4chan and /b/: An Analysis of Anonymity and Ephemerality in a Large Online Community

Michael Bernstein, Andrés Monroy-Hernández,
Drew Harry, Paul André,
Katrina Panovich and Greg Vargas

>>

Anonymous 07/20/11(Wed)15:30:05 No.339760588

mit computer science and ai lab
mit media lab
university of southampton

Identity Representation

pseudonyms

Mark Zuckerberg

Pseudonyms and multiple accounts demonstrate "a lack of integrity"

Google

“The web means
the end of forgetting.”
— New York Times

Identity Representation

Archiving Strategy

Mark Zuckerberg

Pseudonyms and multiple accounts demonstrate “a lack of integrity”

Millen 2000

Archives are highly valued and expected to be read by newcomers.

Identity Representation

Archiving Strategy

Millen + Patterson 2003

Real names and pseudonyms “promote trust, cooperation and accountability.”

Ma + Agarwal 2007

Strong identity and permanent archives correlate with satisfaction and participation

Identity Representation

Archiving Strategy

?

What happens in a large scale anonymous, ephemeral community?

Ma + Agarwal 2007

Strong identity and permanent archives correlate with satisfaction and participation

Identity Representation

Archiving Strategy

?

How does such a community produce so much of the Internet's shared culture?

Ma + Agarwal 2007

Strong identity and permanent archives correlate with satisfaction and participation

Identity Representation

Archiving Strategy

4chan /b/

Our Goal

Use 4chan /b/ as a lens
to understand the concepts
of anonymity and ephemerality.

Our Argument

Anonymity and ephemerality support community behaviors that generate internet culture.

File : 1310254071.jpg-(255 KB, 772x679)

Anonymous 07/09/11(Sat)19:27:51 No.339793221 [Reply]

Your fortune: Bad Luck

http://www.youtube.com/watch?v=4lC4hYaoJJA&feature=feedrec_grec_index
http://www.youtube.com/watch?v=pnqSwWcdZRw&NR=1

This is why, when someone talks about how fucked up /b/ used to be and how it was sicker and far more evil.... you can tell they are newfags.

Truth

107 posts and 85 image replies omitted. Click Reply to view.

>> **Anonymous** 07/09/11(Sat)21:08:51 No.339807752

Your fortune: Outlook good

>>339807618
yeah but the links are dead...

