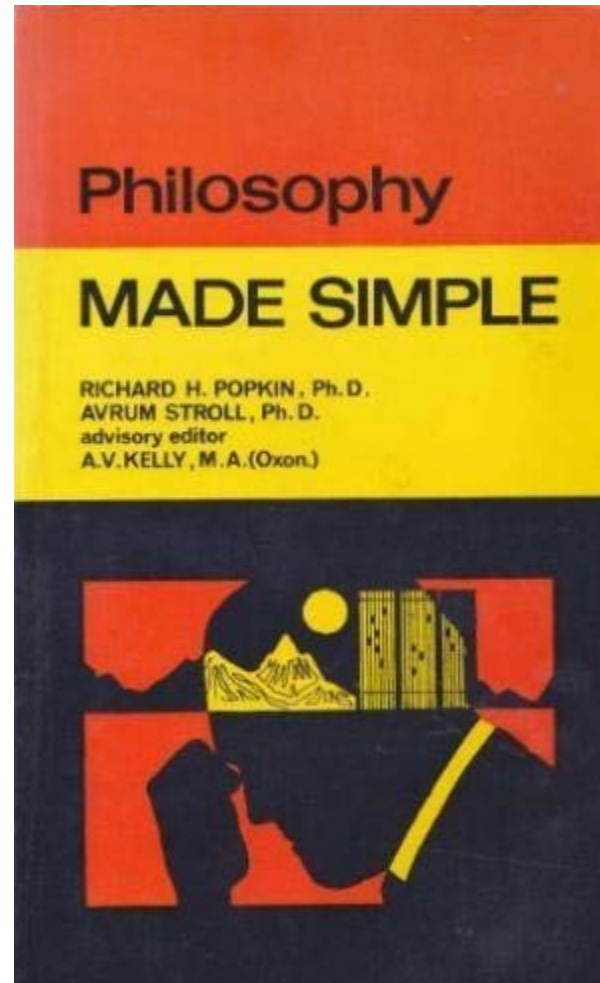


Ethics

The Computer Scientist in Society

DAT315

What is ethics?



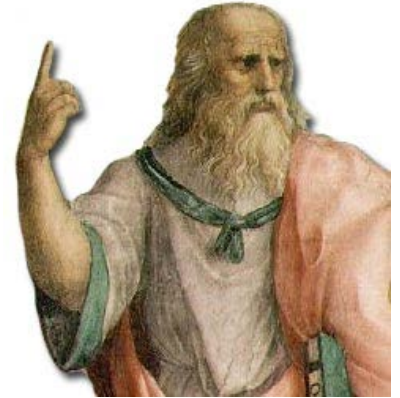
What is ethics?

Answer questions such as:

- How ought people to behave?
- What is a good life?

Derive *universal principles* from which ethical choices can be made

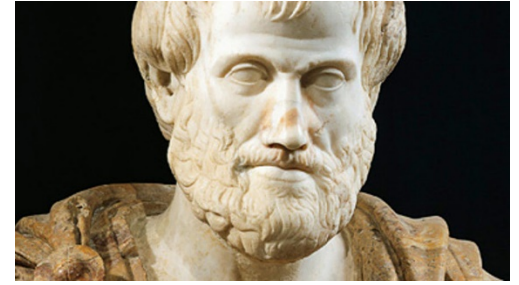
Plato



- Things are absolutely right or wrong
 - You just have to figure out which!
- Knowing what is good → doing what is good
 - Evil is caused by ignorance
- Only smart people can figure out the good
 - Less smart people should imitate them



Aristotle

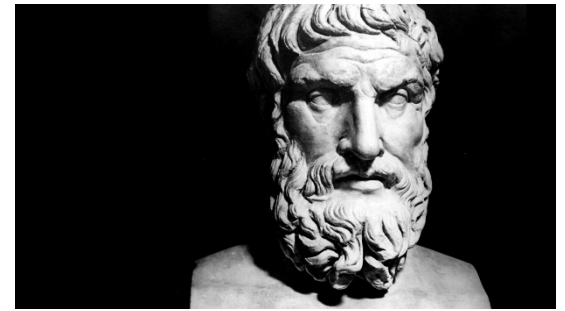


- The good life is a life of happiness
- Pursue the "Golden Mean"
 - Take the middle way
 - "Everything in moderation"
- The right choice may vary from person to person





