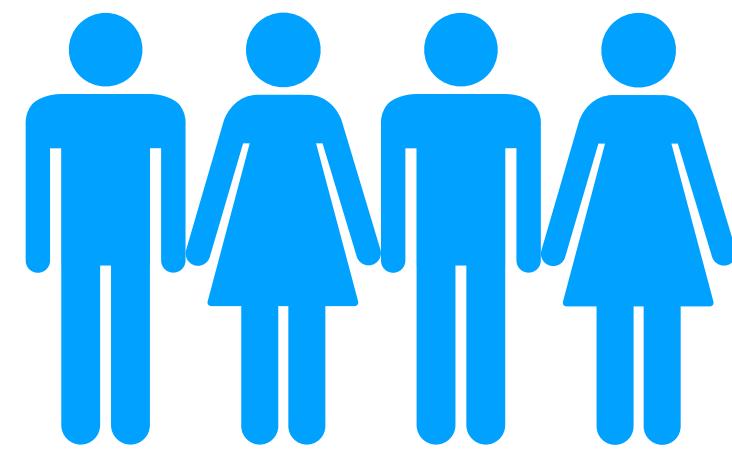
In the previous lecture you saw …

- What is influence in online media?

  - Specifically for Twitter (now X)

- Evaluation of influence on Web

  - Using PageRank
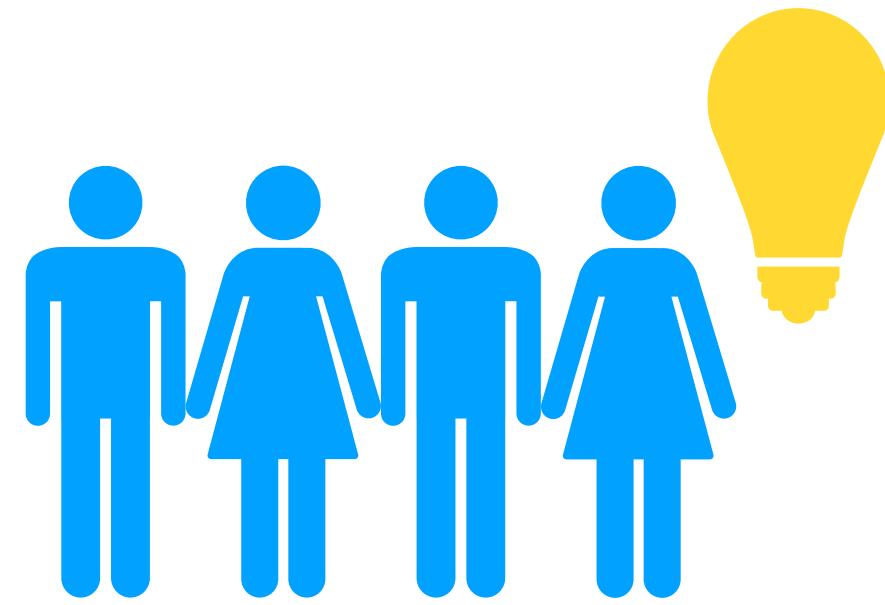
Scholarly peer-reviewed publications
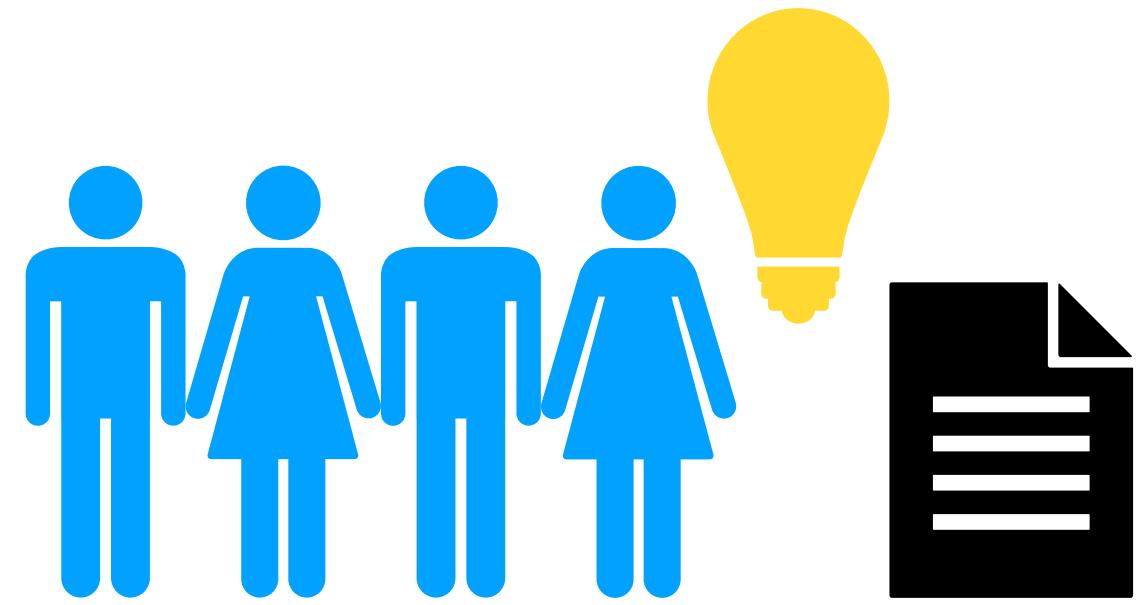
# What are peer-reviewed publications?

What are peer-reviewed publications?
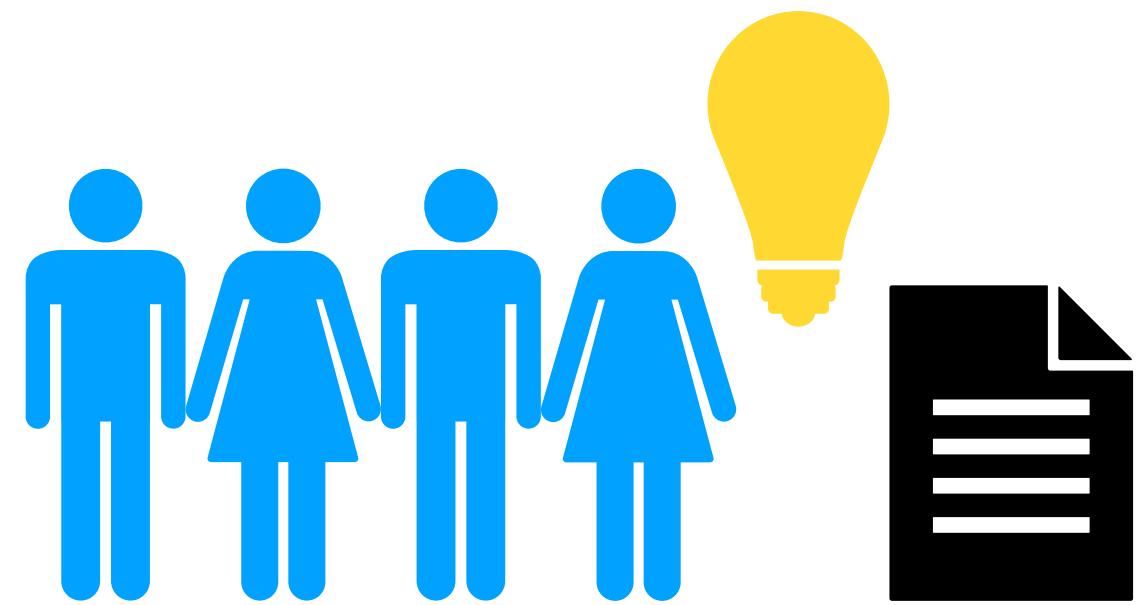
What are peer-reviewed publications?

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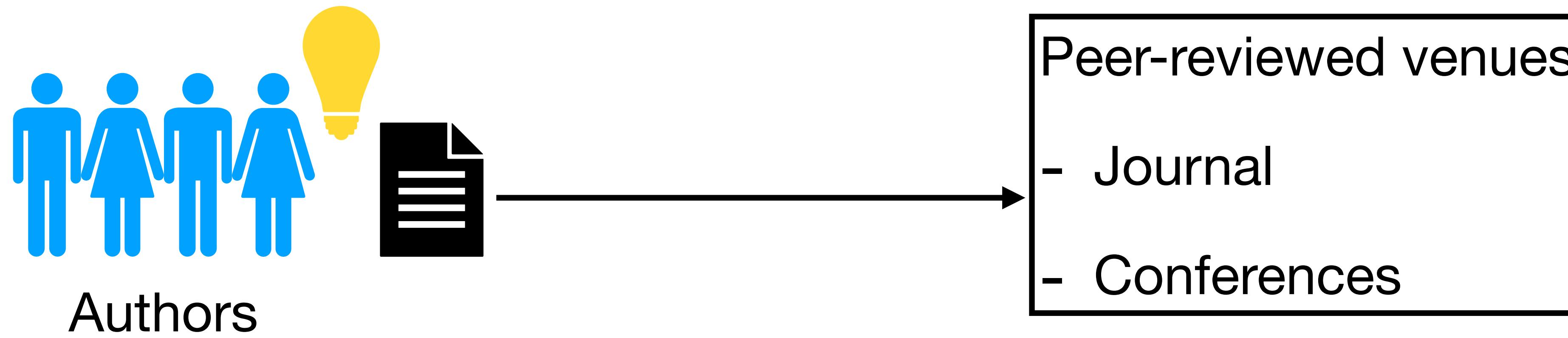
What are peer-reviewed publications?

Authors

What are peer-reviewed publications?

Authors

Peer-reviewed venues

- Journal

- Conferences

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Peers or Experts or Reviewers

