

The Virtuous SRE



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SREcon APAC 2019

What this talk is **NOT** about

- Telling you what to do
- Telling you what to think
- Trying to change your values
- Recapping the (fine) ACM code of ethics on slides



About us

Theo Schlossnagle

Serial Entrepreneur: OmniTI,
Sparkpost, Fontdeck, Circonus

Author: Scalable Internet
Architecture, Web Operations,
Seeking SRE

Software Engineer and Ops
Distinguished ACM Member

Laura Nolan

Been doing SRE stuff for a
while. Has left a job for ethical
reasons.

Contributor: Seeking SRE, SRE
book.

Campaigns for preemptive ban
on lethal autonomous
weapons and runs a local
tech-critical group in Dublin.



WE ARE
BETTER
THAN THIS!



Professional Ethics

The background features a faded illustration of a scene from Dr. Seuss's 'The Lorax'. On the left, a globe with a pink star is shown. In the center and right, several yellow birds with long necks and tufted heads are depicted. One bird is standing on the right, while others are in various poses, some appearing to be in motion or interacting with the globe.

- Religion
- Law
- Medicine

When you have the power to affect society...
society needs to be able to trust you'll use that power in their interest.

Computing and its Sudden Impact

A faded background image of the character Deadpool, wearing his signature red and black suit, lying down with his hands on his head. The image is semi-transparent, allowing the text to be clearly visible over it.

- 1940s-90s: computing begins affecting small populations
- 2010: accessible to much of the world
- 2020: directly influencing much of the world

Wow, we grew up too fast.



Why, ethically speaking, is a computer system not like a bridge?



The shortest possible introduction to ethics

Virtue Ethics

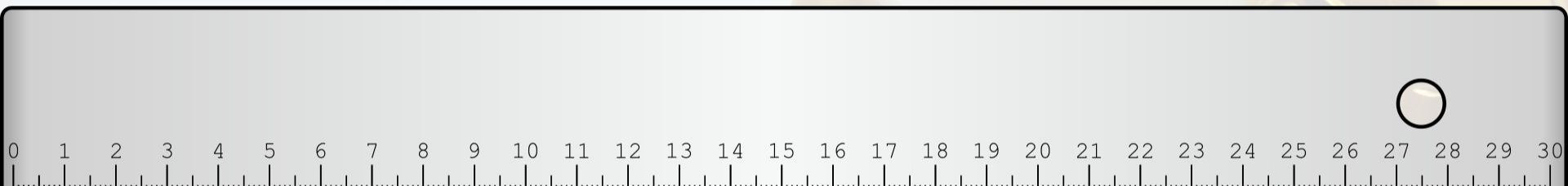
“Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit.”

-- Aristotle



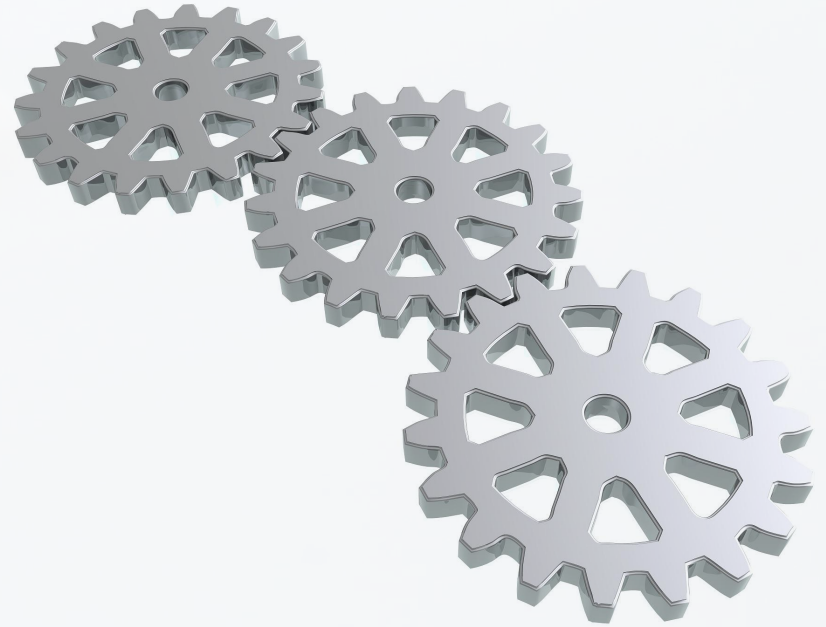
Deontology: rule based ethics

- Rules 'bind to one's duty'
- Many possible rules systems:
 - Religious rules
 - Personal values
 - Cultural values