>> **Anonymous** 07/09/11(Sat)21:09:25 No.339807847

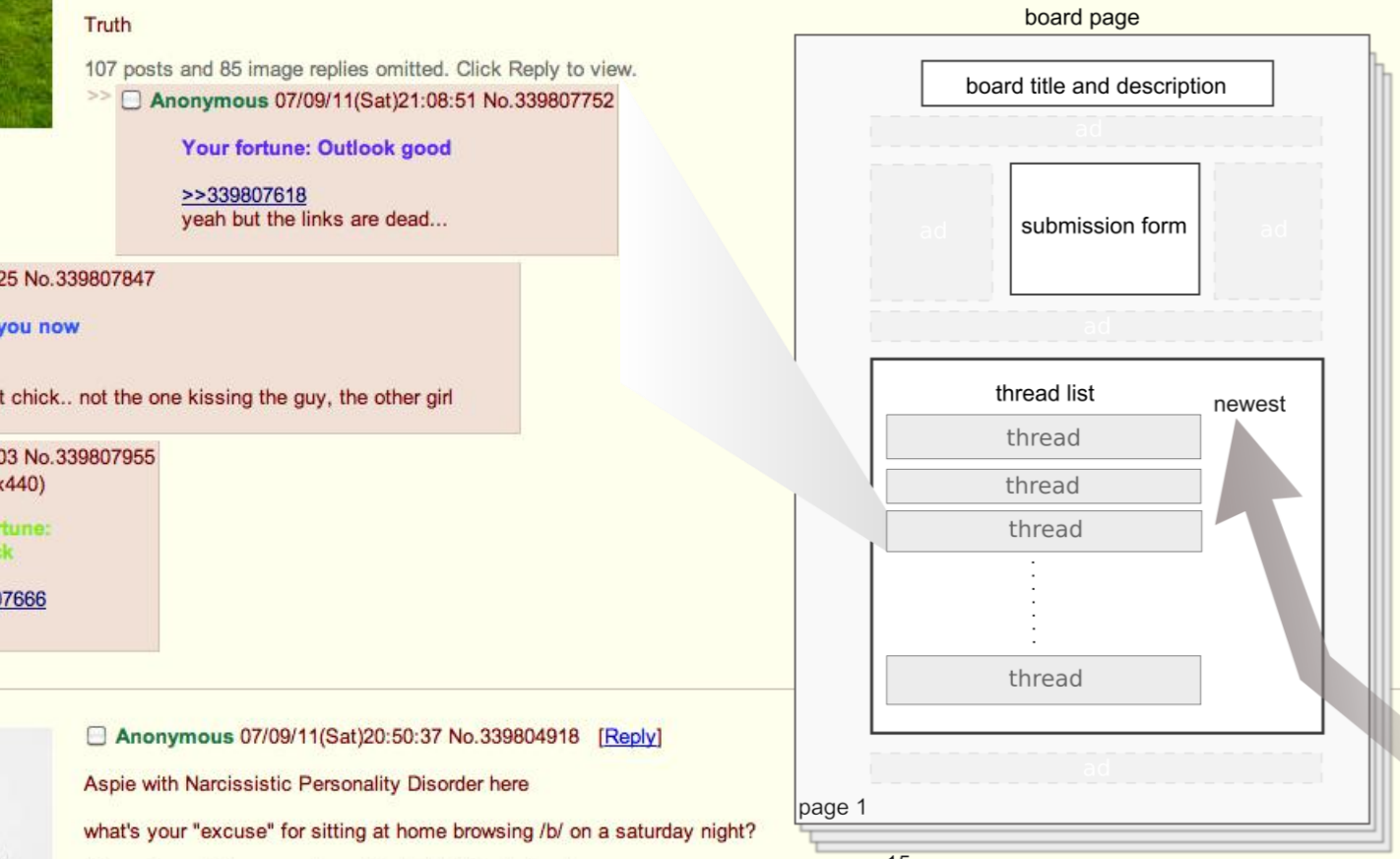
Your fortune: Better not tell you now

>>339807618
dude everyone has pics of that chick.. not the one kissing the guy, the other girl

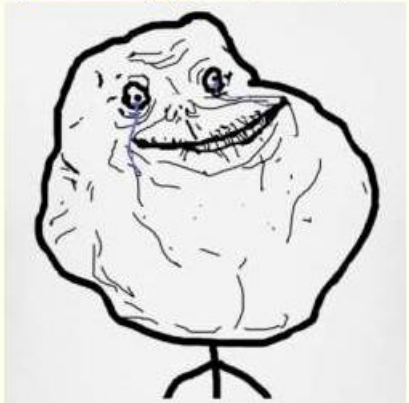
>> **Anonymous** 07/09/11(Sat)21:10:03 No.339807955
File1310260203.jpg-(191 KB, 600x440)

Your fortune:
Bad Luck

>>339807666



File : 1310259037.png-(69 KB, 378x378)



Anonymous 07/09/11(Sat)20:50:37 No.339804918 [Reply]

Aspie with Narcissistic Personality Disorder here

what's your "excuse" for sitting at home browsing /b/ on a saturday night?

19 posts and 1 image reply omitted. Click Reply to view.

>> **Anonymous** 07/09/11(Sat)21:08:04 No.339807630

>>339807257
Punk my good sir.
I'm sure you're an excellent frontman

>> **Anonymous** 07/09/11(Sat)21:08:16 No.339807665

I could care less what day of the week it is. I have to work at 8am tomorrow.

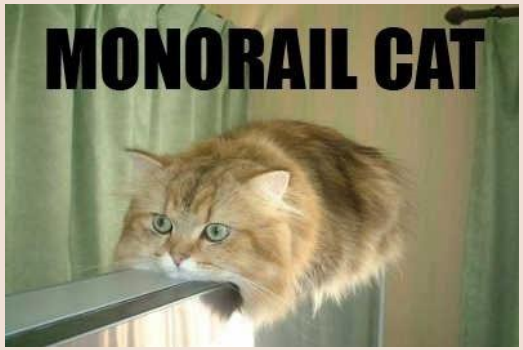
4chan's Impact

>>

moot!Ep8pui8Vw2 07/20/11(Wed)15:30:05 No.339760588

over seven million users

>>



Anonymous 07/20/11(Wed)15:30:23 No.339760

prolific meme factory
> lolcats
> rickrolling
> chocolate rain
> pedobear

>>

Anonymous 07/20/11(Wed)15:30:43 No.339823

highly visible off-site activities
> electing moot Time Person of the Year
> hacktivist group Anonymous

/b/, the “Random” board

The most active board

>>

Anonymous 07/20/11(Wed)15:30:05 No.339760588

30% of all traffic

>>

moot!Ep8pui8Vw2 07/20/11(Wed)15:30:05 No.339760588

“the lifeforce of the website”
where the “rowdiness and lawlessness” happen

4chan /b/ and Ephemerality

>>

Anonymous 07/20/11(Wed)15:30:05 No.339760588

/b/ deletes content as soon as newer content arrives

>>

Anonymous 07/20/11(Wed)15:30:05 No.339760597

fast-paced and chaotic experience

Twitter’s design suggests ephemerality

4chan /b/ and Anonymity

>>

Anonymous 07/20/11(Wed)15:30:05 No.339760588

posts are fully anonymous by default
rarely contain pseudonyms or other identity signals

>>

Anonymous 07/20/11(Wed)15:30:23 No.339760597

traditional reputation systems become unworkable

Formspring.me is based on anonymous feedback
Blizzard's shift to real names sparked an uprising

Related work

>>

Anonymity 07/20/11(Wed)15:30:05 No.339760588

>>

Sites with (discouraged) anonymous commenting: Usenet [Donath 1999], Slashdot [Lampe+Resnick 2004]

Removing social cues makes communication impersonal [Short, Williams, Christie 1976] and cold [Hiltz, Johnson, Turoff 1986], and anonymity directly undermines credibility [Rains 2007].