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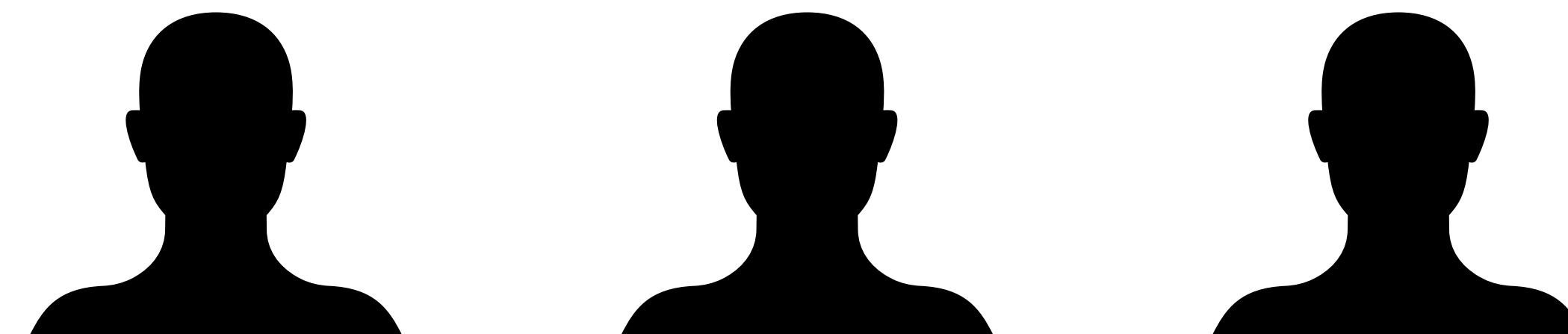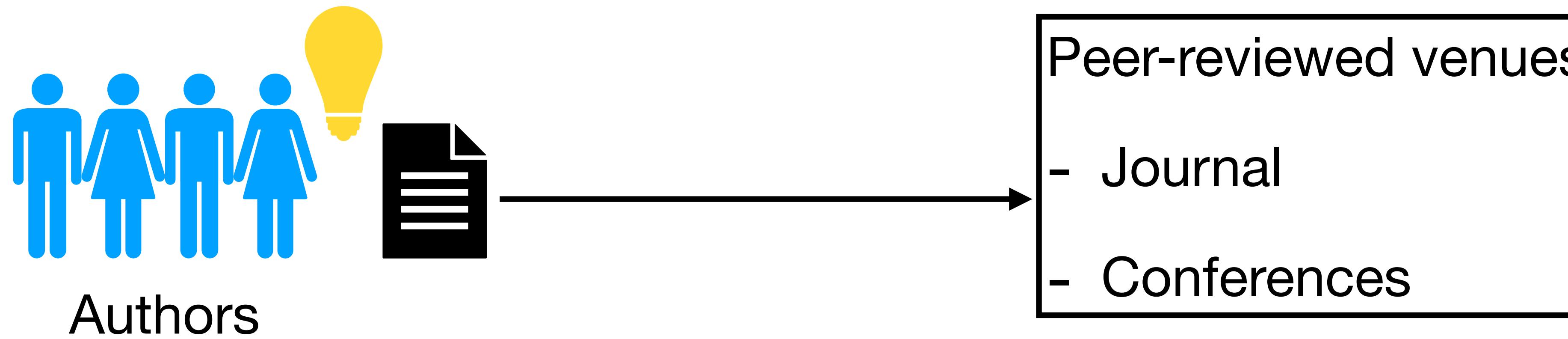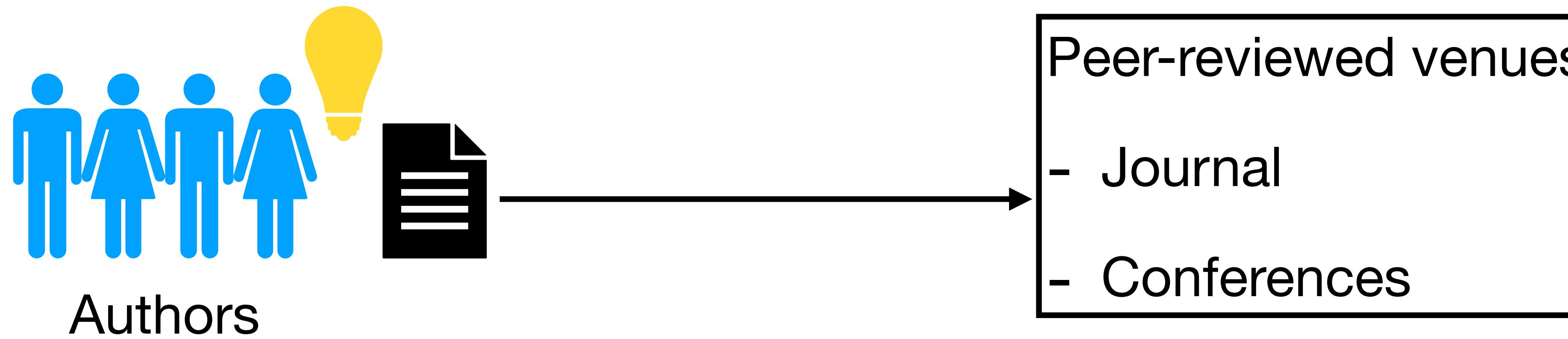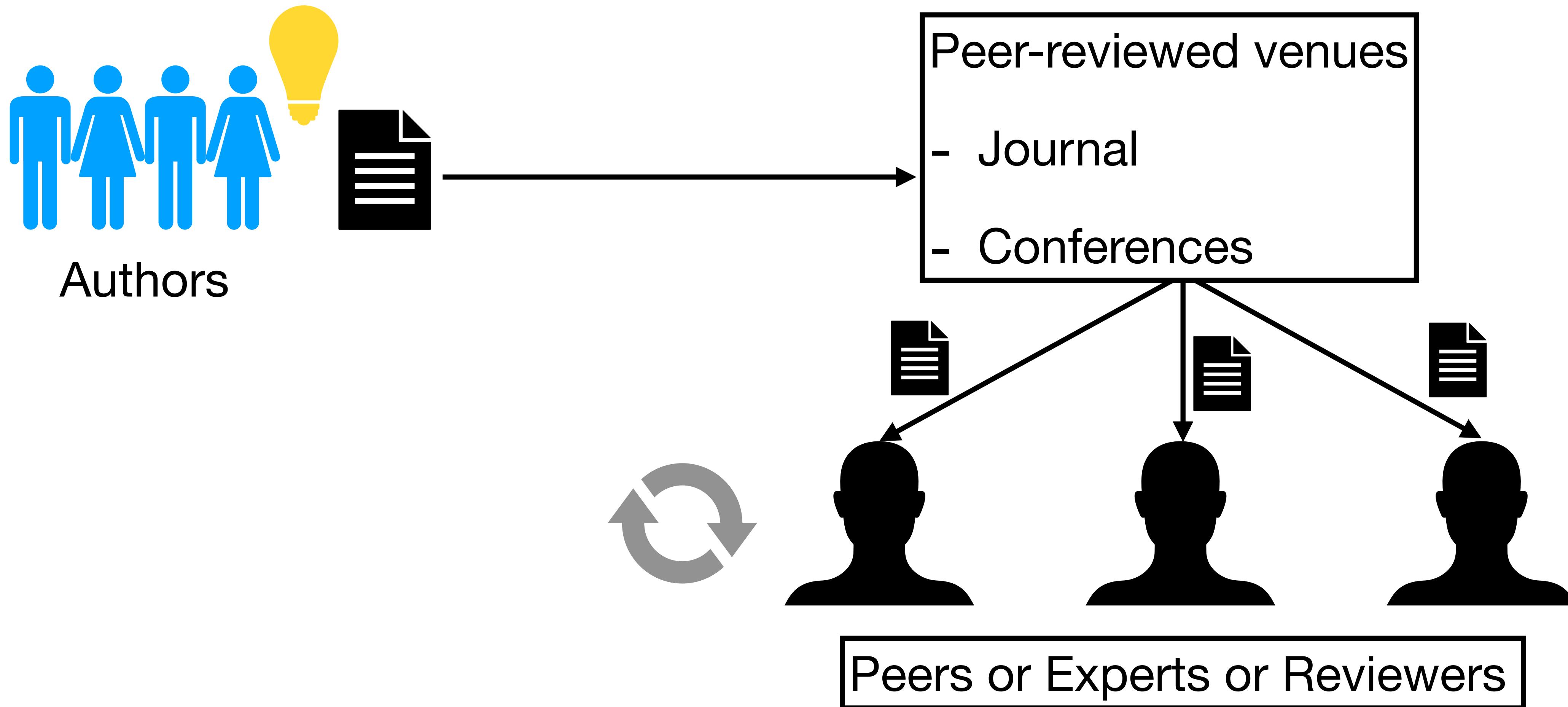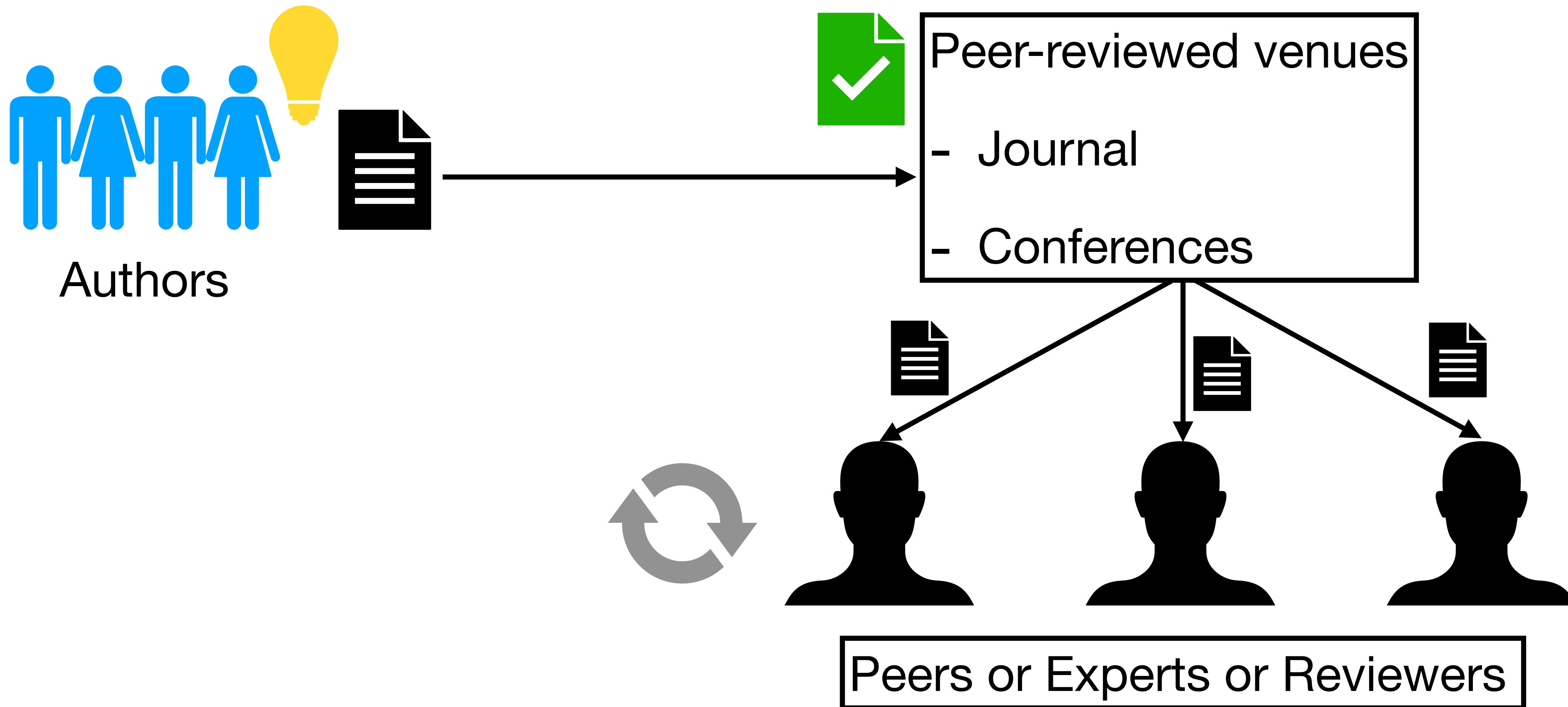
Peers or Experts or Reviewers

A brief history of peer reviewing

- Started in 1665

- Heavily developed in the 18th and 19th Century

Purpose of peer-reviewed publications

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Analyze content of research before publication

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Analyze content of research before publication

