Privacy, Ethics, & Accountability

Lenore D Zuck (UIC)

TAFC, June 7, 2013

First Computer Science Code of Ethics? [1942]

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm

2. A robot must obey the orders given to it by human beings, except where such orders would conflict with the First Law

3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Laws

are robots then bound by the Hippocratic oath?
are drones robots?
and the people (computer scientist!!) who design them?

HERE'S LOOKING AT YOU

Should we worry about the rise of the drone?

BY NICK PAUMGARTEN

Flying quadrotors at Penn's GRASP lab. Photograph by Christopher Griffith.

One night last June, outside the town of Lakota, North Dakota, three cows, with three calves, wandered off a ranch and onto a nearby property farmed by a family named Brossart. The next day, Rodney Brossart, the patriarch, discovered the cows and calves, he claims, eating feed and hay meant for his own cattle. He put them in a pen. Before long, the neighbor appeared and asked that Brossart return them. Brossart refused, citing an old North Dakota livestock law, which, in his interpretation, entitled him to hold on to the cattle until the neighbor repaid him for what they'd eaten and whatever damage they'd caused. The neighbor, who says that Brossart offered to sell him the cattle, appealed to the county sheriff, and soon a deputy and a livestock inspector were headed out to the Brossart farm. On the way there, the officers came upon Rodney Brossart, pumping water, and asked that he turn over the cattle. Brossart refused. The officers threatened to go onto his property to retrieve them, and Brossart replied, "If you step foot on that property, you're not walking away." The deputy attempted to arrest Brossart. Encountering some resistance, he subdued Brossart with a Taser. Brossart's son Jacob, seeing his father in distress, rushed to his aid, and was handcuffed. Brossart's daughter, Abby, also attempted to intercede, and was arrested and charged with assault.

The Brossarts' ranch covers three thousand acres and encompasses an old missile silo. Later that day, the sheriff and other officers showed up with a warrant and were greeted by several Brossarts brandishing firearms. The sheriff retreated and called in a SWAT team from Grand Forks. He also requested the use of a Predator drone, like the ones that the United States has deployed in Iraq and Afghanistan. U.S. Customs and Border Patrol has a fleet of them, and had recently offered them to local law enforcement to help conduct operations on the state's vast northern plains. An unarmed Predator, finishing up its shift along the border, flew down to the Brossart ranch and circled ten thousand feet overhead, using infrared imaging to track the Brossart boys, as they moved about their ranch with what looked to be rifles in hand. The sheriff decided to wait until morning.

The roundup of the Brossarts was hailed at the time as the first drone-assisted arrest on American soil. There had been at least one other, it turns out, but this was certainly the first time that a four-million-dollar remote-controlled aircraft had been deployed to resolve a dispute over reimbursement for a bale of hay.

Citizens movement; they deny it, but they do favor, as their lawyer asserted last month, in a motion to dismiss the case, "the company of one another over the company of extended family or friends." This can be taken as either a justification for the use of the Predator or a kind of self-contained rebuke, since the cops' disproportionate approach seems to validate the anti-government sentiment that precipitated it. Those who most fervently decry the incursions of an Orwellian police state are often the ones who wind up provoking it to its most conspicuous excesses. Certainly, it doesn't help that the Predator is a drone known for killing people from the air. It's one thing to have misgivings about airborne surveillance and another to contemplate death from

Lethal Autonomous Robotics (LARs)

Ethical use of drones hot debate at Grand Forks summit

by Dan Gunderson, Minnesota Public Radio

May 31, 2013

Lethal Autonomous Robotics (LARs)

Ten years later, I'm a philosopher writing a book about the ethics of drone warfare. Some days I fear that I will have either to give up the book or to give up philosophy. I worry that I can't have both. Some of my colleagues would like me to provide decision procedures for military planners and soldiers, the type that could guide them, automatically, unthinkingly, mechanically, to the right decision about drone use. I try to tell them that this is not how ethics, or philosophy, or humans, work.

For the first time in history, soldiers have something in common with philosophers: they can do their jobs sitting down.

John Kaag, NYT March 17, 2013

Lethal Autonomous Robotics (LARs)

Summary

Lethal autonomous robotics (LARs) are weapon systems that, once activated, can select and engage targets without further human intervention. They raise far-reaching concerns about the protection of life during war and peace. This includes the question of the extent to which they can be programmed to comply with the requirements of international humanitarian law and the standards protecting life under international human rights law. Beyond this, their deployment may be unacceptable because no adequate system of legal accountability can be devised, and because robots should not have the power of life and death over human beings. The Special Rapporteur recommends that States establish national moratoria on aspects of LARs, and calls for the establishment of a high level panel on LARs to articulate a policy for the international community on the issue.

