The AE says: “You need a natural experiment…”

• What is it?
  – Random assignment for construct of interest

• How do you find one?
  – Know your context

• Why does it matter?
  – Conclusive empirical results
  – Theoretical precision
Status, Quality, and Attention: What’s in a (Missing) Name?
Management Science 57(2), pp. 274–290

Tim Simcoe, Boston U. and NBER
David Waguespack, U. of Maryland
Status and Performance

- Theory: Social Signals matter for exchange when quality is uncertain
- Cumulative advantages for the well positioned via attention and resources
- Typical estimation approach: regress observed position plus controls on performance

- Identification Problems: omitted variables (quality), reverse causation

- Solution: disentangle status and signal
  - Merton 1968: “Rayleigh’s name was either omitted or accidentally detached [from a manuscript] and the Committee turned it down as the work of one of those curious persons called paradoxers. However, when the authorship was discovered, the paper was found to have merits after all.”
The Internet Engineering Task Force (IETF)

- The *de facto* Internet standards body
- Public data: 90K proposals, 3.5K publications, 7K authors, 800K listserv messages, 7.5K leadership appointments, 60K conference attendees over ~20 years.
- Authors submit manuscripts
- IETF posts and announces the manuscript
- Non-blind community review
- Revise, quit, or gets published
- “Et al” natural experiment – from 2000 to 2003 some prominent author names replaced with “et al” on email announcements
A New Internet-Draft is available from the on-line Internet-Drafts directories.

Title: A Framework for Passive Packet Measurement

Author(s): R. Bush, N. Duffield, A. Greenberg, M. Grossglauser, J. Rexford

Filename: draft-duffield-framework-papame-00.txt
Pages:
Date: 16-Nov-01

A wide range of traffic engineering and troubleshooting tasks rely on reliable, timely, and detailed traffic measurements. We describe a passive packet measurement framework that is (a) general enough to serve as the basis for a wide range of operational tasks, and (b) relies on a small set of primitives that facilitate uniform deployment in router interfaces or dedicated measurement devices, even at very high speeds. This document describes the motivation for such a framework through several operational examples, defines the measurement primitives (filtering, sampling, and hashing), and illustrates their use.

A URL for this Internet-Draft is:
A New Internet-Draft is available from the on-line Internet-Drafts directories.

Title: Pseudo Wire (PW) Management Information Base Using SMIv2

Author(s): D. Zelig et al.

Filename: draft-zelig-pw-mib-00.txt
Pages: 58
Date: 12-Jul-01

This memo defines an experimental portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it describes managed objects for modeling of Pseudo Wire (PW) services on a general Packet Switched Net (PSN). In addition, the current revision of the draft describes MIB module for PW operation over Multi-Protocol Label Switching (MPLS) [MPLSArch] Label Switch Router (LSR). Future revisions will include other types of PSN, for example L2TP, GRE, etc.

A URL for this Internet-Draft is:
http://www.ietf.org/internet-drafts/draft-zelig-pw-mib-00.txt
Internet Draft Submissions

New Submissions

0 500 1,000 1,500


Individual  Working Group
Q: When is Darlene really busy?
A: Just before an IETF Meeting
Publication Decision on 5418 Manuscripts submitted 2000-2003. ~80 new or revised per week.

High Status position = WG Chair

High Status Signal

Sample split into two groups:
1) High uncertainty: publication rate = 07%
2) Low uncertainty: publication rate = 44%

Table 3: Identity as a Signal

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<tr>
<th>Sample</th>
<th>All Individual IDs</th>
<th>All WG IDs</th>
</tr>
</thead>
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<td><strong>Dependent Variable = Published as RFC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WG Chair Author</td>
<td>0.084** (0.01)</td>
<td>0.103** (0.03)</td>
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<tr>
<td></td>
<td>0.040* (0.02)</td>
<td>0.041* (0.04)</td>
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<td>-0.031 (0.07)</td>
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<tr>
<td></td>
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<td>-0.011 (0.07)</td>
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<tr>
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<td>-0.031 (0.07)</td>
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<tr>
<td></td>
<td>0.006 (0.04)</td>
<td>0.071 (0.05)</td>
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<td></td>
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<td></td>
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<td>0.090* (0.05)</td>
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</tr>
<tr>
<td>IETF Meeting Effects</td>
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<tr>
<td>Mean of DV</td>
<td>0.072</td>
<td>0.441</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses; †10% significance; *5% significance; **1% significance. †See Table A3 for additional models that control for rank of Unlisted Chair in list of authors.
Conclusions

• Juliet (but not Shakespeare) was wrong...
  – “A rose by any other name would smell as sweet”

• Matthew Effects at the IETF
  – Individual vs. Working Group submissions
    • Volume + heterogeneity => screening heuristics
  – Attention and increasing returns
    • Name-based signals effect intermediate outcomes
Natural Experiment: Attribution in IETF publishing

• What is it?
  – Random assignment of author name visibility by Darlene

• How do you find one?
  – Know your context: IETF processes

• Why does it matter?
  – Conclusive empirical results: status matters for performance
  – Theoretical precision: signal and position are functionally distinct, but reinforcing

Caveat: can’t be certain you will find a NE and can’t prove randomness

Great news!: thinking experimentally will improve methods and theory... even if no NE found