1) Identify potential errors

Purpose of peer-reviewed publications

Analyze content of research before publication

1) Identify potential errors → Filtering bad / wrong results

Purpose of peer-reviewed publications

Analyze content of research before publication

1) Identify potential errors → Filtering bad / wrong results

2) Apply scientific method

Purpose of peer-reviewed publications
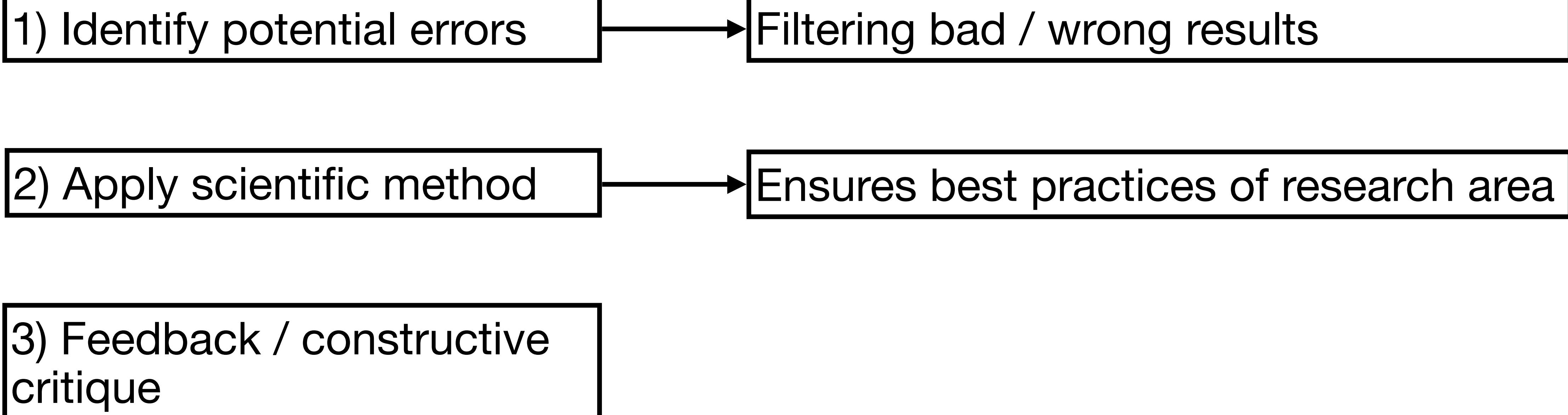
Analyze content of research before publication

1) Identify potential errors	→	Filtering bad / wrong results

2) Apply scientific method	→	Ensures best practices of research area

Purpose of peer-reviewed publications

Analyze content of research before publication

1) Identify potential errors → Filtering bad / wrong results

2) Apply scientific method → Ensures best practices of research area

3) Feedback / constructive critique

Purpose of peer-reviewed publications

Analyze content of research before publication

1) Identify potential errors	→	Filtering bad / wrong results

2) Apply scientific method	→	Ensures best practices of research area

3) Feedback / constructive critique	→	Potential improvements

Peer reviewing tools

Peer reviewing tools

Journals

Peer reviewing tools

Journals

Long review cycles

Peer reviewing tools

Journals

Long review cycles

Most disciplines

Peer reviewing tools

Journals

Conferences

Long review cycles

Most disciplines

Peer reviewing tools

Journals

Conferences

Long review cycles

Short review cycles

Most disciplines

Peer reviewing tools

Journals

| Long review cycles |

| Most disciplines |

Conferences

| Short review cycles |

| Computer science |

Peer reviewing tools

Journals

Conferences

Workshops

Long review cycles

Short review cycles

Most disciplines

Computer science

Peer reviewing tools

Journals

Conferences

Workshops

Long review cycles

Short review cycles

Faster turnaround

Most disciplines

Computer science

Peer reviewing tools

Journals	Conferences	Workshops
Long review cycles	Short review cycles	Faster turnaround
Most disciplines	Computer science	Preliminary results

Peer reviewing tools (contd…)

Peer reviewing tools (contd…)

Pre-prints

Peer reviewing tools (contd…)

Pre-prints

E.g. - arXiv.org, eprint.iacr.org

Peer reviewing tools (contd…)

Pre-prints

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Non-peer reviewed

Peer reviewing tools (contd…)

Pre-prints

E.g. - arXiv.org,
eprint.iacr.org

Non-peer reviewed

Lightweight

Peer reviewing tools (contd…)

Pre-prints

E.g. - arXiv.org, eprint.iacr.org

Non-peer reviewed

Lightweight

Timestamped

Peer reviewing tools (contd…)

Pre-prints

E.g. - arXiv.org, eprint.iacr.org

Non-peer reviewed

Lightweight

Timestamped

Any field; particularly useful for fast-moving fields like AI

Blinding

Blinding

Reviewers see
authors' identities

Blinding

| Reviewers see authors' identities | Authors see reviewers' identities |

Blinding

Reviewers see
authors' identities

Authors see
reviewers' identities

Non-blind

Blinding

Reviewers see authors' identities

Authors see reviewers' identities

Non-blind

✓ ✓

Blinding

| Reviewers see authors' identities | Authors see reviewers' identities |

Non-blind ✓ ✓

Single-blind

Blinding

	Reviewers see authors' identities	Authors see reviewers' identities
Non-blind	✔	✔
Single-blind	✔	✖

Blinding

	Reviewers see authors' identities	Authors see reviewers' identities
Non-blind	✓	✓
Single-blind	✓	✗
Double-blind		

Blinding

	Reviewers see authors' identities	Authors see reviewers' identities
Non-blind	✓	✓
Single-blind	✓	✗
Double-blind	✗	✗

Influence metrics in research

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What are the metrics for influence in research?

Influence metrics in research

What are the metrics for influence in research?

- No. of citations

Influence metrics in research

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- No. of citations

- No. of publications

Influence metrics in research

What are the metrics for influence in research?

- No. of citations

- No. of publications

- No. of accepted grant proposals

Influence metrics in research

What are the metrics for influence in research?

- No. of citations

- No. of publications

- No. of accepted grant proposals

- h-index

Manipulation of metrics

Manipulation of metrics

Honorary authorship

Manipulation of metrics

Honorary authorship

Coercive citations

Manipulation of metrics

Honorary authorship

Coercive citations

Citation rings

Blinding

	Reviewers see authors' identities	Authors see reviewers' identities
Non-blind	✓	✓
Single-blind	✓	✗
Double-blind	✗	✗

Search engine manipulation

Aim of search engine manipulation

- The access of web pages is primarily governed by the web pages' position

    - 91.5% of clicks are on the first page of the results

        - 32.5% are on the first result

        - 17.6% are on the second result

- <u>The goal of the search engine manipulation is to put the search results as high as possible</u>

Manipulation techniques

Manipulation techniques

- <u>Unethical techniques to improve the rank of a page: black-hat techniques</u>

Manipulation techniques

- <u>Unethical techniques to improve the rank of a page: black-hat techniques</u>

  - Indexing

Manipulation techniques

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Manipulation techniques

- <u>Unethical techniques to improve the rank of a page: black-hat techniques</u>

  - Indexing

  - On-page techniques

  - Off-page techniques

  - Bowling

Indexing: Blog-Ping

Indexing: Blog-Ping

New
Website

Indexing: Blog-Ping
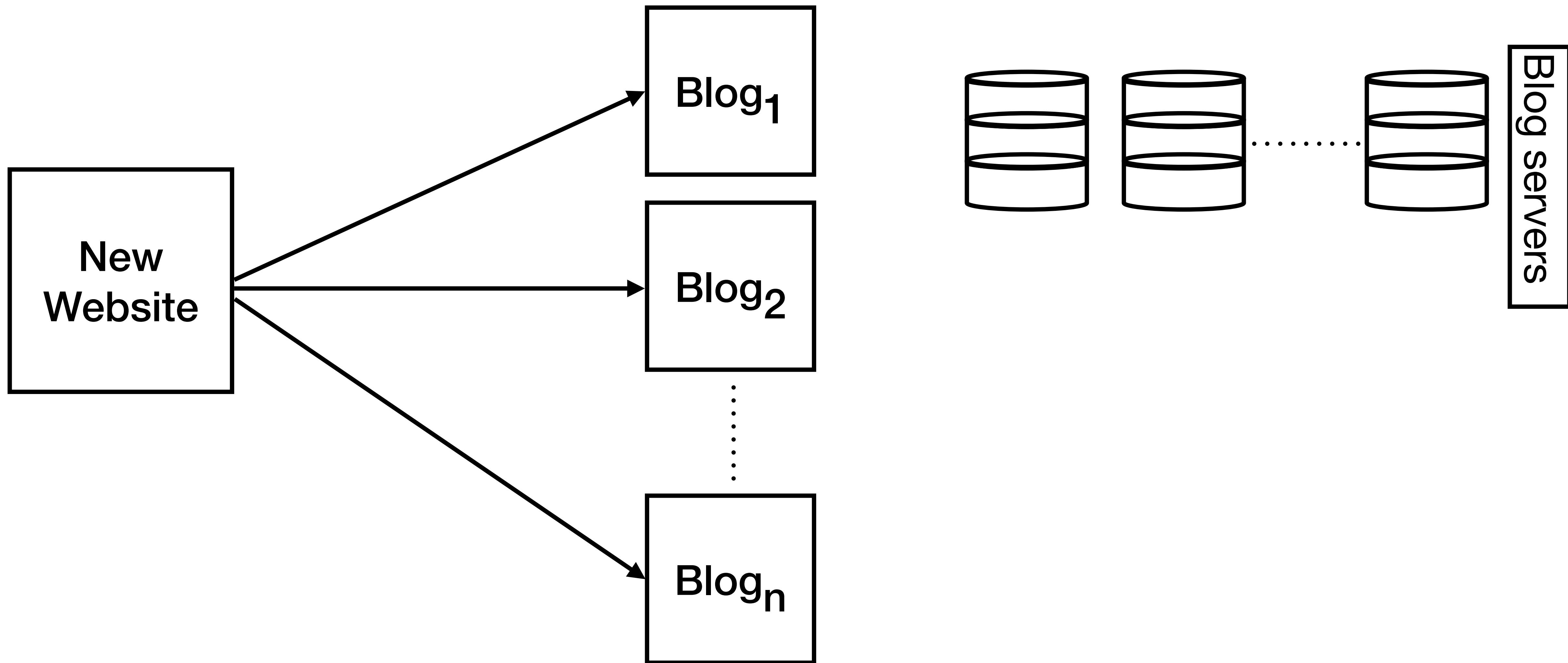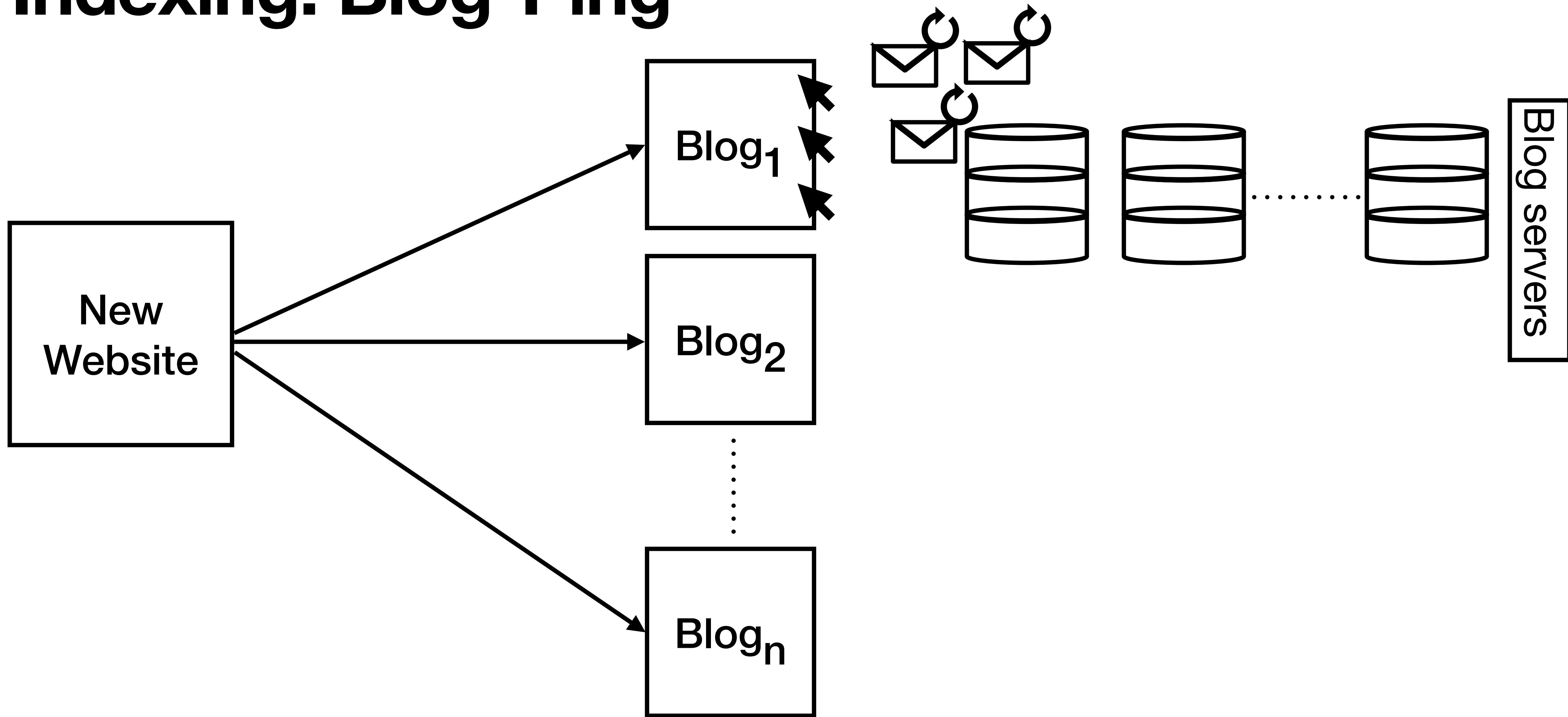
New
Website