Consequentialism

- The moral worth of any action depends solely on the outcome
- What is a good outcome?
- Consequences for who?
- Consequences of single acts or rules?
- Utilitarianism - maximising the aggregate happiness



Eastern ethics

仁, benevolence, humaneness

義/义, righteousness or justice

禮/礼, proper rite

智, knowledge

信, integrity

忠, loyalty

孝, filial piety

節/节, contingency

義/义, righteousness





**Consequentialism versus virtues, values,
and duties?**

Kant and the Categorical Imperative

- Moral acts are done out of duty, and motives make an act right or wrong
- Act only in ways that would be OK if they were universal
- Treat humanity not as a means, but always as an end





That was nothing to do with cats!

True. Sorry.

Human rights

- Each society has widely varying value systems...
yet the Internet connects us in a way that requires a shared ethical compass.
- In 1948 the UN gave us the Universal Declaration of Human Rights (UDHR)





THE ONES
WHO WALK
AWAY FROM
OMELAS



URSULA K.
LE GUIN

THE ONES WHO WALK AWAY FROM OMELAS



**The German air safety
law**

PATIENT NAME: John
TREATMENT MODE: FIX

BEAM TYPE: E

ENERGY (KeV): 10

	ACTUAL	PRESCRIBED
UNIT RATE/MINUTE	0.000000	0.000000
MONITOR UNITS	200.000000	200.000000
TIME (MIN)	0.270000	0.270000

GANTRY ROTATION (DEG)	0.000000	0.000000	VERIFIED
COLLIMATOR ROTATION (DEG)	359.200000	359.200000	VERIFIED
COLLIMATOR X (CM)	14.200000	14.200000	VERIFIED
COLLIMATOR Y (CM)	27.200000	27.200000	VERIFIED
WEDGE NUMBER	1.000000	1.000000	VERIFIED
ACCESSORY NUMBER	0.000000	0.000000	VERIFIED