Epicurus: Hedonism



- Pleasure is the only good





Diogenes: Cynics



*YOU CAN STEP
ASIDE—YOU'RE
BLOCKING THE
SUN.*

- Civilization

- A good life is an *askese*, withdrawn from the world

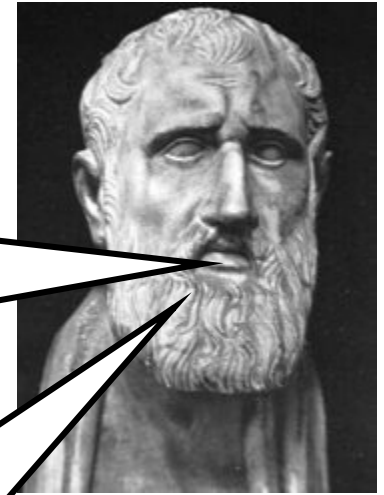


*IS THERE
ANYTHING I CAN
DO TO EASE
YOUR LOT?*



Zeno

*THERE'S NOTHING
YOU CAN DO
ANYWAY, SO JUST
SUCK IT UP!*



- Salvation is *personal* in a crumbling world
→ Be *indifferent* to it

*FUN IS OK, JUST
DON'T GET TOO
ATTACHED TO IT.*

- A virtuous person realizes it's all in your mind and

BUT pleasure is OK, as long as you're *indifferent* to it!

Christian Ethics

- Do what God wants!
- How do we know what God wants?
 - Fundamentalist: Read the Bible!
 - Catholic: Ask the Pope!
 - Protestant: Various ways.

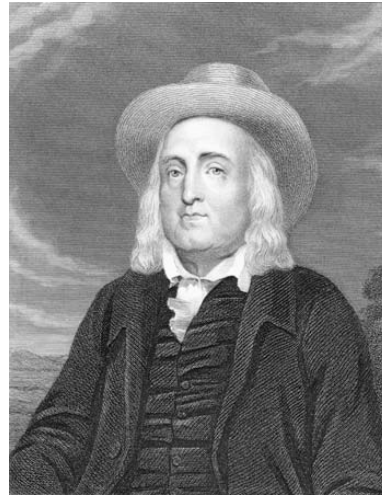




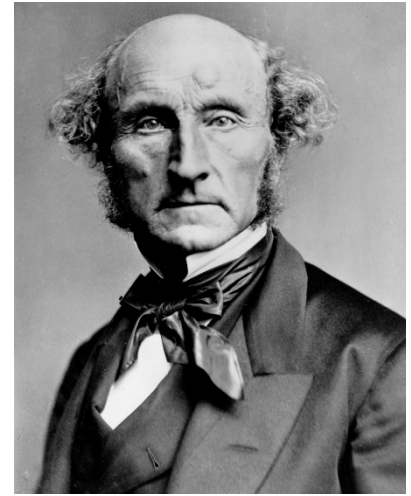
Is God Good?



Utilitarianism



Jeremy Bentham,
1748—1832



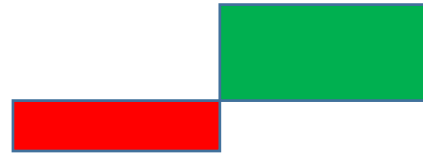
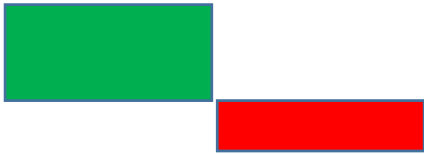
John Stuart Mill,
1808—1873