$Blog_1$

$Blog_2$

$Blog_n$

Indexing: Blog-Ping
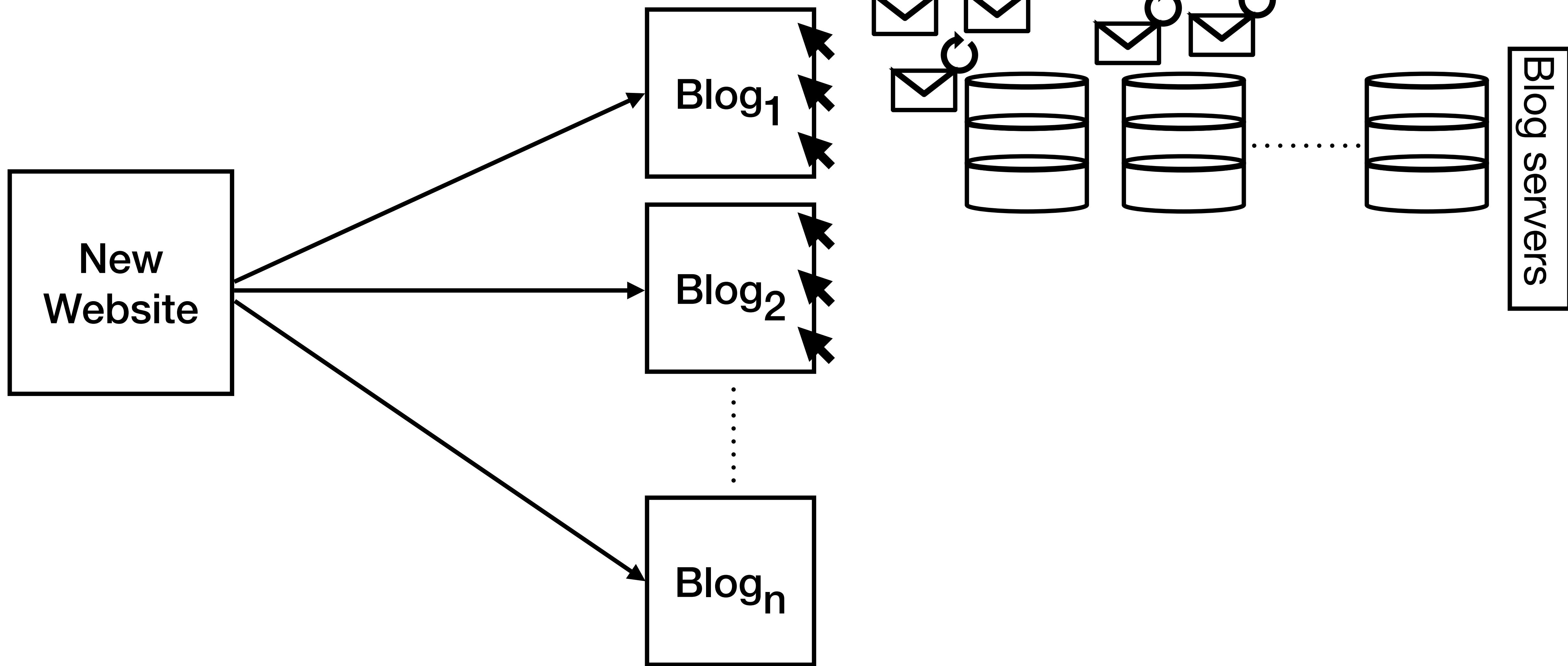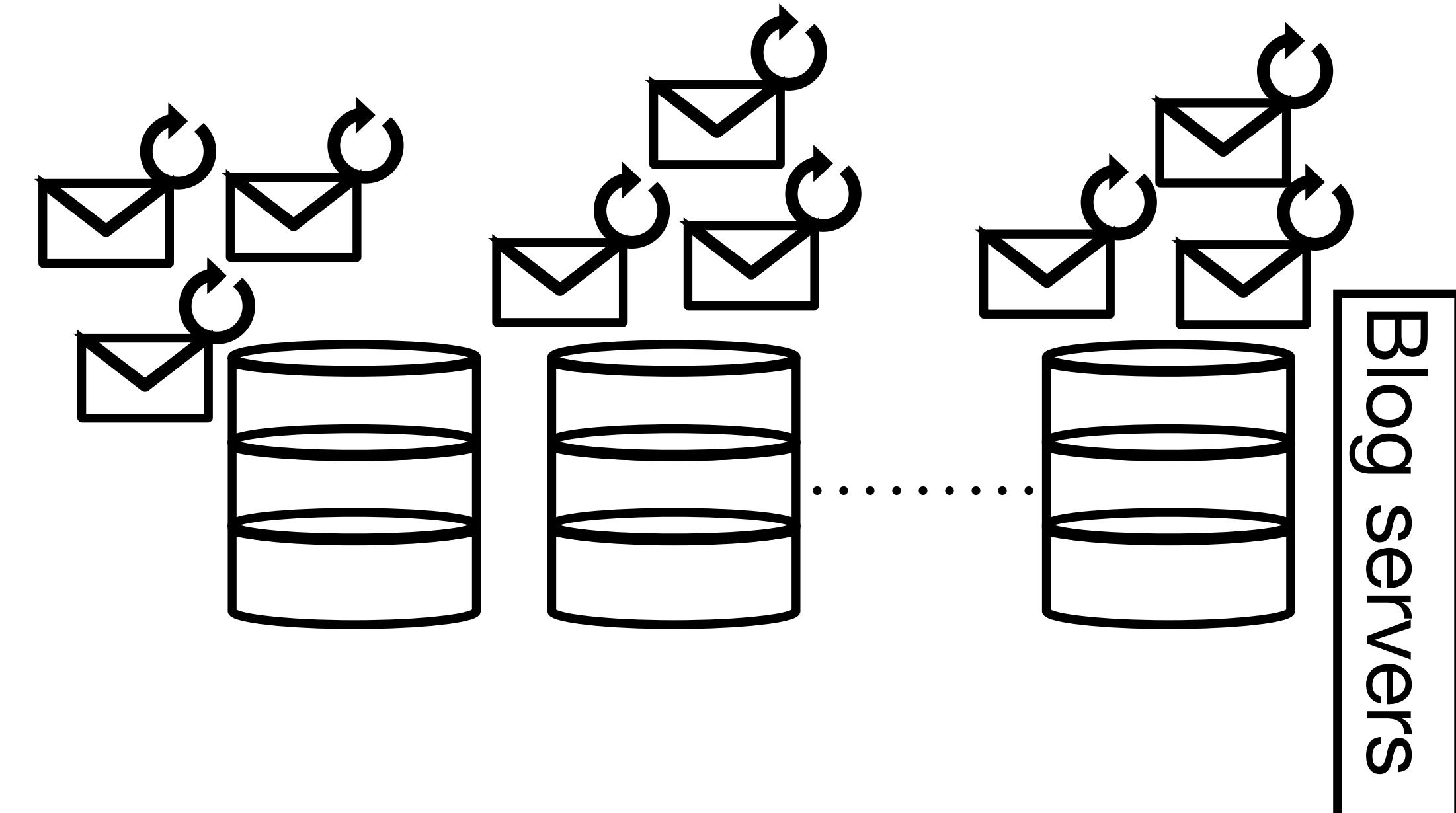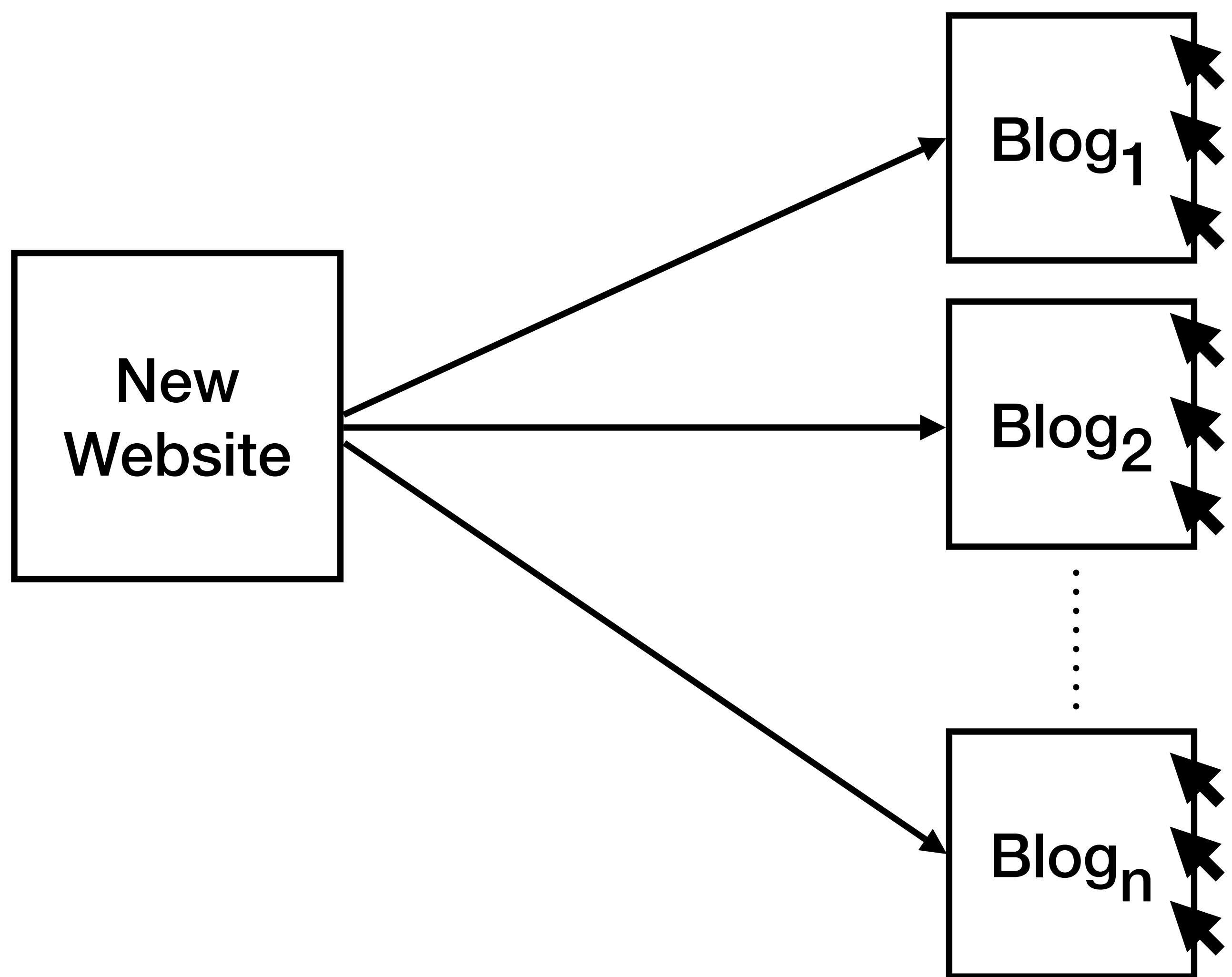
# Indexing: Blog-Ping

