Do Not Track

Musings of a Graduate Student

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Thanks

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Mubarak Won’t Seek New Term
Opposition Demands That He Leave Sooner

Path to Change in Power Still Unclear
By ANTHONY SHADID
56 minutes ago
President Hosni Mubarak’s vow to step down in the fall was not enough for the hundreds of thousands who poured into Tahrir Square.

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Egypt's Mubarak Promises to Step Down

How Cairo, U.S. Were Blindsided by Revolution

Egypt's rulers and their Western allies were caught almost completely off guard as the revolution unfolded, despite deep concerns about where Egypt's government was leading the country.

• Abrupt End to Powerful Reign

Egypt's Islamist Riddle

Israel Watches 'Regional Earthquake' in Egypt

Multinationals Keep Egypt Offices Shut

Evacuees out of Cairo Recall Tense Days

Economic Paralysis Strains Egypt

ElBaradei's Book Is Rushed to Print

Opposition Wants Quicker Exit

Egyptian President Hosni Mubarak said he will step down after elections planned for later this year, bowing after 29 years in power to a popular uprising that has begun to reshape the Middle East.

• PM Report: Mubarak to Step Down \x26 More: Crisis in Cairo

U.S. Role in Transition to Color Future Efforts

U.S. Army Sets Sights on New Rifle

For the first time in almost 60 years, the U.S. Army wants to replace the standard rifle shouldered by hundreds of thousands of frontline troops around the world.

Massive Storm Marches Across Country

Charlotte Gets Democratic Convention

Illegal-immigrant Numbers Stabilize
Mubarak Won't Seek New Term

Opposition Demands That He Leave Sooner

Path to Change in Power Still Unclear

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Quiet Acts of Protest on a Noisy Day

King of Jordan Dismisses His Cabinet

Antiquities Chief Says Sites Are Largely Secure

New Service Lets Voices From Egypt Be Heard

The Lede: Updates From Day 8

INTERACTIVE FEATURE: A Timeline of Mubarak's Presidency

Ann Nabawy

iMest built a meeting room just for you.
Introduction

Syphilis is a bacterial infection that is usually passed on through having sex with someone who is infected. It can also be passed from an infected mother to her unborn child and, in rare cases, can be caught through injecting drugs.

It is extremely rare to catch syphilis through a blood transfusion in the UK as blood donors are carefully screened.

Three stages of disease

Stage 1 (primary syphilis). Symptoms of syphilis begin with a painless but highly infectious sore on the genitalia or sometimes around the mouth. If somebody else comes into close contact with the sore, typically during sexual contact, they can also become infected. The sore lasts two to six weeks before disappearing.

Stage 2 (secondary syphilis). Secondary symptoms, such as a skin rash and sore throat, then develop. These symptoms may disappear within a few weeks, after which you experience a latent (hidden) phase with no symptoms, which can last for years. After this, syphilis can progress to its third, most dangerous stage.

Stage 3 (tertiary syphilis). At this stage, it can cause serious damage to the body. The primary and secondary stages are when you are most infectious to other people. In the latent phase (and usually around two years after becoming infected), syphilis cannot be passed onto others but can still cause symptoms. See Symptoms of syphilis for more information on the
Browsing History
Health Information
Financial Information
Shopping History
...

misuse
subjective creepiness
accidental disclosure
economic harm
government access
slippery slope
data breach
unwanted disclosure
rogue employees
80+% third-party tracking should be illegal

90+% opt outs should be legally binding

Source: Turow et al. 2009
Lots of empirical questions.
Many Research Designs

1. build custom platform for experiment
2. run experiment
3. write paper
4. goto 1
FourthParty Design

1. build one platform
2. collect as much data as possible
3. run many experiments
4. write many papers
FourthParty Architecture

- easy to use
- shared data, historical data
- works with existing extensions (crawling and more)
- multiplatform

SQLite
What do existing opt outs do?
What tracking technologies are in use?
Does the self-regulatory icon appear?
Are self-help tools adequate?
Is tracking anonymous?
THE NETWORK ADVERTISING INITIATIVE'S SELF-REGULATORY CODE OF CONDUCT

≈ 70 companies
• not comprehensive
• not all third-party trackers offer
• vast majority do not participate in NAI
• requires updating*
• can accidentally clear*
opt out = Do Not Target Ads
“Today we’re making available Keep My Opt-Outs, which enables you to opt out permanently from ad tracking cookies.”

-Google Public Policy Blog
65 companies tested

33 left a trackable cookie after opting out
What do existing opt outs do?
What tracking technologies are in use?
Does the self-regulatory icon appear?
Are self-help tools adequate?
Is tracking anonymous?
stateful tracking
supercookies
stateless tracking
fingerprinting
HTTP cookies
HTTP authentication
HTTP ETags
content cache
IE userData
Flash Local Shared Objects
Silverlight Isolated Storage
TLS session ID & resume
browsing history
window.name
HTML5 protocol & content handlers
HTTP STS
HTML5 session/local/global/database storage
DNS cache
Source: [Aggrawal10]
this is blue

link
this is purple

link
User Agent

HTTP ACCEPT Headers

browser plug-ins

MIME support

clock skew

installed fonts

cookies enabled?

browser add-ons

screen resolution

Sources: [Eckersley10], [Mayer09]
What do existing opt outs do?
What tracking technologies are in use?
Does the self-regulatory icon appear?
Are self-help tools adequate?
Is tracking anonymous?
• Use 15x15 pixel icons.
• Less landing time.

AdChoices
10% with icon
5% with icon + text
What do existing opt outs do?
What tracking technologies are in use?
Does the self-regulatory icon appear?
Are self-help tools adequate?
Is tracking anonymous?
anti-tracking technology
blocking
cat and mouse

arms race
• not comprehensive
• requires updating
• breaks stuff
• requires user knowledge about providers
“blocks many … technologies that can track and profile you as you browse the Web … updated weekly”
-Abine TPL

“completely removes all forms of tracking from the internet”
-EasyPrivacy ABP Subscription

“complete control over online tracking”
-PrivacyChoice TrackerBlock

“helps users get good ads, without compromising personal privacy”
-TRUSTe TPL
(we can’t reasonably expect the average user to sort this out)
What do existing opt outs do?
What tracking technologies are in use?
Does the self-regulatory icon appear?
Are self-help tools adequate?
Is tracking anonymous?
“it’s all anonymous”
actually, it’s all pseudonymous
• social network or other first party
• intentional leakage
• unintentional leakage
• security exploit
• deanonymization

Source: Narayanan 2011
1. Scorecard Research, 81 sites (44%)
2. Google Analytics, 78 sites (42%)
3. Quantcast, 63 sites (34%)
4. Google Advertising, 62 sites (34%)
5. Facebook, 45 sites (24%)

(signed up and interacted with 185 sites)
What do existing opt outs do?
What tracking technologies are in use?
Does the self-regulatory icon appear?
How do self-help tools perform?
Is tracking anonymous?
DNT: 1
10+ million users

(≈ 100x opt-out cookie users)
Questions?

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