Lethal Autonomous Robotics (LARs)

114.   Invite the High Commissioner for Human Rights to convene, as a matter of priority, a High Level Panel on LARs consisting of experts from different fields such as law, robotics, computer science, military operations, diplomacy, conflict management, ethics and philosophy. The Panel should publish its report within a year, and its mandate should include the following:

(a)   Take stock of technical advances of relevance to LARs;

(b)   Evaluate the legal, ethical and policy issues related to LARs;

(c)   Propose a framework to enable the international community to address effectively the legal and policy issues arising in relation to LARs, and make concrete substantive and procedural recommendations in that regard; in its work the Panel

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and other officers showed up with a warrant and were greeted by several Brossarts brandishing firearms. The sheriff retreated and called in a SWAT team from Grand Forks. He also requested the use of a Predator drone, like the ones that the United States has deployed in Iraq and Afghanistan. U.S. Customs and Border Patrol has a fleet of them, and had recently offered them to local law enforcement to help conduct operations on the state's vast northern plains. An unarmed Predator, finishing up its shift along the border, flew down to the Brossart ranch and circled ten thousand feet overhead, using infrared imaging to track the Brossart boys, as they moved about their ranch with what looked to be rifles in hand. The sheriff decided to wait until morning.

The next day, the Predator returned, and the police, watching on a monitor, saw the Brossarts riding around the ranch on A.T.V.s. They appeared to be armed. The SWAT team moved in and arrested three of them. The neighbor got back cows, and five Brossarts got warrants. The cops uncovered shotguns, a few bows and a samurai sword.

The Brossarts were the first drone-arrest on U.S. soil. There—as it turns out, that a drone was used—

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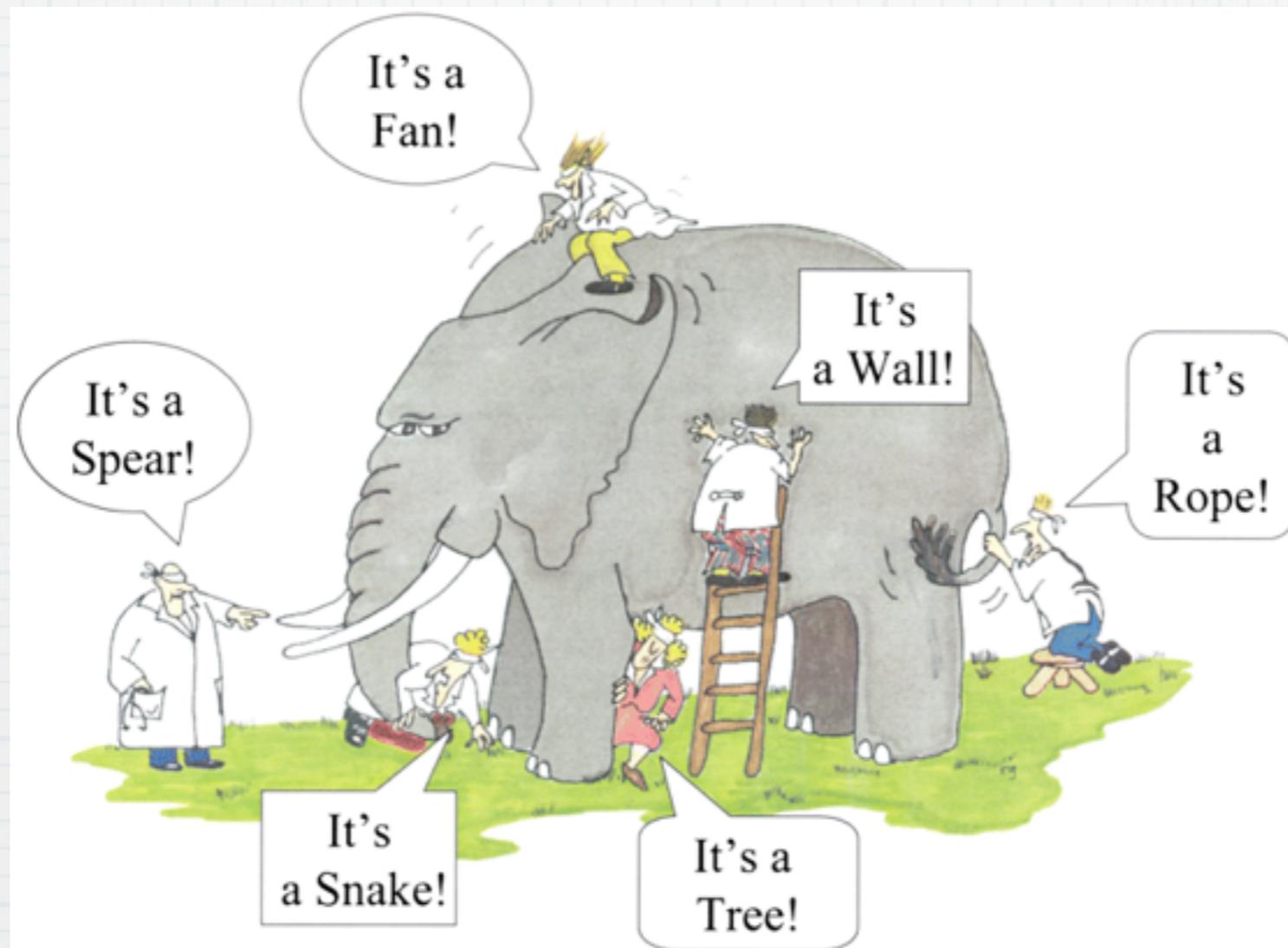
Flying quadrotors at Penn's GRASP lab. Photograph by Peter Griffith.