>>

Ephemerality 07/20/11(Wed)15:30:05 No.339760588

>>

Technology does not let us forget
[Grudin 2002; Mayer-Schonberger 2009]

ITT: In This Talk

Content
Analysis of threads on 4chan /b/

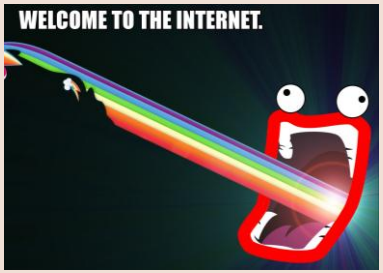
Ephemerality
Tempo and deletion dynamics

Anonymity
Practices around identity

Content Analysis

Content Analysis Method

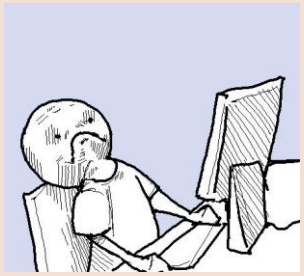
>>



Anonymous 07/20/11(Wed)15:31:04 No.3397256562

collected 598 thread-starting posts over ten days

>>

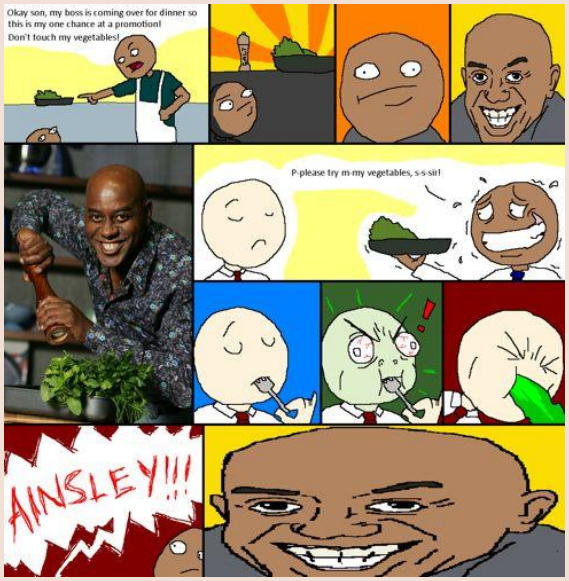


Anonymous 07/20/11(Wed)15:30:05 No.339760588

rounds of iterative coding
developed nine categories to describe thread themes

Themed 28%

>>



Anonymous 07/20/11(Wed)15:30:05

ITT [“In this thread”] we only post stuff we have laughed at so hard we had tears

Sharing Content 19%

>>

Anonymous 07/20/11(Wed)15:30:05

This guy is a hero. :)
http://www.youtube.com/[xxxxx]

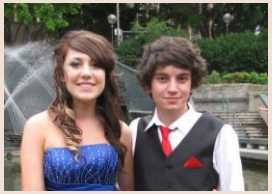
Question or Advice 10%

>>

Anonymous 07/20/11(Wed)15:30:05

Soup /b/
Recently I've been hanging out with a girl a lot, we're both in college. I spend the night at her place all the time and we kiss and whatnot. Problem is, she just broke up with her ex [...]
and I know she's not over him.
I really like her but I dunno what to do, so what do /b/?

>>



Sharing Personal Information 9%

U JELLY? [“Jealous?”] This is me suiting up at my formal looking fucking brilliant, then there is you fags sitting back and watching.

>>

Discussion 8%

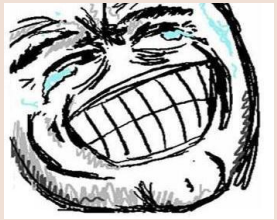
Hi Anonymous! So ive started this game called League of Legends a few days ago. [...] Is there anyone here who also plays it? Lets talk about it!

>>

Request for Item 8%

anyone has a pic of that star wars battle tank with the german insignia shooped [“photoshopped”] on it? in return tits

>>



Request for Action 7%

Make a group saying [name] is awesome on face book.
DO IT FAGGOTS

>>

Discussing /b/ 5%

Heidi Ho there /b/ I’m a Newfag and now that i’ve been here all Summer I was wondering if i need a letter of recommendation From a Registered OldFag?

A Brief Word on Normalcy

>>

Media Representation 07/20/11(Wed)15:30:05

Fox News: 4chan is “The Internet Hate Machine”

