

# LIS-5411

## More Privacy Theory

# A framework for digital privacy?

The Constitution thinks of privacy in terms of your stuff –

- but what changes when  
everything is recorded,  
by someone who ain't you?

# 3 components:

- 1) Secrecy. (encryption)
- 2) Anonymity
- 3) The cultural belief and legal reinforcement of 1 and 2.

We have technical privacy

(if we're careful)

(really, really careful)

# Legal “privacy”

No explicit right to privacy in the Constitution  
–but..

1<sup>st</sup>, 4<sup>th</sup>, 5<sup>th</sup>, amendment, and others



# Two big legal cases

Kyllo v. U.S.

- (Thermal imaging case)

Katz v. U.S

- (Wiretapping)

# Pre-Internet!

# Traditional (misconceptions of) privacy

The one deep dark secret that you would be mortified if the world knew....?



# The P.I.s best friend



# Specifically...



Even better (for them)



# Not much wrong here, right?

Can a store legally record your purchasing?

- (sure, why not?)

Why might they?

- Inventory
- Advertising, etc

Legal protection/acknowledgment:

**TRADE SECRET**



Suddenly, online!



**amazon.com**<sup>®</sup>

But, maybe you don't keep it a trade secret..after all:

If CVS sees: Pregnancy tests

..then that's interesting, kind of.



If Amazon ALSO sees: “What to expect when you're expecting”

...perhaps valuable info for CVS? Vice-versa?

And again, all legal: Gathered legally, traded or sold legally – little, marginal steps.

# Don't forget

...the security cameras

..the bank records

..the credit scores

..the phone records

**AND THIS IS ONLY WHAT WAS GIVEN UP  
“ON ACCIDENT...”**

# Info brokers:

- Choicepoint
- Acxiom ,etc.

Then, there's the VOLUNTARY side

Facebook, et al

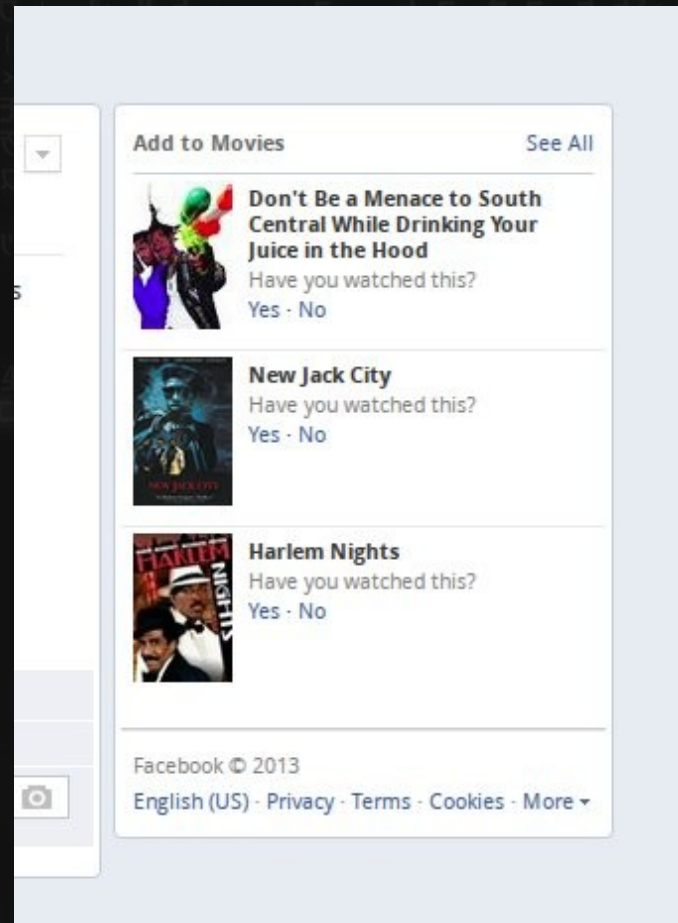
...but you guys know all about this, right?

“but hey, it's just advertising”

Inference: Figuring out things about people



# True story: the first time Facebook asked me about my movies...





# Inference

Credit scores

“Google Killed Me”

Target and pregnancy

And Graph Search...(wow, they're really that oblivious?)

# If companies can sell, who's buying

Other companies? Yep?

Law enforcement? Yep.

(but what about the 4<sup>th</sup> amendment?)

# Interesting question:

- Why should the gov't / law enforcement directly surveill AT ALL?

This allows you to get around them pesky Constitutional rules...

But, as we know, they did.  
(he wasn't the first...)

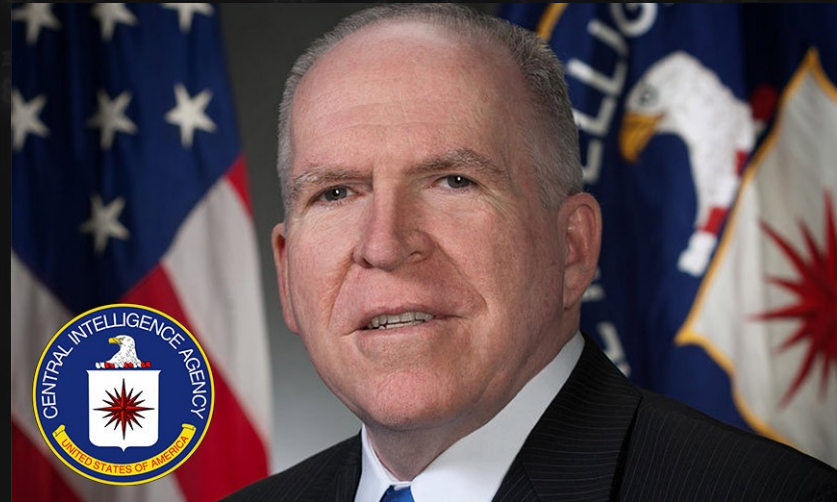


# NSA: PRISM (among others)

- Roughly: everything.
- “Collect it all now, perhaps analyze later”



Do they even understand this stuff?





# Justification: Terrorism?

Perhaps, but not a great strategy.

Why an “automatic terrorism detector” will pretty much never work...

# The False Positive Paradox (Gatorbola!)

New disease; Unspeakable consequences.

Incidence rate: 1/10,000 people have it

Yikes!

But, there's a better than 99%  
accurate test!

Specifically:

For tests coming out negative – 100% accurate

For tests coming out positive – 99% accurate

But...uh-oh: you get tested and...

The test is positive!

What are the odds that you have **Gatorbola**?

# Do the math:

99% right = 1% wrong.

So, if you test 10,000 people:

**100** out of 10,000 people will have a + test

But..

**1** out of 10,000 people will actually HAVE it.

# Whoa, what?

Even for a test that's 99% accurate, there's still only a 1/100 chance that you have it.

Now, consider a “terrorism” test? e.g.

How many terrorists are there? And

How accurate could a terrorism test possibly be?



# Why NOT surveil? (in this way)

What exactly is wrong with ubiquitous surveillance?

AKA, the “What do you have to hide” question.

# Silver Linings?

# The end of shame?

If everybody knows everybody's business,  
can this reduce shame/embarrassment?

# Little Brother

As opposed to “Big Brother”

Yes, cameras are everywhere – but “we” control quite a few of them.

# Almost final thought:

“I'm not too worried about privacy because I have nothing to hide...”



# Almost final thought:

“I'm not too worried about free speech because I have nothing to say...”