Ethics is not new...

Philosophers have been arguing since days of yonder

We need **practical** guidelines (rather than arguments between consequentialism and deontology)

ACM's Code of Ethics
General Moral Imperatives

CONTRIBUTE TO SOCIETY AND HUMAN WELL-BEING

what about working for defense?

AVOID HARM TO OTHERS

Consider all potential impacts?

BE FAIR AND TAKE ACTION NOT TO DISCRIMINATE

not tolerate own society until discrimination-free utopia is a reality? work to equalize wealth and eliminate poverty?

HONOR PROPERTY RIGHTS INCLUDING COPYRIGHTS AND PATENT

stop coding? copyrights national, ACM international

Thanks E. Barr

ACM's Code of Ethics
More Specific Professional Responsibilities

KNOW AND RESPECT THE EXISTING LAWS PERTAINING TO PROFESSIONAL WORK

Feasible? There is more:

VIOLATION OF A LAW OR REGULATION MAY BE ETHICAL... IF ONE DECIDES TO VIOLATE A LAW... ONE MUST FULLY ACCEPT RESPONSIBILITY FOR ONE'S ACTIONS AND FOR THE CONSEQUENCES

you are on your own? [why bother with this text??]

GIVE COMPREHENSIVE AND THOROUGH EVALUATIONS OF COMPUTER SYSTEMS AND THEIR IMPACTS, INCLUDING ANALYSIS OF POSSIBLE RISKS

As in "do your job well"? Or exhortation? Part of code of ethics?

Thanks E. Barr

ACM's Code of Ethics
More Specific Professional Responsibilities

HONOR CONTRACTS, AGREEMENTS, AND ASSIGNED RESPONSIBILITIES

Why in code? What if inconsistent with other clauses? As the mutually inconsistent:

...A RESPONSIBILITY TO REQUEST A CHANGE IN ANY ASSIGNMENT THAT HE OR SHE FEELS CANNOT BE COMPLETED AS DEFINED.

an imperative to second guess? No... wait!

A JUDGMENT... MAY NOT BE ACCEPTED... REGARDLESS OF THE DECISION, ONE MUST ACCEPT THE RESPONSIBILITY FOR THE CONSEQUENCES. HOWEVER, PREFORMING ASSIGNMENTS `AGAINST ONES'S OWN JUDGEMENT' DOES NOT RELIEVE THE PROFESSIONAL RESPONSIBILITY...

WE are going to sit back, see what the outcome was and hold YOU responsible in any case

Thanks E. Barr

ACM's Code of Ethics
Compliance with the Code
(in case you wondered)

AS AN ACM MEMBER I WILL
1. UPHOLD AND PROMOTE THE PRINCIPLE OF THIS CODE
2. TREAT VIOLATIONS OF THIS CODE AS INCONSISTENT WITH MEMBERSHIP IN THE ACM

But Ethics doesn't sell... Perhaps data privacy does!