Indexing: Blog-Ping

Indexing: Blog-Ping

New
Website

Blog$_1$

Blog$_2$

Blog$_n$

Blog servers
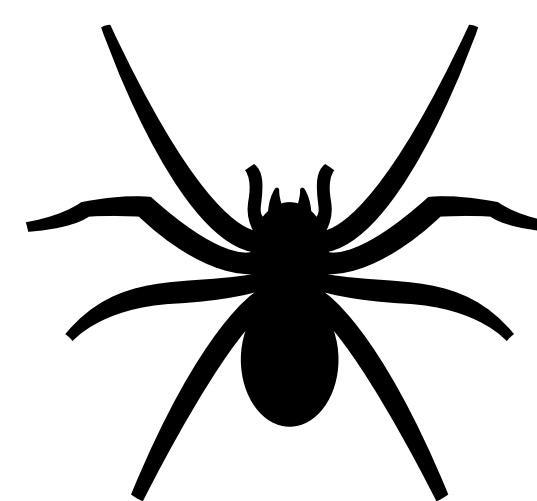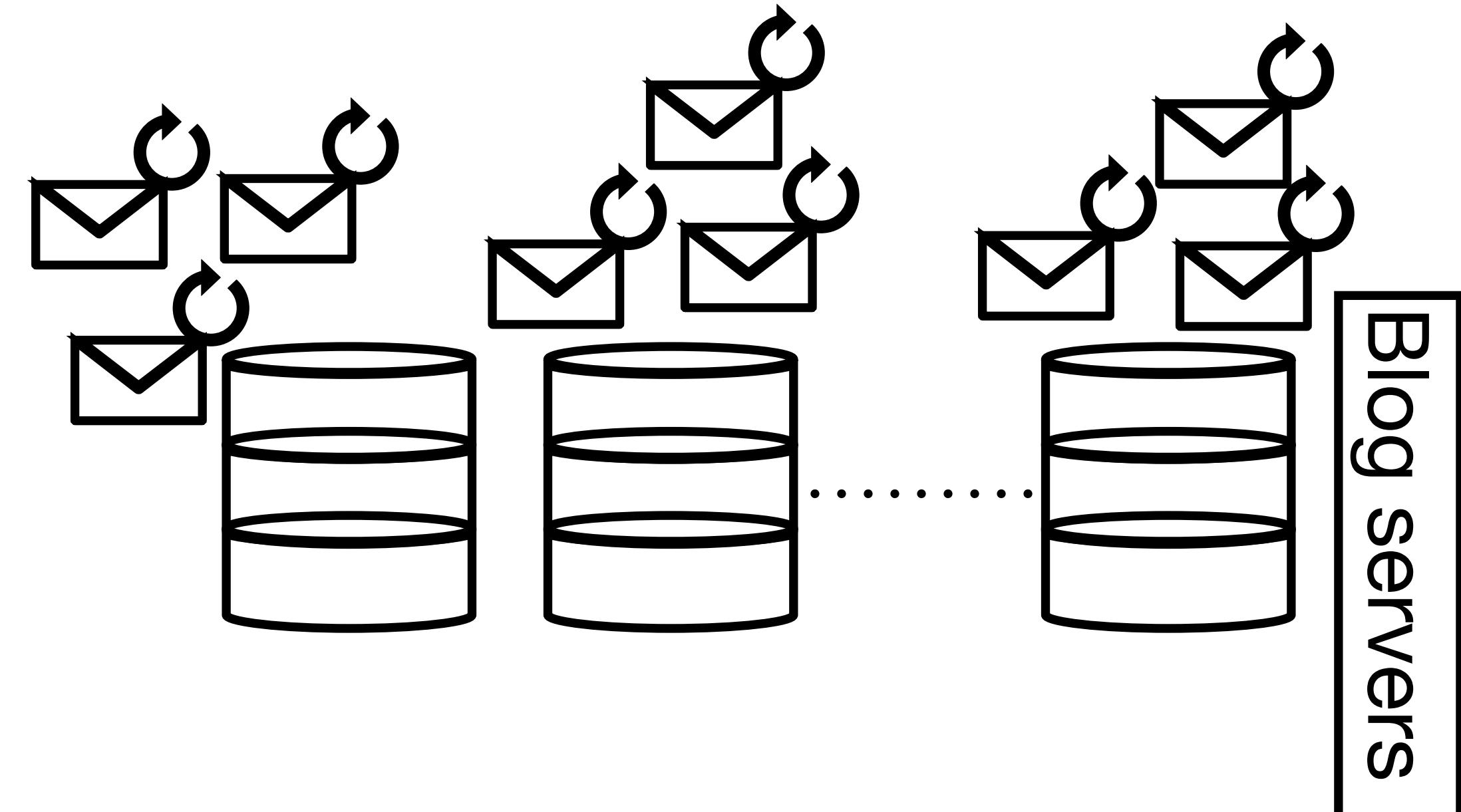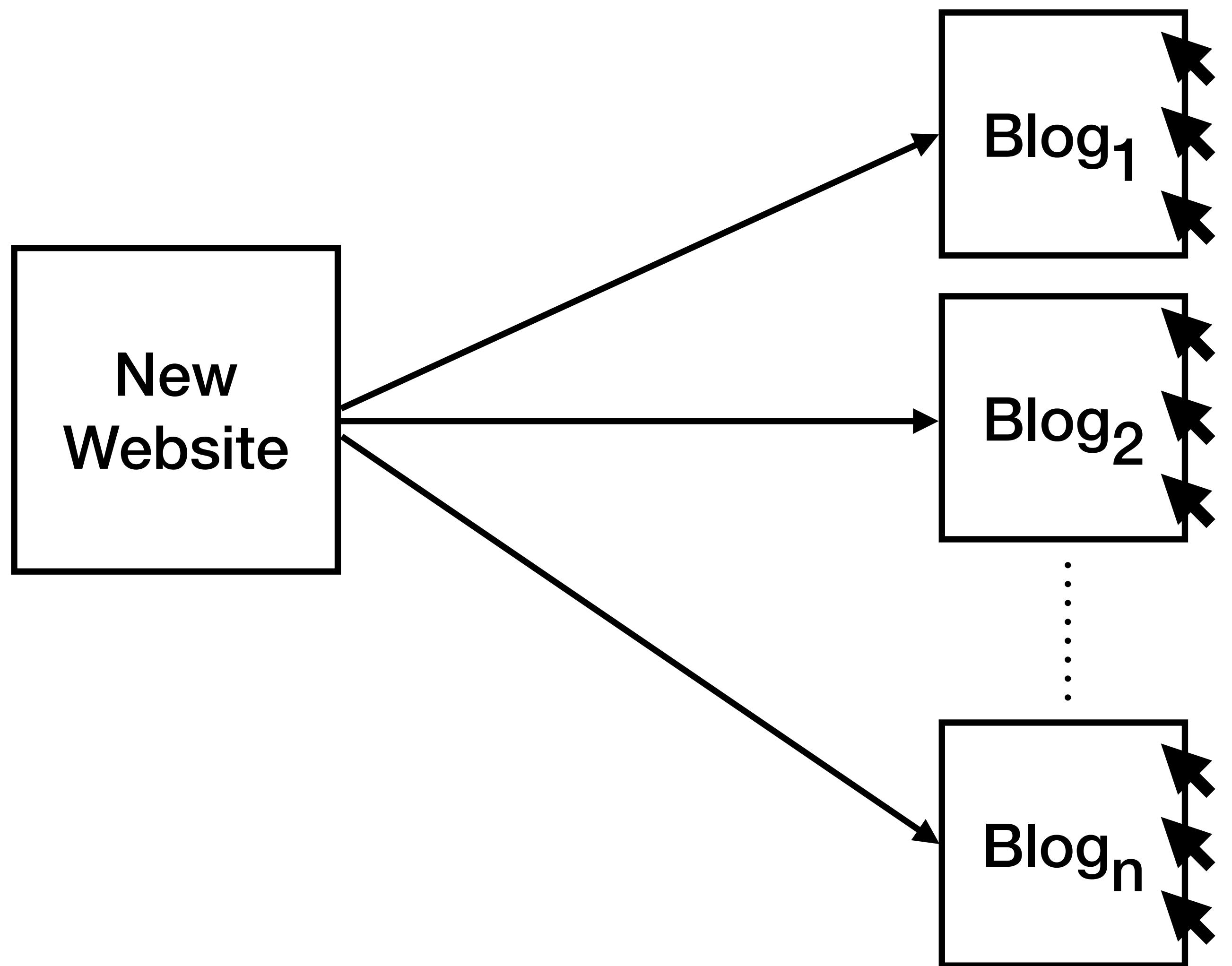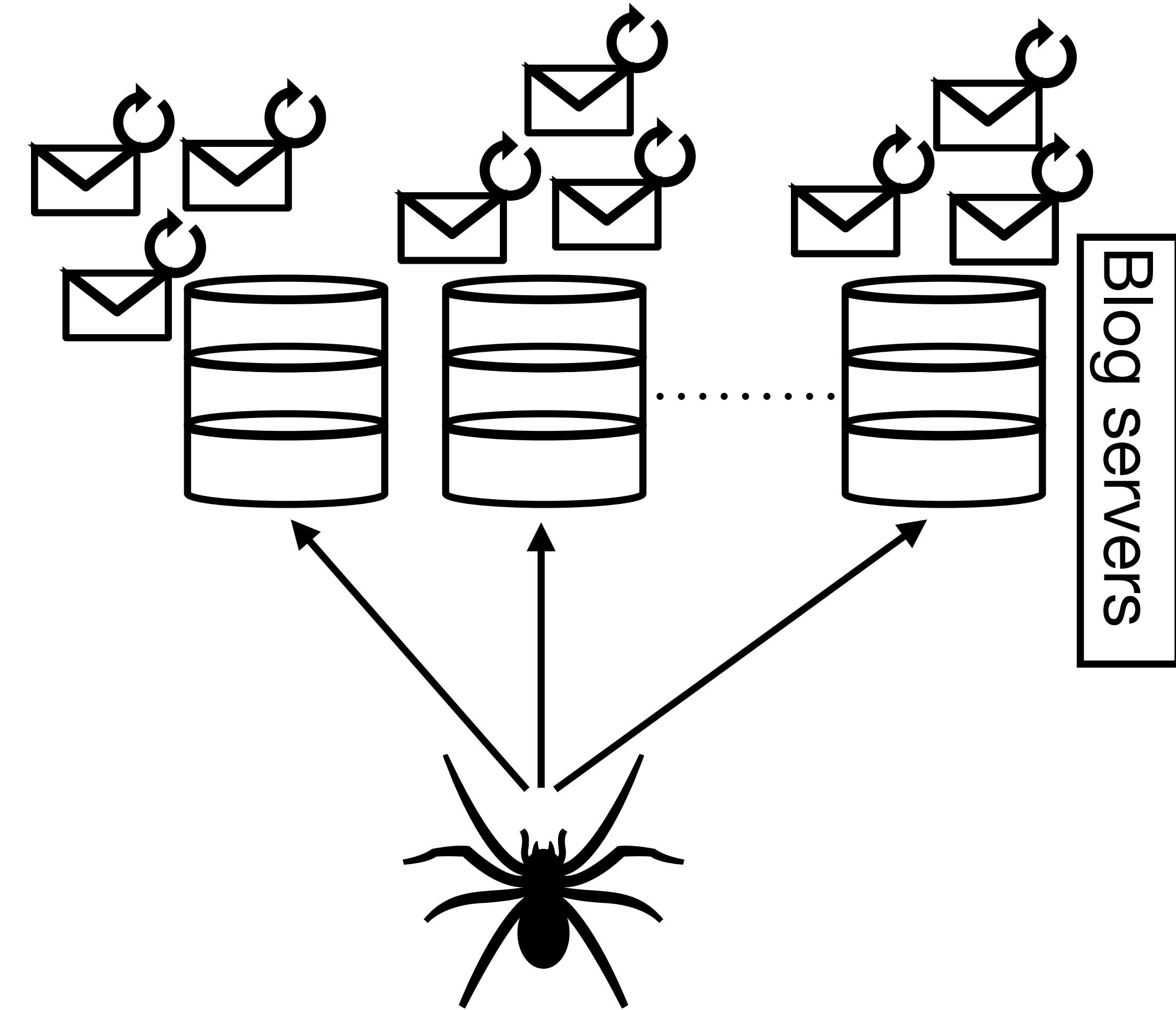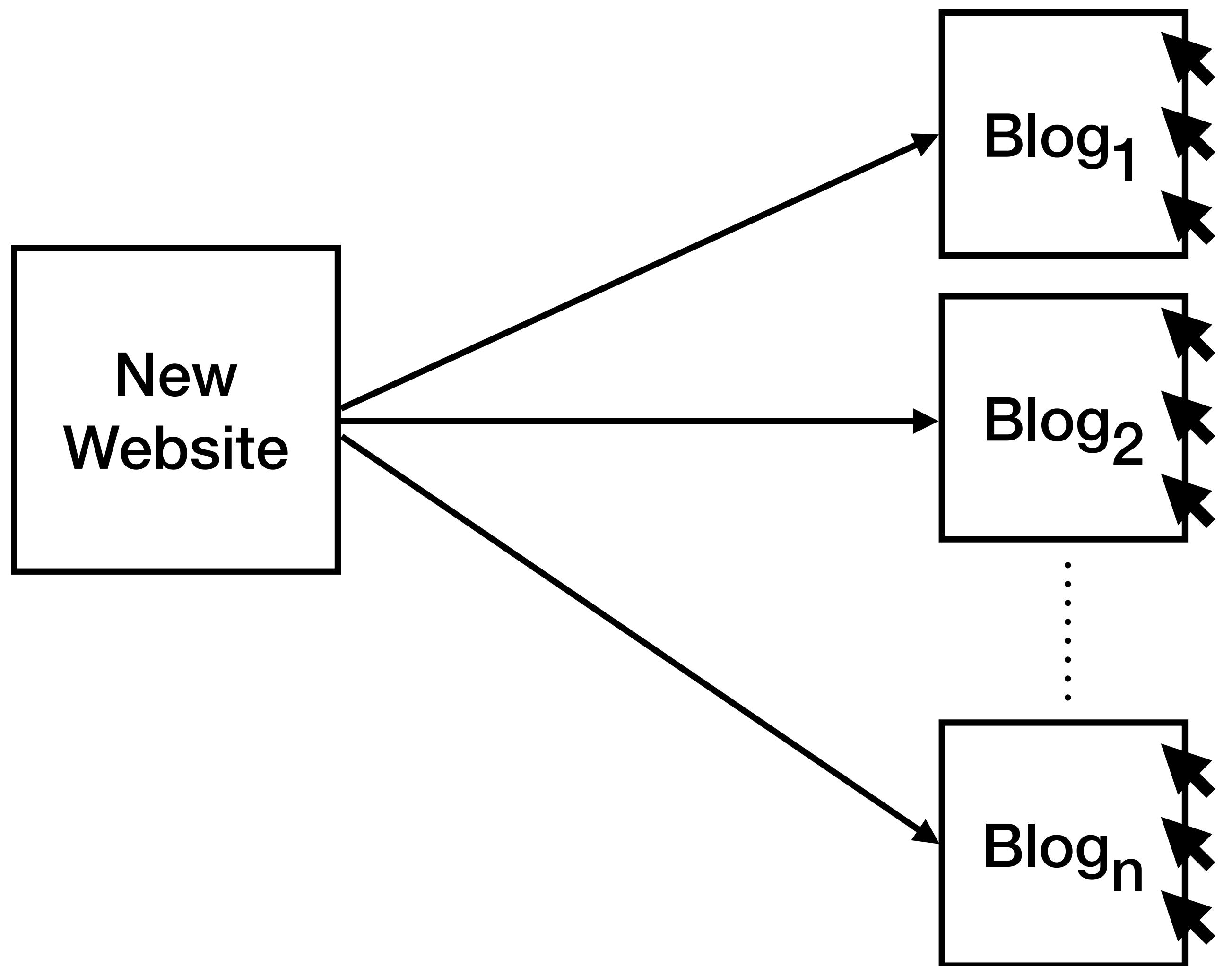
Indexing: Blog-Ping