-but-

it is a community like any other

>>

Nudity, Gore, Homophobia, Racism

intentionally offensive and off-color

create taste boundaries to keep out
those not in it for the lulz

Study 1
Ephemerality

Ephemerality on 4chan

Anonymous 07/20/11(Wed)15:30:05

cool paper bro

Ephemerality on 4chan

Ephemerality on 4chan

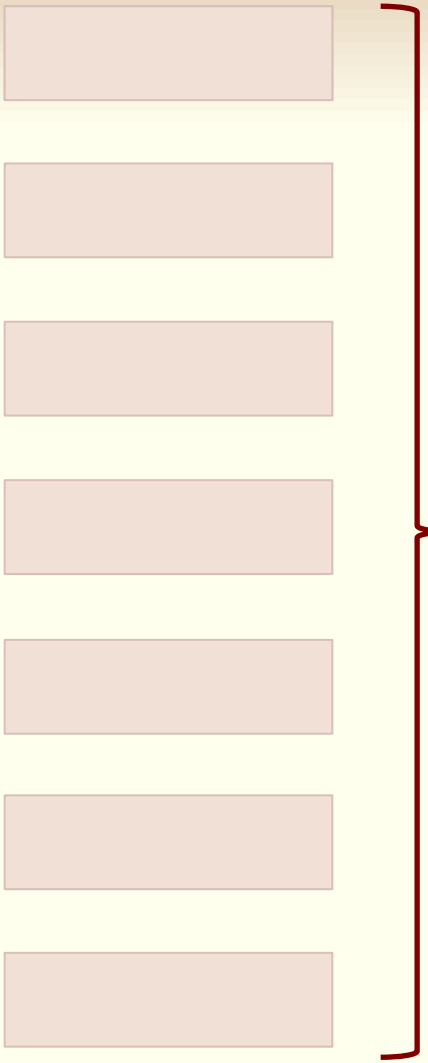
Ephemerality on 4chan

Ephemerality on 4chan

Ephemerality on 4chan

Ephemerality on 4chan

Ephemerality on 4chan



15 threads per page
15 pages

225 threads on /b/

Ephemerality on 4chan

404

Ephemerality on 4chan

Bumping

Anonymous 07/20/11(Wed)15:30:05

cool paper bro

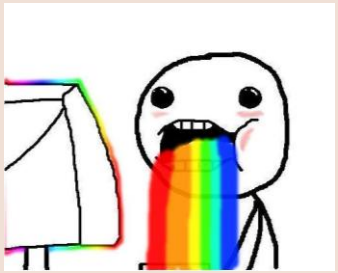
>>

Anonymous

p values or GTFO

Data Collection

>>



Anonymous 07/20/11(Wed)15:30:05 No.339760588

complete dataset of /b/ activity over two weeks
5,576,096 posts in 482,559 threads

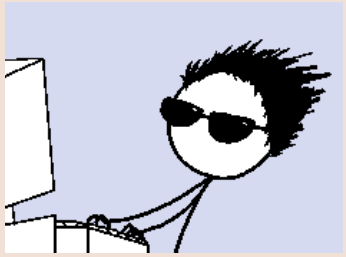
>>

Anonymous 07/20/11(Wed)15:30:34 No.339734523

recreate /b/’s thread position history using
post creation timestamps

Entire Lifetime

>>



Thread Lifetime 07/20/11(Wed)15:30:34 No.3397345

median thread lifetime: **3.9 minutes**
min: 28 seconds
max: 6.2 hours

>>

43% of threads get no replies
median thread has original post and one reply

>>

ASK A
PAGAN
ANYTHING

Longest-Lived Thread 07/20/11(Wed)15:30:34

go on do your worst (or alternatively actually get my respect and actually ask something useful)

>>

Short-Lived Thread 07/20/11(Wed)15:30:34 No.33973453984

I hope you're glad the captcha is gone, woo yeah, let's all be random lolz!

First Page

>>

Why first page? 07/20/11(Wed)15:30:34

threads get most of their visibility on the first page
reminder: bumped threads are returned to the first page

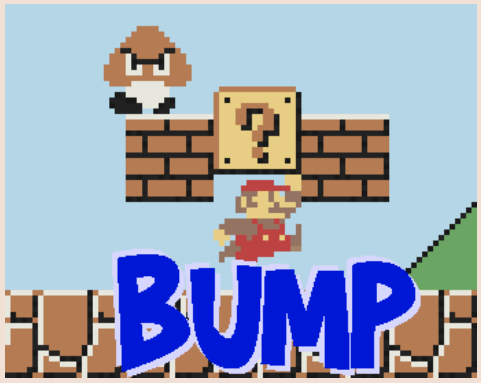
>>

Total time on first page 07/20/11(Wed)15:30:34

median time on first page: **5 seconds**
min: less than 1 second
max: 37 minutes

Bumping and Sage

>>



bump 07/20/11(Wed)15:30:34 No.33973454556

can reply with deliberate intent to bring the thread to the first page and keep it from 404ing

2.16% of posts contained “bump”, “bamp”, etc. or similar inflections

>>

sage 07/20/11(Wed)15:30:34 No.33973454556

“sage” in email field leaves a reply without bumping the thread: “burying” a thread

0.77% of posts were sages

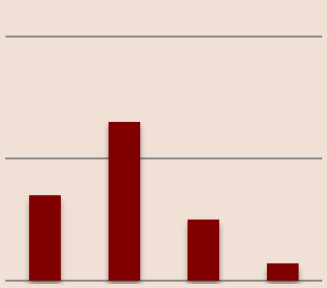
>>

Interpretation 07/20/11(Wed)15:30:34

4chan members play within the bounds of ephemerality and manipulate it

Ephemerality Discussion

>>

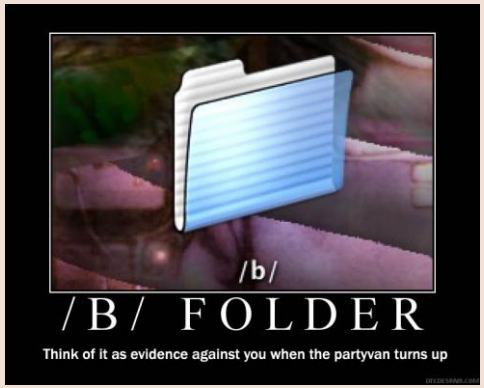


Volume comparisons 07/20/11(Wed)15:30:34

35,000 threads and 400,000 /b/ posts per day
vs. 7,100 digg threads per day
25,000 usenet posts per day
65,000 youtube videos per day

[Szabo+Huberman 2010, newsadmin.com]

>>



Alternate Archives 07/20/11(Wed)15:30:34

users save memorable content
to /b/ folders on their hard drives

4chanarchive.org for “epic” threads

Ephemerality Discussion

>>

Role in meme creation 07/20/11(Wed)15:30:34

fast pace leads to continuously fresh content
no history may mitigate “rich get richer” phenomena