How do the current data protection rules hold back the single market?

Today's data protection rules are divergent and inconsistent across the EU's 27 member countries. Companies may have to deal with **27 different sets of data protection rules** within the EU. The result is a fragmented legal environment with legal uncertainty and **unequal protection for individuals**.

This has also caused **unnecessary costs** and **a significant administrative burden for businesses**. This complex situation is a **disincentive** for businesses – particularly small and medium-sized companies (SMEs) – to expand their operations across the EU and represents an obstacle to economic growth.

Technology

The New York Times

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If Your Password Is 123456, Just Make It HackMe

By ASHLEE VANCE
Published: January 20, 2010

Back at the dawn of the Web, the most popular account password was "12345."

Today, it's one digit longer but hardly safer: "123456."

Despite all the reports of Internet security breaches over the years, including the recent attacks on Google's e-mail service, many people have reacted to the break-ins with a shrug.

According to a new analysis, one out of five Web users still decides to leave the digital equivalent of a key under the doormat: they choose a simple, easily guessed password like "abc123," "iloveyou" or even "password" to protect their data.

"I guess it's just a genetic flaw in humans," said Amichai Shulman, the chief technology officer at Imperva, which makes software for blocking hackers. "We've been following the same patterns since the 1990s."

MOST POPULAR PASSWORDS
Nearly one million RockYou users chose these passwords to protect their accounts.

1. 123456	17. michael
2. 12345	18. ashley
3. 123456789	19. 654321
4. password	20. qwerty
5. iloveyou	21. iloveu
6. princess	22. michelle
7. rockyou	23. 111111
8. 1234567	24. 0
9. 12345678	25. tigger
10. abc123	26. password1
11. nicole	27. sunshine
12. daniel	28. chocolate
13. babygirl	29. anthony
14. monkey	30. angel
15. jessica	31. FRIENDS
16. lovely	32. soccer

Source: Imperva   The New York Times

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Technology

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Des

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4. password   20. qwerty
5. iloveyou   21. iloveu
6. princess   22. mich
7. rockyou   23. 11
8. 1234567   24.
9. 12345678
10. abc123
11. nicole   28.
12. daniel   29. antho
13. babygirl 30. angel
14. monkey   31. FRIENDS
15. jessica   32. soccer
16. lovely

Source: Imperva   The New York Times

Facebook 'friend suggestion' exposes man's other wife and polygamist life

By DAILY MAIL REPORTER

PUBLISHED: 16:53 EST, 9 March 2012 | UPDATED: 10:00 EST, 10 March 2012

Comments (5) | Share

Facebook's automatic efforts to connect user through "friends" they may know recently led two Washington women to find out they were married to the same man, at the same time.

That led to the man, corrections officer Alan L. O'Neill, 41, being slapped with bigamy charges.

According to charging documents filed on Thursday, O'Neill married a woman in 2001, moved out in 2009, changed his name and remarried without divorcing her.

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facebook

Facebook helps you connect a
eople in your life.

Facebook's automatic efforts to connect user through "friends" they may
led two Washington women to find out they were both married to Alan O'Neill, 41

© Mike Kemp In Pictures/Corbis

The first wife first noticed O'Neill had moved on to another woman
Facebook suggested the friendship connection to wife No. 2
Shulma
makes softw
"People You May Know" feature.
following the sa

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Facebook 'friend suggestion' exposes man's other wife and polygamist life

By DAILY MAIL REPORTER

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Source: Imperva   The New York Times

theguardian

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News ⟩ World news ⟩ Occupy Wall Street

Twitter forced to release Occupy protester's tweets to New York court

Micro-blogging site loses legal challenge to prosecutors' request for three months' worth of messages from Malcolm Harris

Matt Williams in New York
guardian.co.uk, Monday 2 July 2012 15.49 EDT

© Mike Kemp in Pictures/Corbis

Facebook helps yo... ...eople in your life.

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HOME » TECHNOLOGY » SONY

PlayStation hack: Sony users urged to change passwords

Tens of millions of PlayStation owners were urged to change their online passwords yesterday after a huge data theft from Sony's systems.

By **Christopher Williams**, Technology Correspondent

6:35AM BST 28 Apr 2011

💬 Comments

Online banking and shopping accounts are at risk from cyber criminals after hackers raided the Sony's PlayStation Network and Qriocity service, because of the way internet users reuse passwords.