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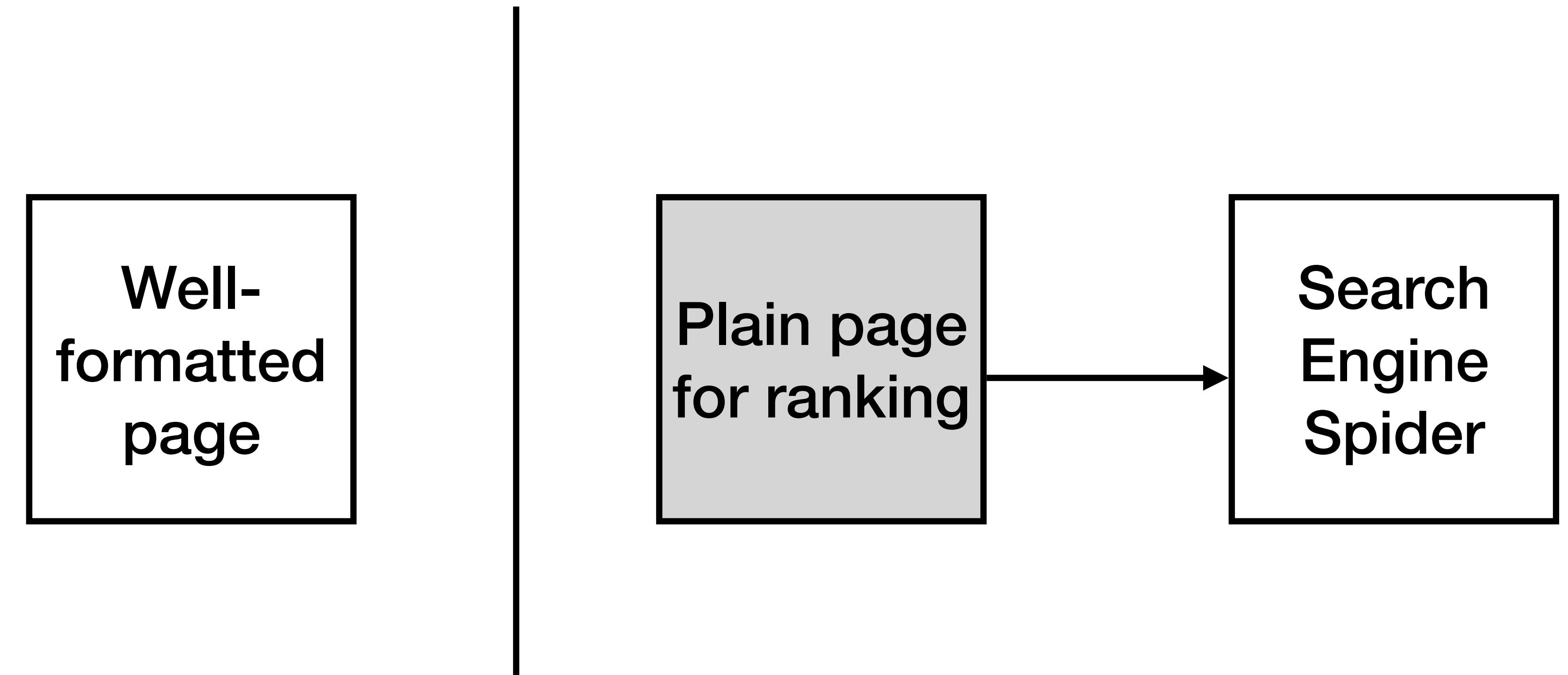
On-Page: Cloaking