>>

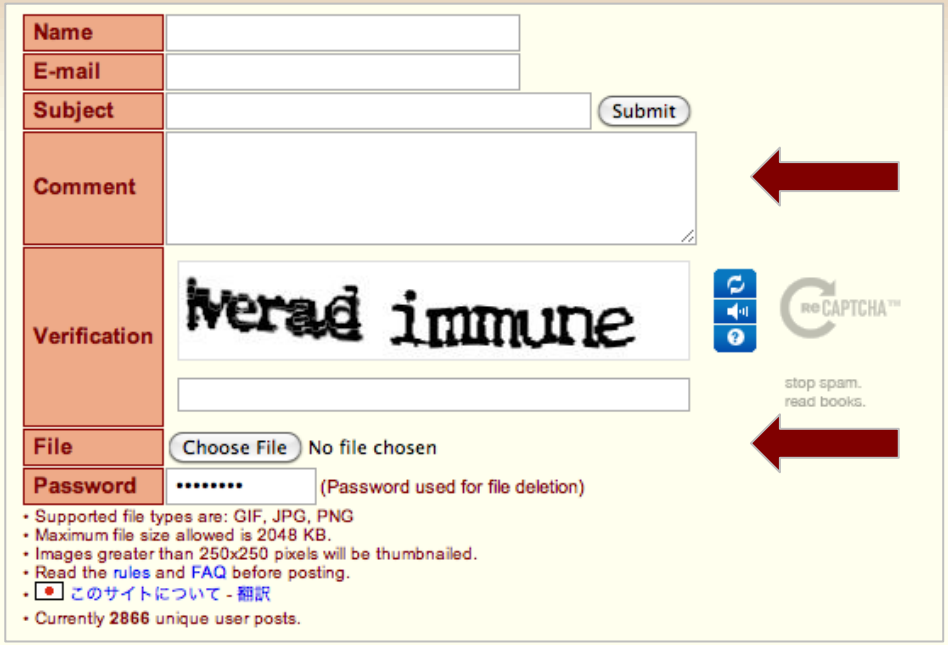
Raising participation? 07/20/11(Wed)15:30:34

counterintuitively, ephemerality may actually
be increasing participation in /b/

participating in a thread is the best way
to keep it from 404ing

Study 2
Anonymity

Anonymity on 4chan



>> **Anonymous** 07/20/11(Wed)15:30:34 No.33973454556

[comment text]

>> **OP** 07/20/11(Wed)15:30:34 No.33973454556

[post using an unverifiable name]

>> **username!Oo43raDvH61** 07/20/11(Wed)15:30:34 No.33973454556

[post using a tripcode, /b/'s only identity mechanism]

Identity Markers

>>

Anonymous 07/20/11(Wed)15:30:34 No. 234028393

90.1% of posts were credited to “Anonymous”

>>

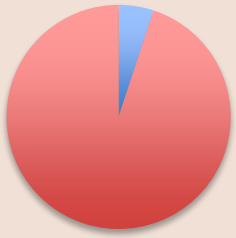
Gómez et al. 2008 07/20/11(Wed)15:30:34 No. 23402839
closest comparison in the literature:
18.6% of Slashdot comments are anonymous

>>

Runners-up 07/20/11(Wed)15:30:44 No. 23402839323

David	1.06% (part of a 4chan meme)
–	1.06%
OP	0.24% (claiming to be the Original Poster of the thread)

>>



Tripcodes 07/20/11(Wed)15:30:34 No. 234028393

5% of posts used tripcodes

An Argument for Anonymity

>>

Anonymous 07/20/11(Wed)15:30:34 No. 2832974298

typical online community narrative is pro-identity
but, anonymity and disinhibition can have positive effects

>>

Anonymous 07/20/11(Wed)15:33:23

masking failure makes experimentation safer
- creativity
- memes

group ownership of creative content

>>

Anonymous 07/20/11(Wed)15:30:34 No. 29038240923

anonymity can provide a cover for intimate conversations

Soup /b/ Recently I've been hanging out with a girl a lot, we're both in college. I spend the night at her place all the time and we kiss and whatnot. Problem is, she just broke up with her ex [...] and I know she's not over him. I really like her but I dunno what to do, so what do /b/?

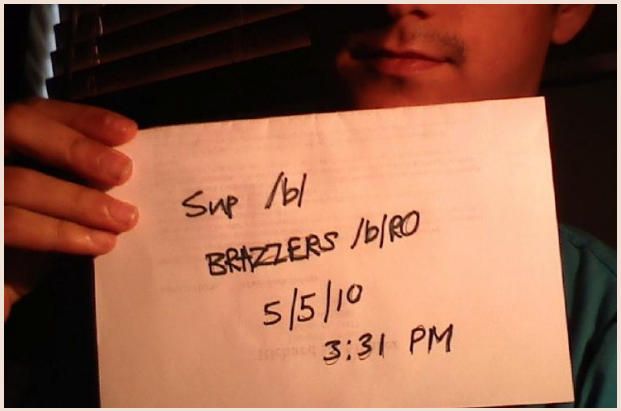
Identity without Accounts

>>

Anonymous 07/20/11(Wed)15:30:34 No. 2832974298

alternative identity signaling

>>



timestamping in photos
suggests authenticity

>>

slang helps delineate
group membership

4chan ‘dialect’ is nontrivial

required familiarity
with current trends and memes

Ingroup and Outgroup

>> **Anonymous** 07/20/11(Wed)15:30:34 No. 2832974298

Triforcing as a classic identity barrier

>> **Anonymous** 08/30/09(Sun)17:59:38 No.156666179

▲
▲ ▲

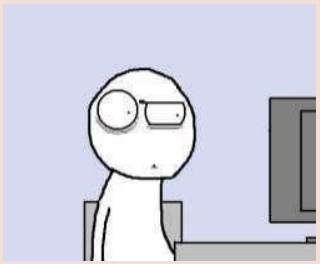
>> **Anonymous** 07/03/10(Sat)10:32:29 No.247423XXX