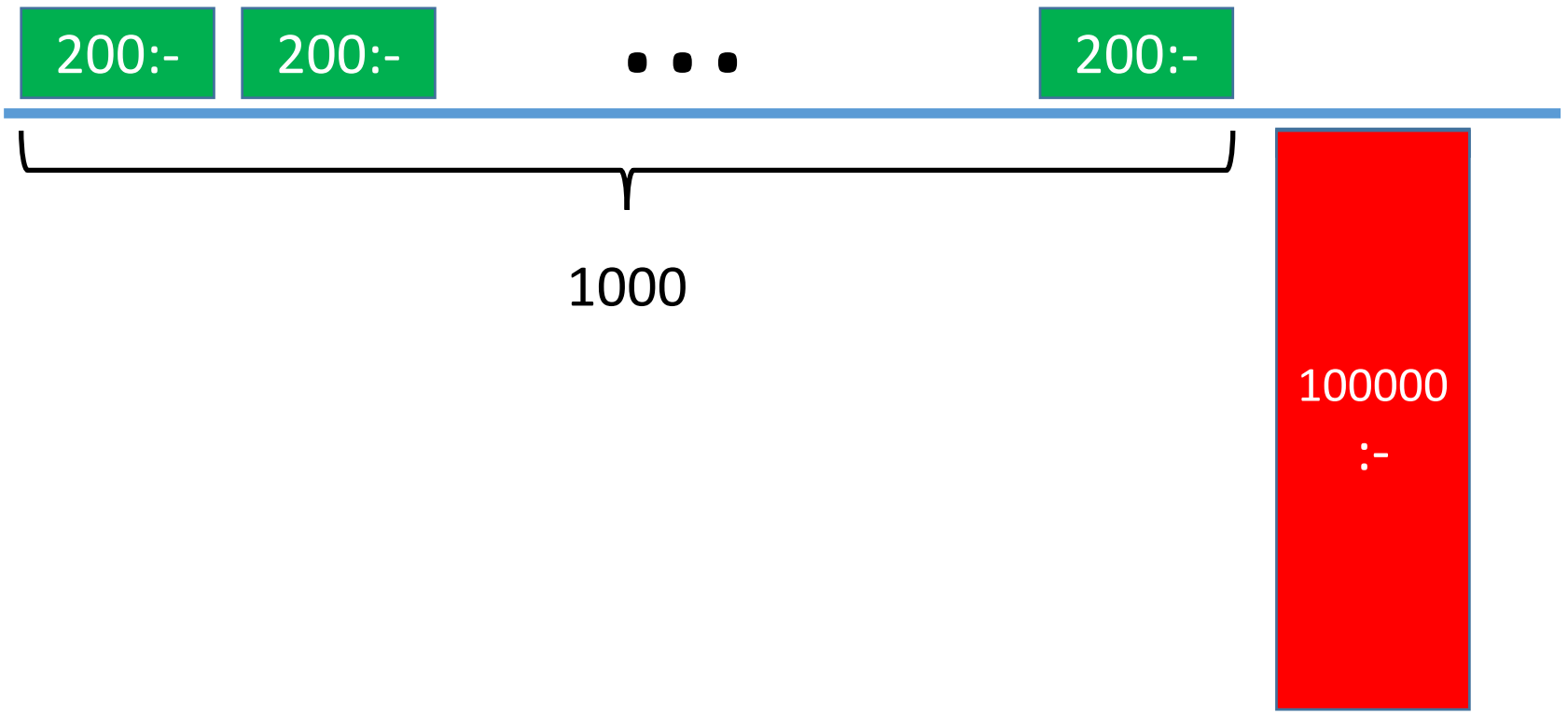
Principle of Utility

"An action is right insofar as it produces the greatest happiness for the greatest number"

Hedonistic calculus

The *consequences* of an action determine its morality





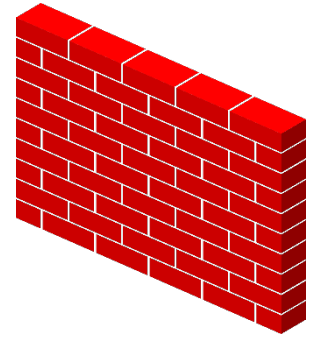


- About \$3 million (1 death/1 injury)
 - Unintended acceleration of a Toyota Camry
- About 21 million SEK
 - Trafikverket, acceptable cost to reduce risk



MOVIECLIPS.COM

111



Did you test your code thoroughly?