On-Page: Cloaking
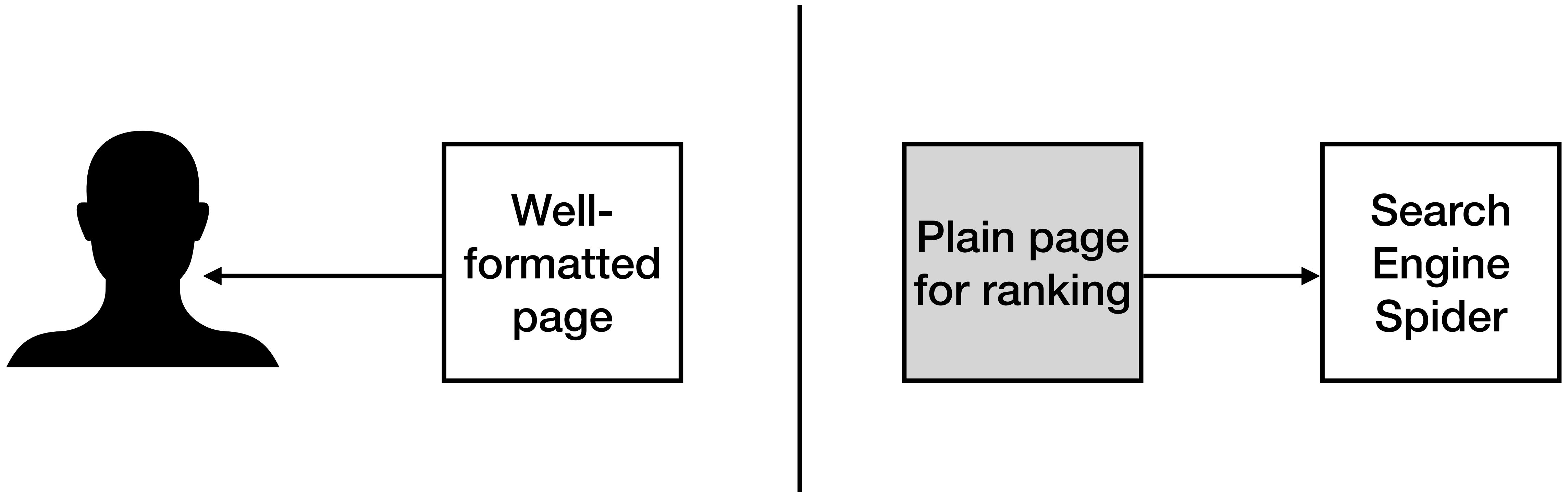
Well-formatted page

Plain page for ranking

On-Page: Cloaking

Well-
formatted
page

Plain page
for ranking → Search
Engine
Spider

On-Page: Cloaking
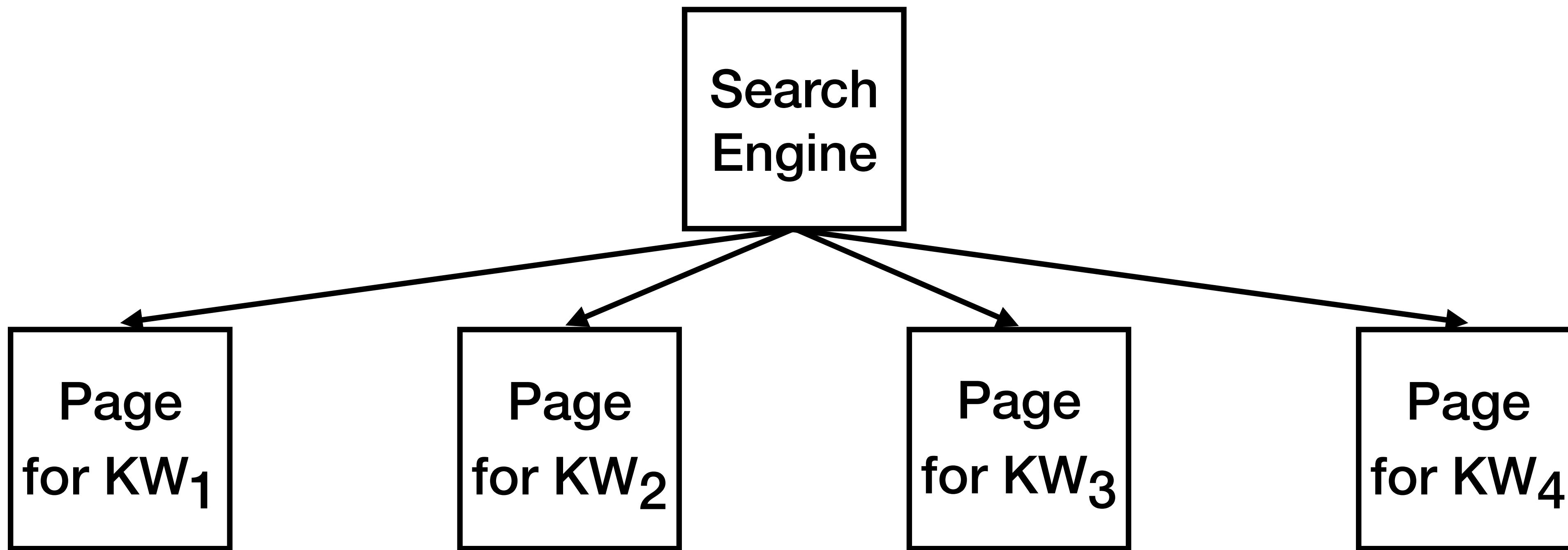
# On-Page: Doorway Pages
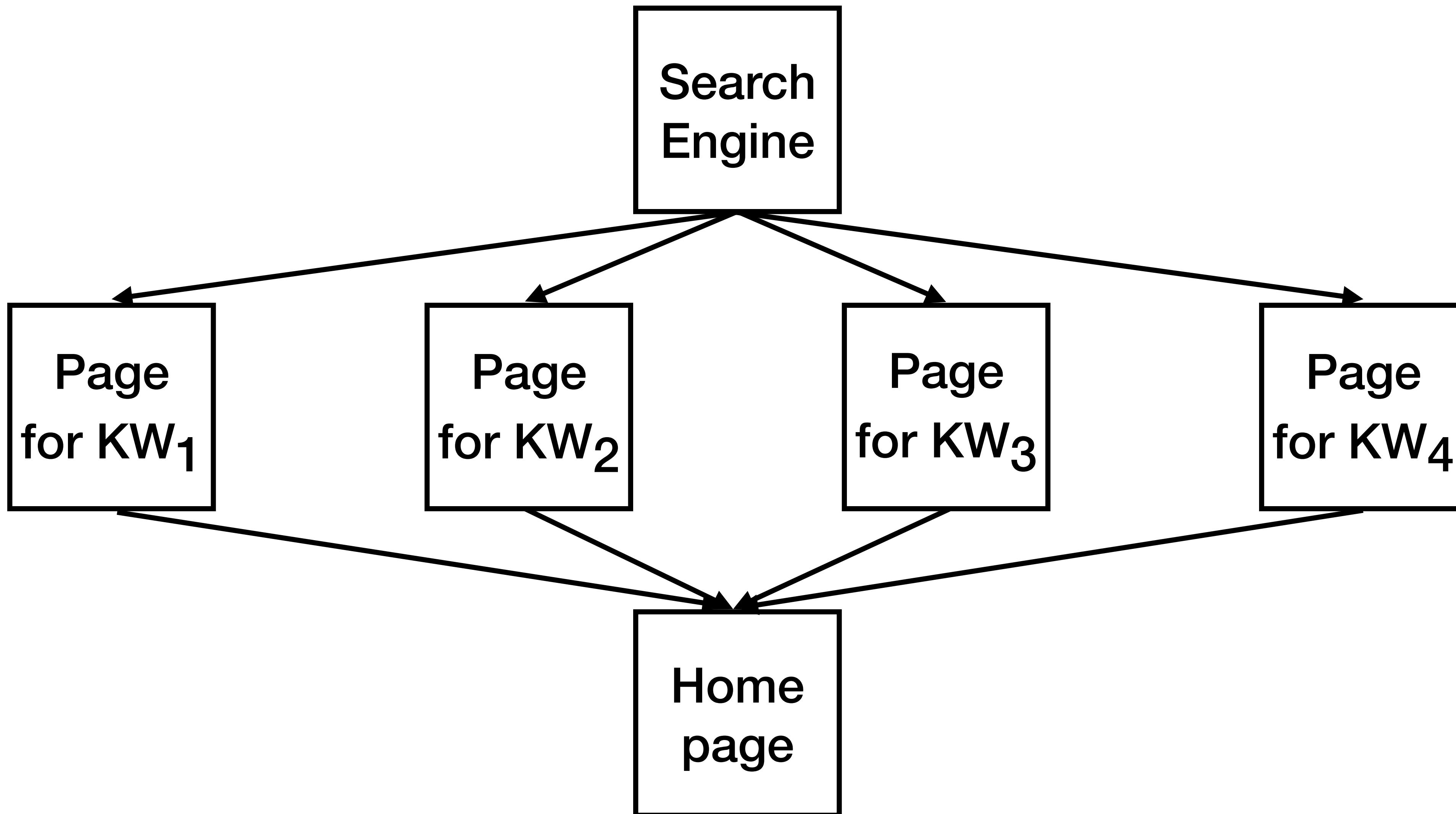
On-Page: Doorway Pages