DATE: 2012-04-16
TIME: 11:48:58
OPR ID: 033-tfs3p

SYSTEM: BEAM READY
TREAT: TREAT PAUSE
REASON: OPERATOR

OP.MODE: TREAT
X-RAY
COMMAND: █
AUTO
173777



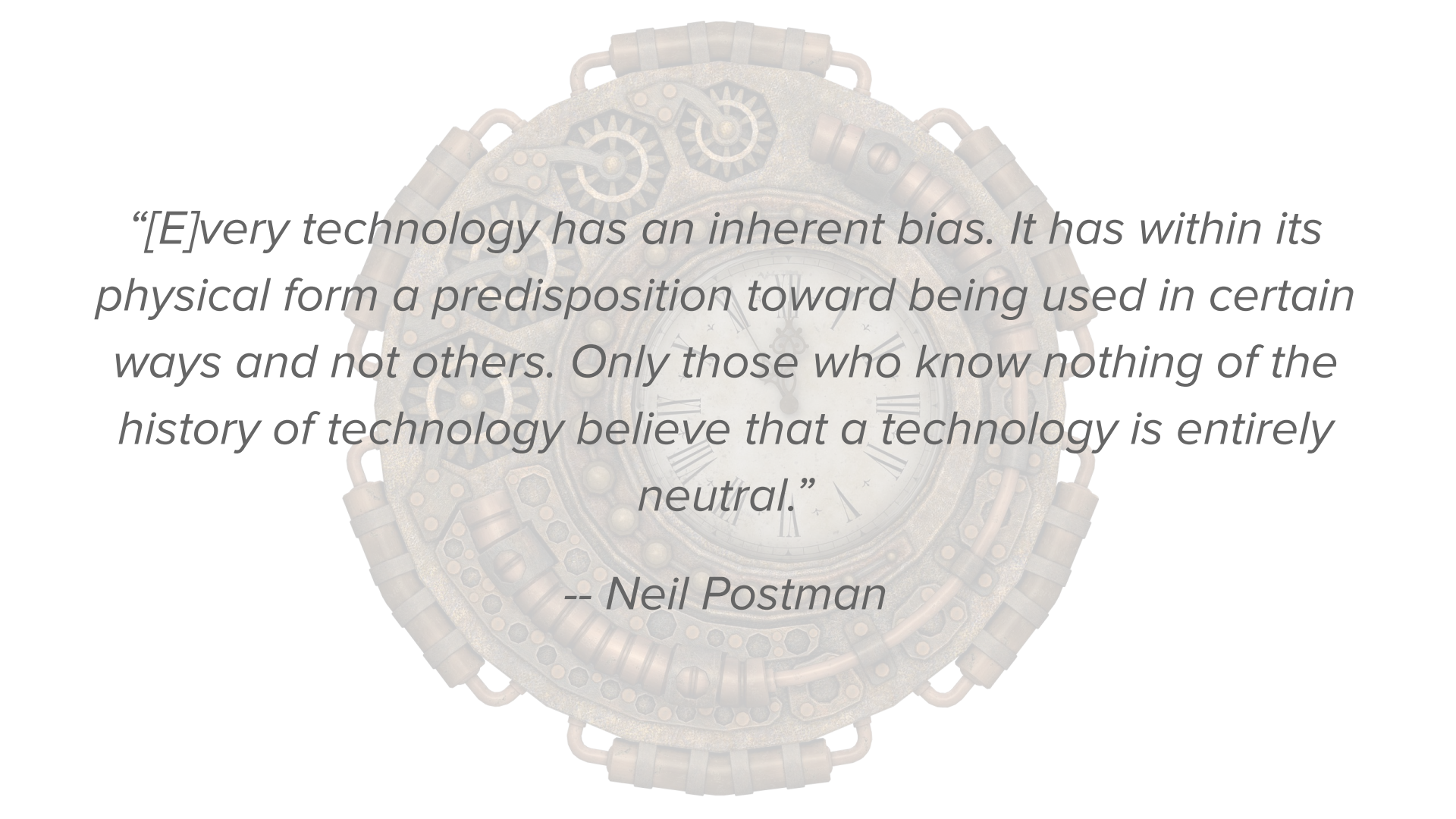
Self Driving Cars

Tesla: Truth in advertising.

Uber: Abiding by the law.



Is technology neutral?

A detailed mechanical watch movement is shown in a faded, light brown color. It features a central dial with Roman numerals, several gears of different sizes, and various mechanical components like springs and levers. The watch is set against a white background.

“[E]very technology has an inherent bias. It has within its physical form a predisposition toward being used in certain ways and not others. Only those who know nothing of the history of technology believe that a technology is entirely neutral.”