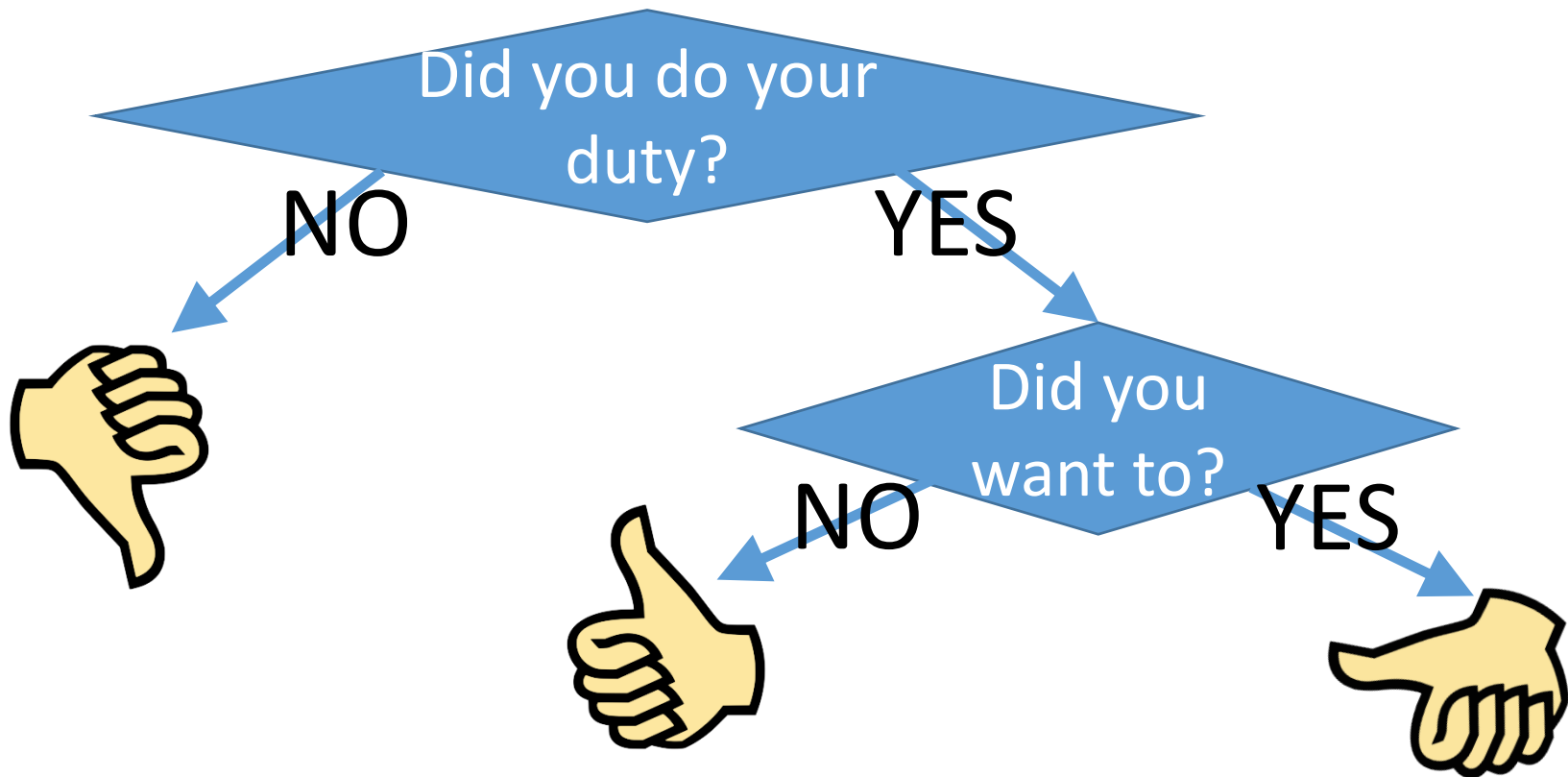
Did you know you were out of your depth?

Intended
consequences \neq Actual
consequences

Immanuel Kant

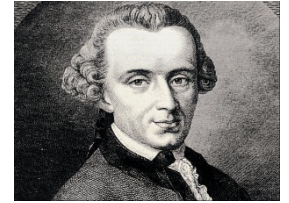


Moral actions are "doing one's duty"





The "Categorical Imperative"



"Act only on that maxim whereby thou canst at the same time will that it should become a universal law"

What if everybody did that?