Sony's systems, which have been shut down for a week, provide online video gaming services and streaming of films and music via the internet. The company has so far refused to confirm whether passwords were stored in files protected by encryption.

The firm has, however, admitted that files of 77million names, addresses, email addresses, birth dates, passwords and usernames were stolen. Sony also said that credit card information may have been stolen, but it had no evidence either way.

Joseph Bonneau, a researcher at the University of Cambridge Computer Laboratory, said: "It's hard to say if leaking passwords or credit card details is a bigger deal.

Mr Bonneau said Sony's statements suggested it had failed to encrypt passwords, a process that would have rendered them useless to cyber criminals. The firm told users: "If you use your PlayStation Network or Qriocity user name or password for other unrelated services or accounts, we strongly recommend that you change them, as well."

The New York Times

WORLD   U.S.   N.Y. / REGION

Search Technology

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14. monkey
15. jessica
16. lovely

17. micha
18. ashle
19. 6543
20. qwe
21. ilov
22. mi
23. 1

Source: Imperva

Science | Money | Right

...gestion'
...ther wife and

...ment | Culture | Business | Environn

...ll Street

...se Occupy
...ew York court
...ge to prosecutors' request
...rom Malcolm Harris

Why care about data?

* Crosses space and time boundaries unlike most other "things"
    * cultural and ethical norms
    * which applies while "in transit"?
* Unintended consequences
    * sources can be merged
    * yet utility should be maintained (or not?)
* Hard to gauge what can/will be inferred from it
    * "advances" in techniques/technology may render the safe unsafe
    * cyberattack prone

My Dream...

* That data will decay

* That people will read privacy policies

* The organizations will follow own privacy policies

* And do the right thing(s)

* I have other dreams. Some concerning what policy writers should do !

What does it have to do with CS?

(In as much as possible) WE should

* Make sure policies are **consistent**

* **Enforceable**

* Find their intersection

* Develop methods to make them **feasible**

* Allow for accountability in data disclosure (including **real-time detection**)

* Guarantee ethical data sharing across borders

Healthcare Policy (ex)

- A source of information for public health officials, who are responsible for improving the health of the nation.
- A resource for marketing and planning by ▮▮▮▮▮▮▮
- A tool for assessing and improving the care rendered by ▮▮▮▮▮▮▮ on a continuous basis.
- A tool to review and improve outcomes achieved by ▮▮▮▮▮ healthcare team.

Understanding what is in your health record and how this information is used will assist you to:

- Ensure its accuracy.
- Better understand who, what, when, where, and why, others may access your health information contained in your medical record.
- Aid you in making informed decisions when authorizing disclosures to others.

Your Health Information Rights:

Your health record is the physical property of ▮▮▮▮▮ however, the information contained in it belongs to you. You have the right to:

- Request a restriction on certain uses or disclosures of your information as provided by CFR 45 164.522 (a).
- Obtain a paper copy of this notice of information practices upon request.
- Inspect and have a copy of your medical record as provided by 164.524.

We reserve the right to change or modify our practices and to make new provisions effective for all protected health information (PHI) we maintain. Should our practices change, we will post the revisions at all clinic locations, publish the changes in our quarterly newsletter and on our website. We will not use or disclosure your PHI without your authorization, except as described in this notice.

Communication with Family Members:

▮▮▮▮▮▮▮ health care professionals, using their best judgment, may disclose to a family member, other relative, close personal friend or any other person you identify, health care information relevant to that person's involvement in your care or payment related to your care.

For More Information or To Report a Problem:

If you have questions or would like additional information, you

What's Wrong with This Picture?

The Clinic health professionals, using their best judgment, may disclose to a family member, other relative, close personal friend or any other person you identify, health care information relevant to that person's involvement in your care or payment related to your care.

* Who are "health Clinic Professionals"?

* What is "best judgment"?

* What if I identify nobody?

* Any information to anybody identified?

* Vacuity checking doesn't hurt...

* (but who reads this anyway?)