sweet im not a newfag anymore

▲
▲ ▲

TL;DR: Conclusion

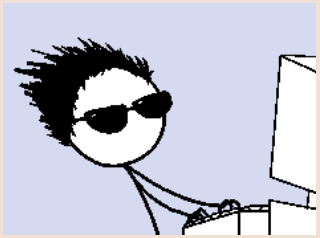
>>



Content 07/20/11(Wed)15:30:05 No.339760588

dominated by playful exchanges of images and links

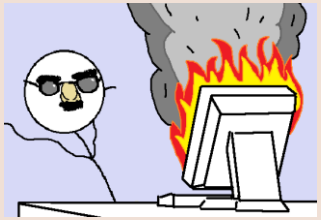
>>



Ephemerality 07/20/11(Wed)15:30:05 No.339760588

median thread spends 5 seconds on the first page
expires completely in 5 minutes
content deletion drives many of /b/'s dynamics

>>



Anonymity 07/20/11(Wed)15:30:05 No.339760588

over 90% of posts are made completely anonymously
contrast to pseudonymous and fully identified sites
5% of posts use tripcode identity mechanisms

Come join the lulz

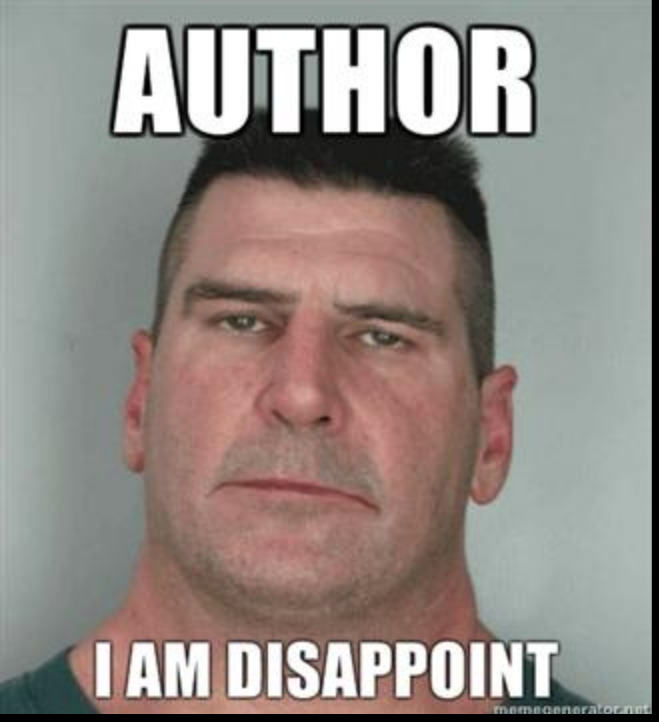
>> **Anonymous** 07/20/11(Wed)15:30:34 No. 2832974298

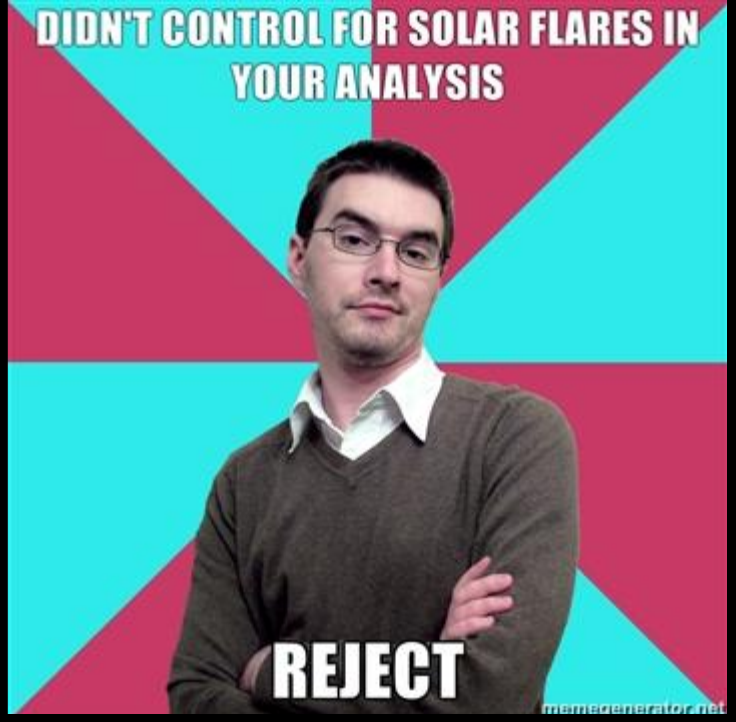
research follows the data
but this turns a blind eye to important communities and movements