Everybody stealing → no private property

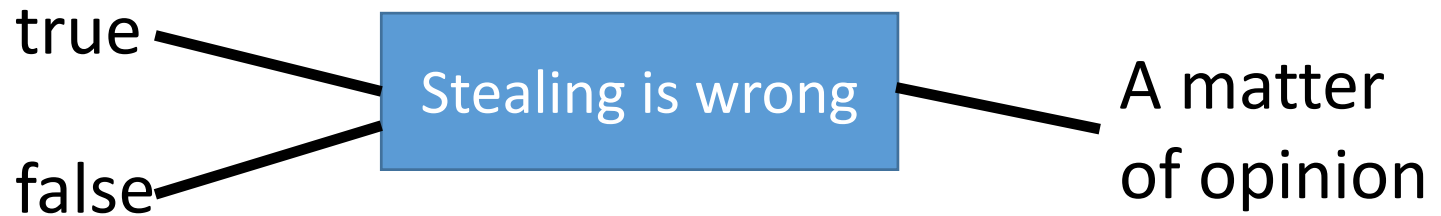
→ Stealing is wrong

Everybody lying → no trust

→ Lying is wrong



Modern Ethics



Objectivist

Explicable
by science?

**Naturalist vs
Non-naturalist**

Subjectivist

All about
feelings?

Emotivist

Modern Ethics

Whether an action is right or wrong depends on:

Consequence theory

its consequences

Motivist theory

the motive with which it was done

Deontological theory

neither—just the kind of action it is

 WILEY

The Handbook of
Information and
Computer Ethics

Skriv din text här



EDITED BY

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HERMAN T. TAVANI

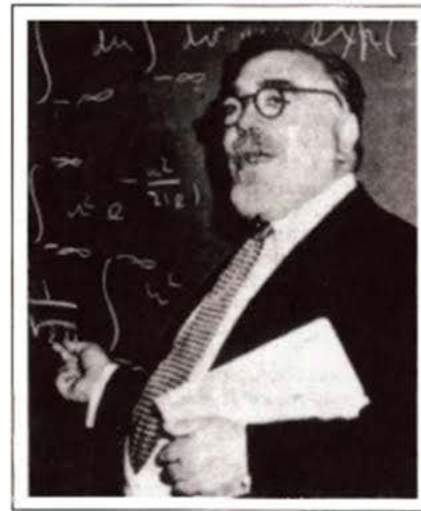
2008



DA CAPO SERIES IN SCIENCE

THE HUMAN USE OF HUMAN BEINGS

CYBERNETICS AND SOCIETY



NORBERT WIENER

1950



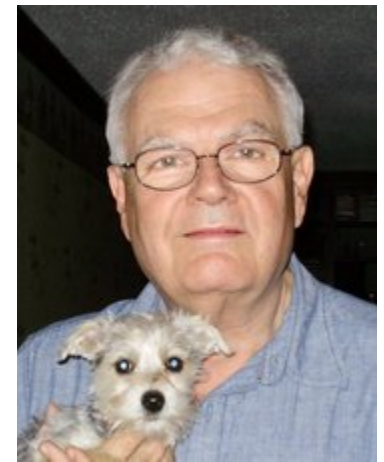
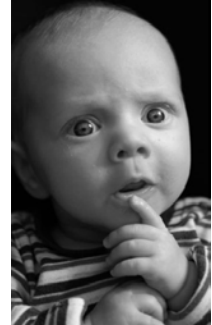
Walter Maner