The new EU proposal

* The European Commission will strengthen individuals' right to be forgotten

* meaning that if you no longer want your data to be processed, and there is no legitimate reason for a company to keep it, the data shall be deleted

Examples -
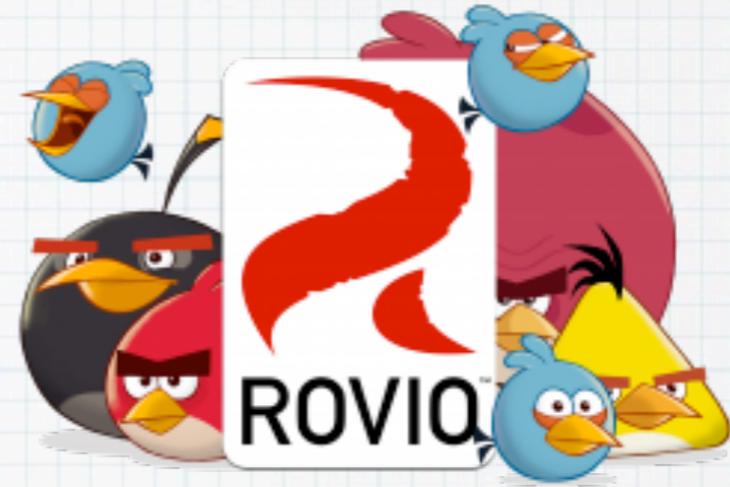
* "Rovio retains the collected data for the period necessary to fulfill the purposes outlined in this Privacy Policy unless a longer retention period is required or permitted by law."

* "Thereafter Rovio deletes all aforementioned data in its possession within a reasonable timeframe"
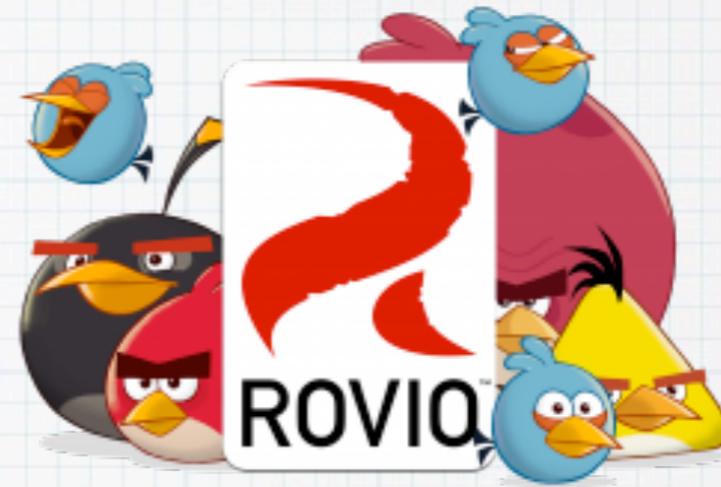
Thanks G. Petronella

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APPROVED

Thanks G. Petronella

Examples -

* "**sometimes**, you will have a choice whether or not to provide information"

* consistent with "when your consent is required, you must be asked to give it **explicitly**" (new EU regulation proposal)???

Thanks G. Petronella

Examples - zeptolab

* "sometimes, you will have a choice whether or not to provide information"

* consistent with "when your consent is required, you must be asked to give it explicitly" (new EU regulation proposal)???

REJECTED

Examples - zynga

* "most major browsers offer choices for whether and how you might receive future cookies and for deleting cookies already on your machine"

* (So, opt-out)

* too bad that the EU law requires websites to gain **consent** from visitors to store or receive any information on a computer or any other web connected devices **(including cookies!)**

Thanks G. Petronella

Examples - zynga

* "most major browsers offer choices for whether and how you might receive future cookies and for deleting cookies already on your machine"

* (So, opt-out)

* too bad that the EU law requires websites to gain **consent** from visitors to store or receive any information on a computer or any other web connected devices (including cookies!)