-- Neil Postman

**The curious
case of the the
clock**





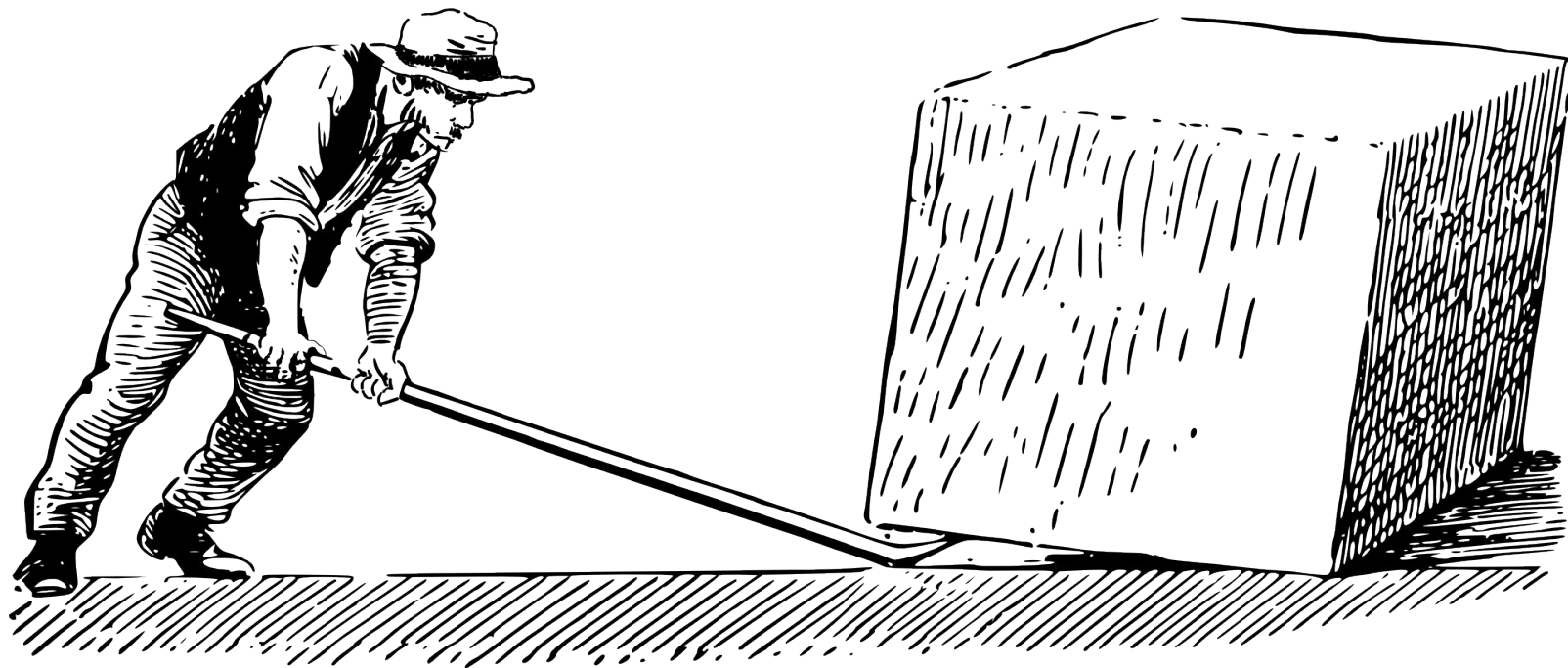
How is a computer system different to a bridge, again?





Magic Internet Money

ICE's expert systems and always detain



ML and AI in the Justice System

Likelihood of parole

Likelihood of recidivism



facebook



Facebook helps you connect and share with the people in your life.



Technologists (mostly) want to do the right thing

In March 2018 the results of a major software developer survey were published.

- 80% think we have an obligation to consider the ethical implications of our code
- 50% would report unethical code if they saw it
- 40% would write unethical code if asked (they mostly said 'it depends' - interpreted this as 'we would do it but we would feel bad')
- 20% feel ultimately responsible for their unethical code

SRE: the watchers on the wall?



What can we do?

- Ethical review processes
- Dissent



Effective dissent

- [IEEE Guidelines for Engineers Dissenting on Ethical Grounds](#)
 - Establish a clear technical foundation.
 - Be as impersonal and objective as possible
 - Catch problems early
 - Use organisational dispute resolution processes

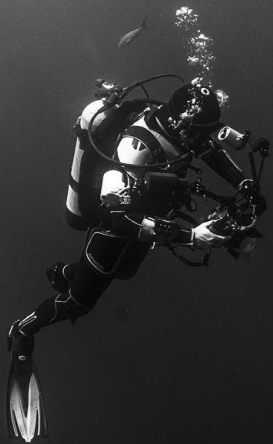


Associations and unions



- Gaining some traction
- May be part of the solution

Challenges.



“A computing professional should contribute to society and to human well-being, acknowledging that all people are stakeholders in computing.

This principle, which concerns the quality of life of all people, affirms an obligation of computing professionals, both individually and collectively, to use their skills for the benefit of society, its members, and the environment surrounding them. This obligation includes promoting fundamental human rights and protecting each individual's right to autonomy.”

-- ACM Code of Ethics