Search
Engine

On-Page: Doorway Pages
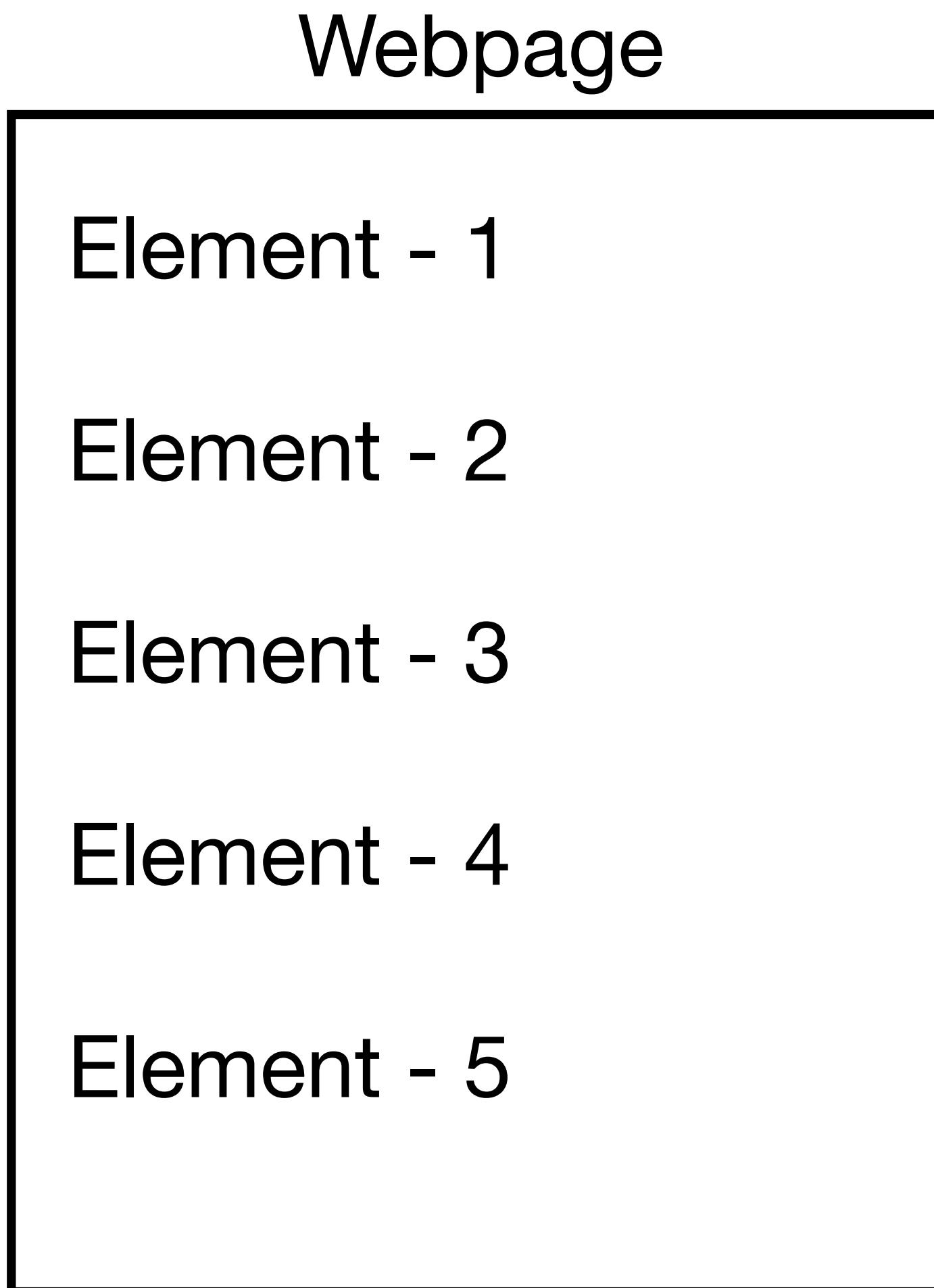
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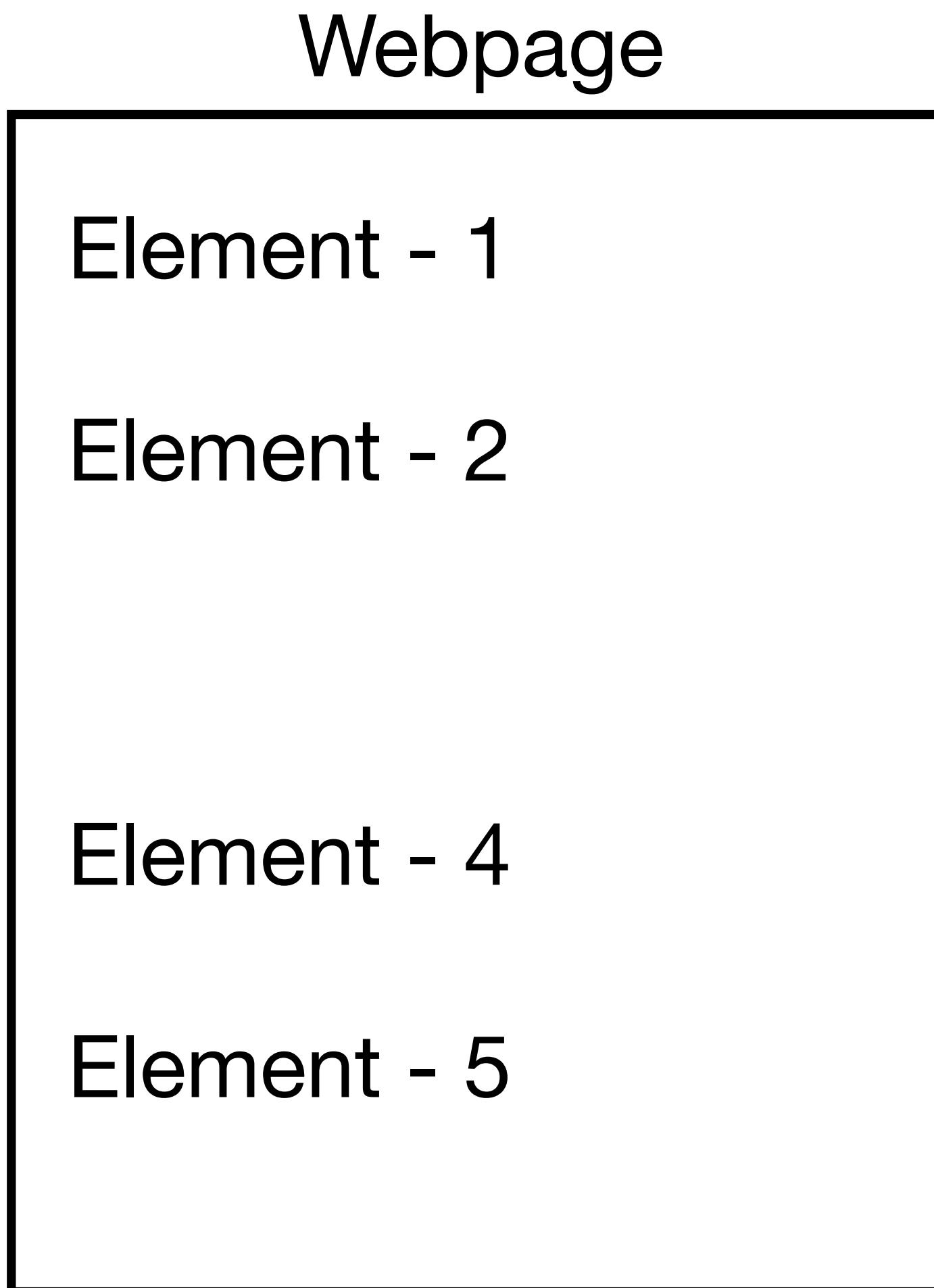
On-Page: Invisible Elements

On-Page: Invisible Elements

Webpage

Element - 1

Element - 2

Element - 3

Element - 4

Element - 5

On-Page: Invisible Elements

Webpage
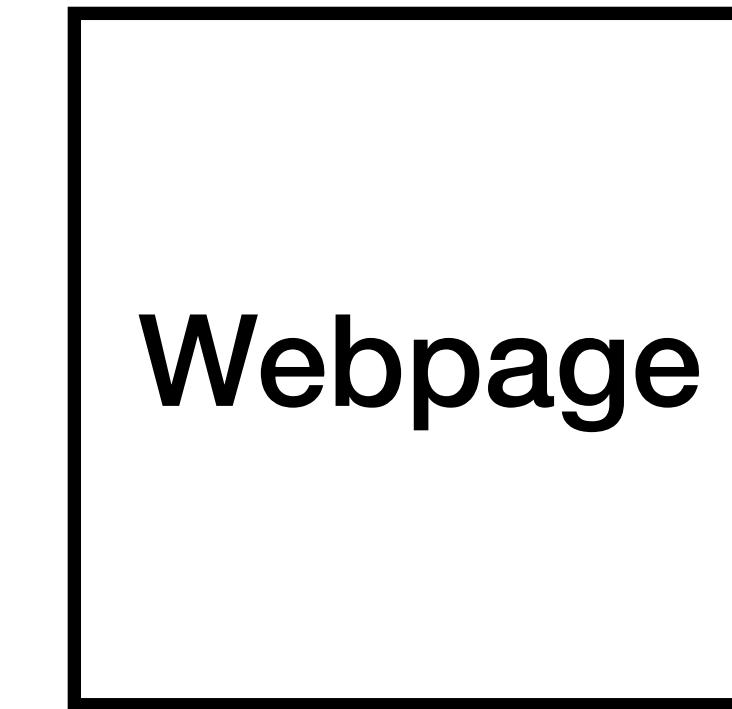
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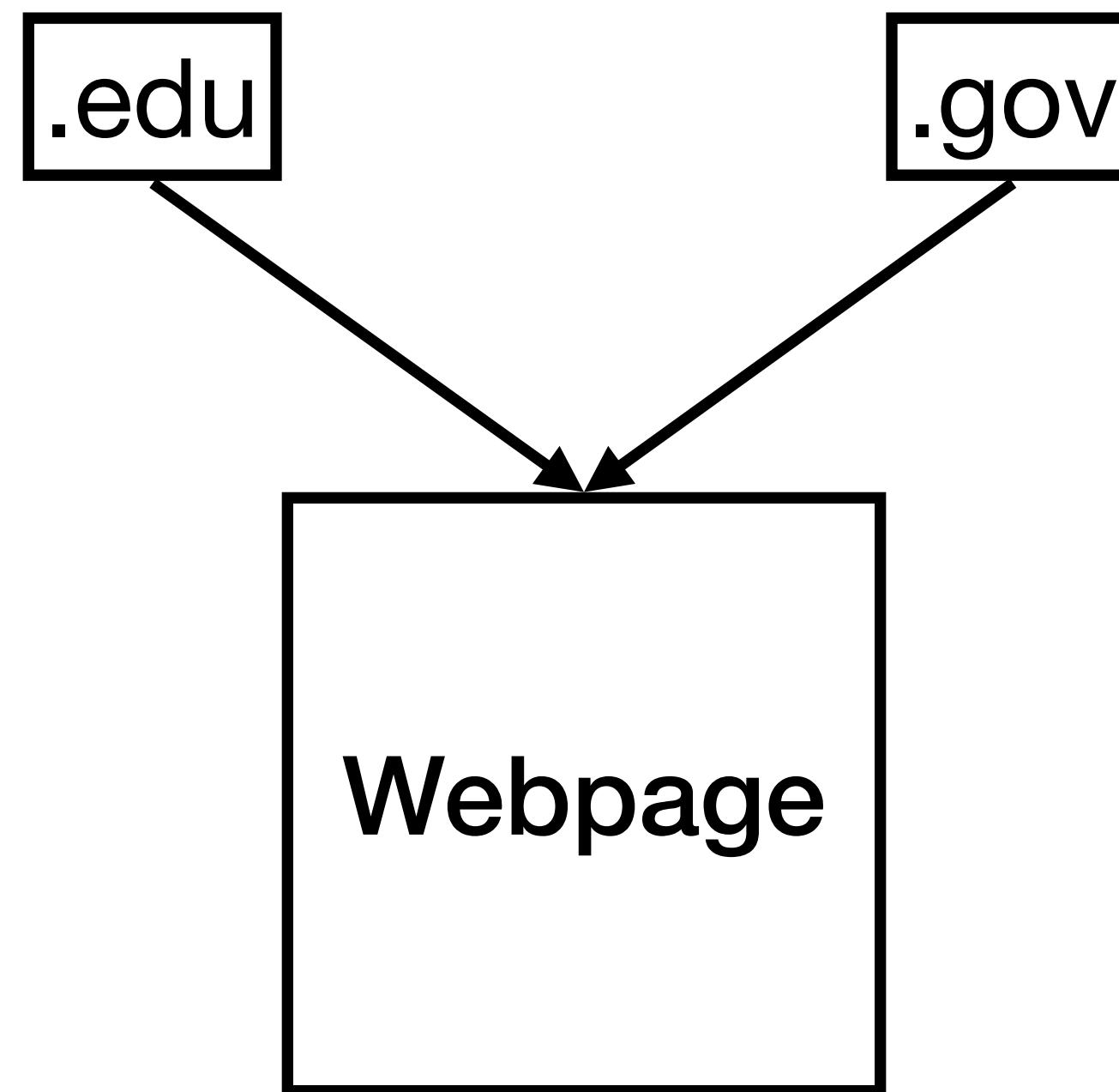
Off-page: Guest book spamming

Off-page: Guest book spamming

Webpage

Off-page: Guest book spamming

Off-page: Link Farms

Off-page: Link Farms