Thanks G. Petronella

REJECTED

Examples - Google

* Have you noticed this lately?
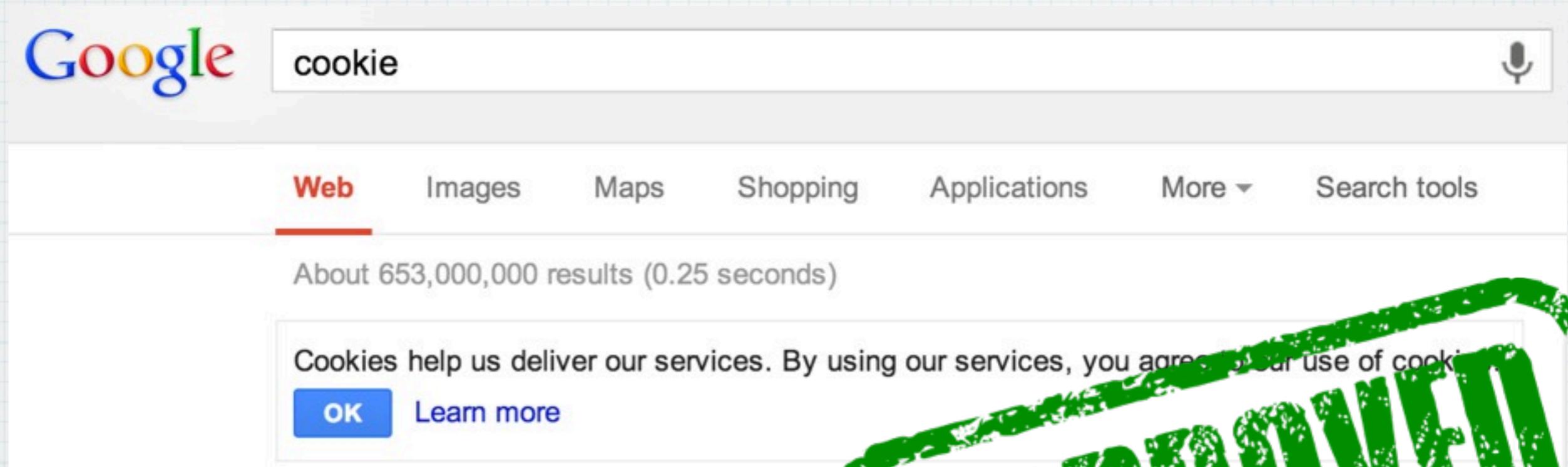
Thanks G. Petronella

On Privacy Self-Management
(Solove, May 2013)

Although privacy self-management is certainly a laudable and necessary component of any regulatory regime, I contend that **it is being tasked with doing work beyond its capabilities**. Privacy self-management does not provide people with meaningful control over their data. First, empirical and social science research demonstrates that there are severe cognitive problems that **undermine privacy self-management**. These cognitive problems impair individuals' ability to make informed, rational choices about the costs and benefits of consenting to the collection, use, and disclosure of their personal data.

On Privacy Self-Management
(Solove, May 2013)

Second, and more troubling, even well-informed and rational individuals cannot appropriately self-manage their privacy due to several structural problems. There are too many entities collecting and using personal data to make it feasible for people to manage their privacy separately with each entity. Moreover, many privacy harms are the result of an aggregation of pieces of data over a period of time by different entities. It is virtually impossible for people to weigh the cost and benefits of revealing information or permitting its use transfer without an understanding of the potential downstream uses, further limiting the effectiveness of the privacy self-management framework.

On Privacy Self-Management
(Solove, May 2013)

In addition, privacy self-management addresses privacy in a series of isolated transactions guided by particular individuals. Privacy costs and benefits, however, are more appropriately assessed cumulatively and holistically – not merely at the individual level.

Privacy Self-Management?

* E.g., **CA "Right to Know Act of 2013" (AB1291)**, requires:

    * disclosure of all PII a company retains

    * disclosure of all PII a company discloses to 3rd party

    * accounting of retention and disclosure of PII to individuals annually

* EU requires **explicit** consent and is more restrictive on data collection/use/disclosure/transfer, while US is basically "okay unless clearly illegal"

(Break?) The Glass

* tracks eye movement (no active permission)

* what if you don't want to be the "bad" guy?

* what if you lose glasses?

Google Glass Is Banned On These Premises

stopthecyborgs.org

(Google complies with overwhelming # of government requests on PII)

The Death of Privacy?

* Will "aid repressive autocracies in targeting their citizens" however...

* "will be a gift to open governments in responding to their citizen and customer concerns" [Schmidt & Cohen]

* (Did I mention James Rosen?)

* (Or George Orwell?)

Take Home

* CT is ever evolving, and so should be relevant code of ethics

* Data is being shared across borders and current regulations/directives/policies/codes fail to capture the complexity involved

* Even if they did, ethical, privacy-preserving, accoutability-enabled, treatment of data requires solutions to numerous technical problems

Challenges

http://www.learningradiology.com/

* Sanitization VS utility

* Policies: specifications; enforcement; consistency; conjunction

* What to do when things don't match (AI to the rescue?)

* Data destruction

* In-Design Privacy/Accountability (Ethics intentionally excluded!)