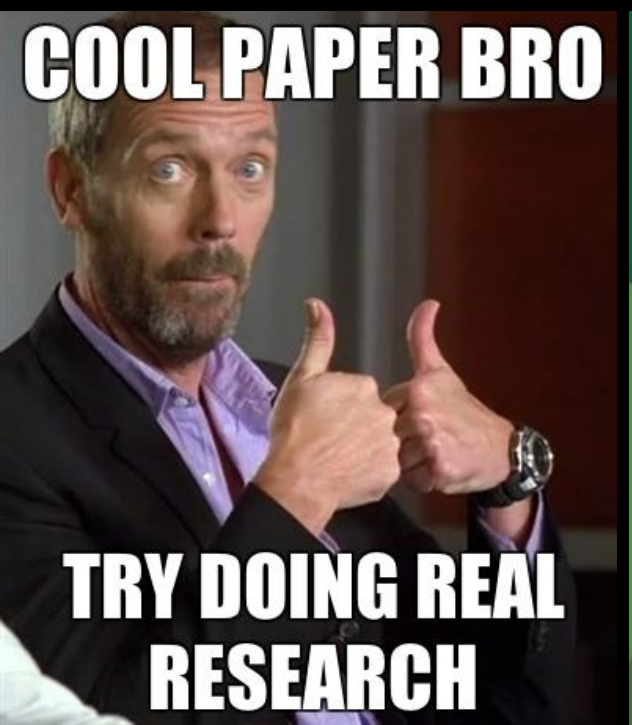
our chanthropologist toolkit can help you collect a dataset

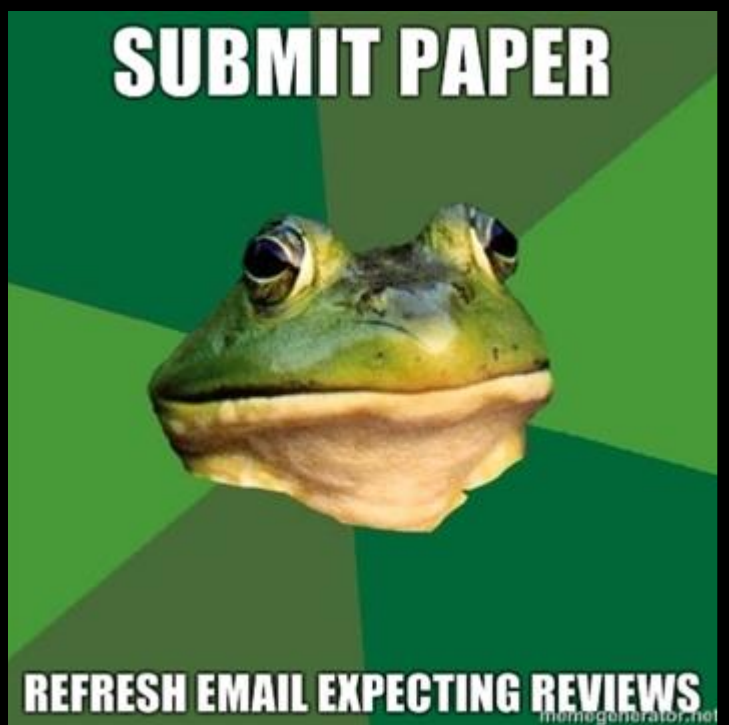
>> **Anonymous** 07/20/11(Wed)16:23:44 No. 2234534879

meme creation and spread
relationship to online activism and off-site activities









4chan and /b/:
An Analysis of Anonymity and Ephemerality in a Large Online Community

RATE ME /B/

Abstract

We present two studies of ephemerality and anonymity online using the popular discussion board /b/ at 4chan.org, which hosts over 7 million users and plays an influential role in Internet culture. Although researchers and practitioners have often assumed that user identity and data permanency are central tools in the design of online communities, we explore how /b/ succeeds despite being almost entirely anonymous and extremely

mous users, and the remainder adopt and discard identities as desired. Based on these studies, we suggest alternative mechanisms that /b/ uses to establish status and frame user interactions - processes we would expect to be difficult in an anonymous and ephemeral environment.

Introduction

Researchers and practitioners have often argued that user identity and data permanency are central features to the design of an online community. Real names and pseudonyms can help "promote trust, cooperation, and accountability" (Millen and Patterson 2003), whereas anonymity will make communication impersonal and undermine credibility (Hiltz, Johnson, and Turoff 1986; Rains 2007). Influential industry players like Facebook argue that pseudonyms and multiple identities show "a lack of integrity" (Kirkpatrick 2010). Similarly, data permanency is also the norm: Q&A sites save contributions with the hope of "growing organizational memory" (Ackerman 1994), communities highly value their searchable archives (Millen 2000), and search engines make content findable years after it is created (Rosen 2010).

While some argue that anonymous contributions and ephemeral participation online can be desirable (Lampe

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and Resnick 2004; Ren, Kraut, and Kiesler forthcoming; Grudin 2002), we have a limited understanding of how an anonymous and ephemeral community design might play out, especially at a large scale. In this paper we analyze one such community that claims over seven million users: the imageboard 4chan (Poole 2010). We focus on 4chan's first and most popular board, the "random" board /b/ (Figure 1).

Our goal is to use /b/ as a lens to understand the concepts of *anonymity* and *ephemerality* online. First, unlike many

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Readers may know of 4chan and /b/ from their influence on Internet culture and media coverage of their offsite activities. 4chan is a prolific meme factory: it originated popular memes like LOLcats (Rurkoff 2007) and rickrolling (Leckart 2009). Additionally, some 4chan and /b/ members participate in highly visible off-site activities. These activities include manipulating a Time Magazine poll to elect its founder the "World's Most Influential Person" (Time Staff 2009) and participating in hacktivist group 'Anonymous'. Anonymous has executed highly visible protests of the Church of Scientology (Coleman 2011) and DDoS attacks against Mastercard and Paypal in support of Wikileaks (Mackey 2010). Reactions are diverse: while memes have brought the site positive media attention (Brophy-Warren 2008), harassment and activism have often been been negatively and sensationally covered in the media (e.g., 4chan is the "internet hate machine," says Phil Shaman on Fox News (2007)), and many media outlets have since sought to profile the site (Dibbell 2009; 2010; Poole 2010). Much of this coverage is a response to /b/'s distinctive culture – a culture that merits critical analysis beyond the scope of this paper. Here, we focus on the board's design choices of anonymity and ephemerality, and how they may support or influence this culture.

In this paper, we perform a content analysis and two data-driven studies of /b/, focusing on anonymity and ephemerality. In our first study, we use a dataset of 5.5 million posts

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Reactions on /b/

>>

Find it funny or weird 07/20/11(Wed)15:30:34 No. 2832974298

ITT: /b/ gets trolled by the MIT

I bet the FBI paid MIT to study us

That's the britfags' tax money at work lol, paying scientists to fap over Emily Watson fakes

Lol at how formally they present what goes on here. Like newt gingrich is some isolated tribe in the rainforest with unique and primitive customs.

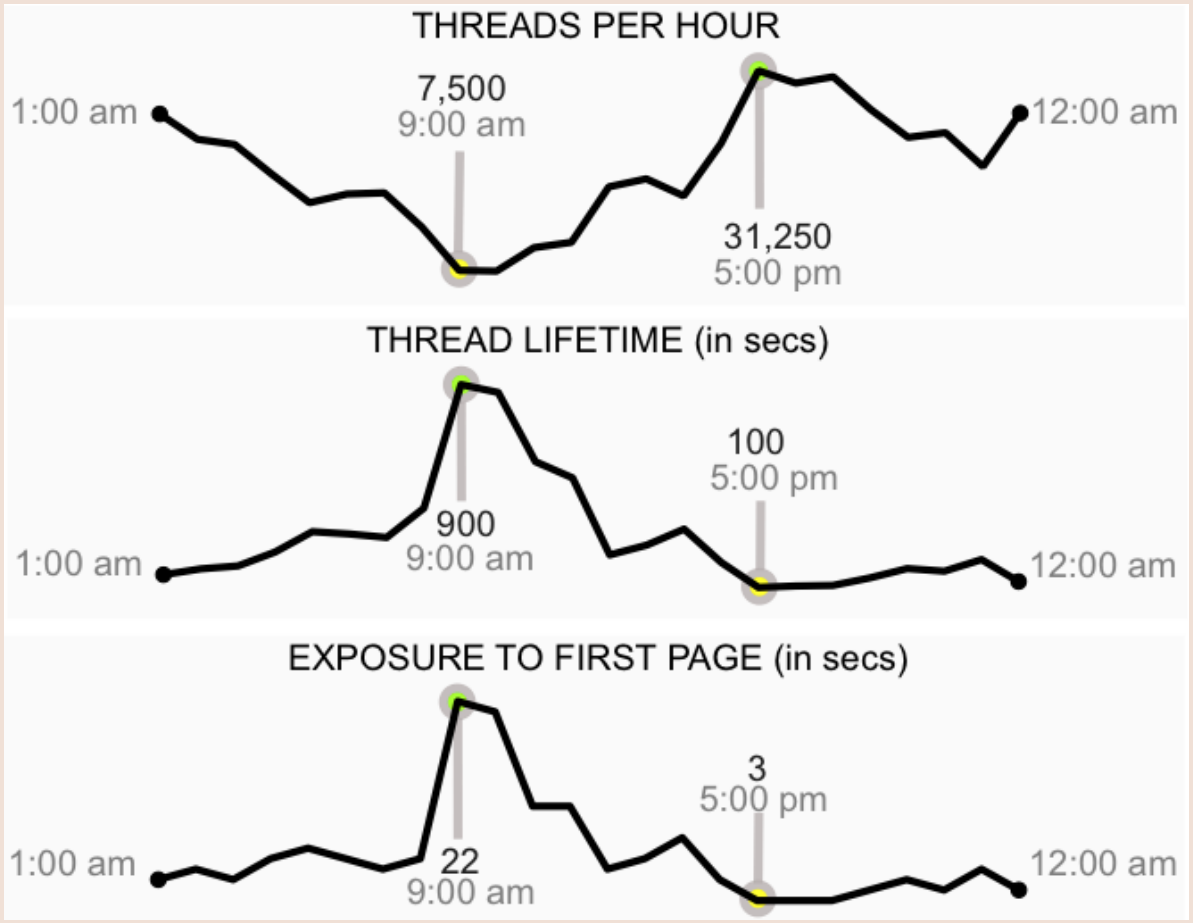
>>

Engaged with the content 07/20/11(Wed)15:30:34 No. 2832974298

skimmed the whole paper. interesting. i especially like seeing the breakdown of what types of threads are posted most. I would like to see the themed section broken down ie. 20% CP 8% furfag 17% raff u roose 2% fingerbox 5% sup my name is john and you're all a bunch of candy-ass s

This is... This is actually pretty damn interesting.

I think something is lost to the analysts here. The fact that one of the most popular /b/ activities is "pissing into the sea of piss".

Time of Day

>> primarily an after-work, after-school phenomenon