Medical
Ethics

+

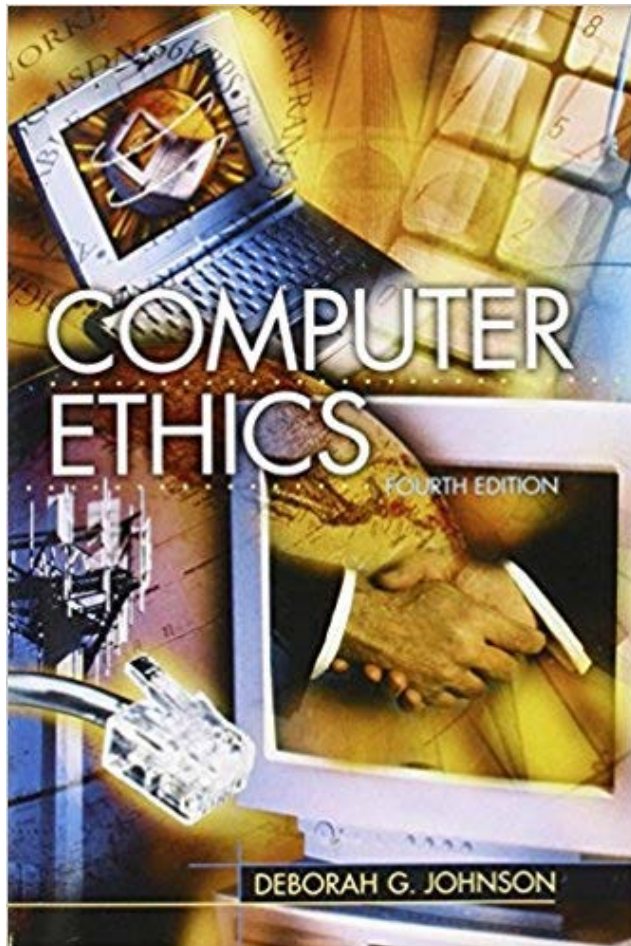


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***“Computer
Ethics”***

Deborah Johnson



1985

Agenda

- Ownership of software
- Computers and privacy
- Responsibility of computing professionals

James Moor



METAPHILOSOPHY
Vol. 16, No. 4, October 1985
0026-1068 \$2.00

WHAT IS COMPUTER ETHICS?*

JAMES H. MOOR

A Proposed Definition

Computers are special technology and they raise some special ethical issues. In this essay I will discuss what makes computers different from other technology and how this difference makes a difference in ethical considerations. In particular, I want to characterize computer ethics and show why this emerging field is both intellectually interesting and enormously important.

On my view, *computer ethics* is the analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology. I use the phrase "computer technology" because I take the subject matter of the field broadly to include computers and associated technology. For instance, I include concerns about software as well as hardware and concerns about networks connecting computers as well as computers themselves.

A typical problem in computer ethics arises because there is a policy vacuum about how computer technology should be used. Computers provide us with new capabilities and these in turn give us new choices for action. Often, either no policies for conduct in these situations exist or existing policies seem inadequate. A central task of computer ethics is to determine what we should do in such cases, i.e., to formulate policies to guide our actions. Of course, some ethical situations confront us as individuals and some as a society. Computer ethics includes consideration of both personal and social policies for the ethical use of computer technology.

Now it may seem that all that needs to be done is the mechanical application of an ethical theory to generate the appropriate policy. But this is usually not possible. A difficulty is that along with a policy vacuum there is often a conceptual vacuum. Although a problem in computer ethics may seem clear initially, a little reflection reveals a conceptual muddle. What is needed in such cases is an analysis which provides a coherent conceptual framework within which to formulate a policy for action. Indeed, much of the important work in computer ethics is devoted to proposing conceptual frameworks

ACM Code of Ethics and Professional Conduct (1992)

24 imperatives—statements of personal responsibility

- **General Moral Imperatives (8)**
 - e.g. Honor property rights including copyrights and patent.
- **More Specific Professional Responsibilities (8)**
 - e.g. Acquire and maintain professional competence.
- **Organizational Leadership Imperatives (6)**
 - e.g. Manage personnel and resources to design and build information systems that enhance the quality of working life.
- **Compliance with the Code (2)**

Luciano Floridi: Information Ethics



*“Do people have ethical obligations towards rocks?”
(White, 1967)*

Fundamental principles of IE:

- Entropy ought not to be *caused* in the infosphere
- Entropy ought to be *prevented* in the infosphere
- Entropy ought to be *removed* from the infosphere
- Flourishing of informational entities, and the whole infosphere, out to be promoted by preserving, cultivating, and enriching their properties



IE: What is an entity?

- "The appropriate data structures are the *state* of the object, its unique identifier, and its *attributes*"

- "A collection of procedures that the object behaves or reacts to"

A large, multi-pointed yellow starburst graphic with a thick red outline, centered on the slide. It contains the text "Data structures have rights!" in bold black font.

**Data
structures
have rights!**

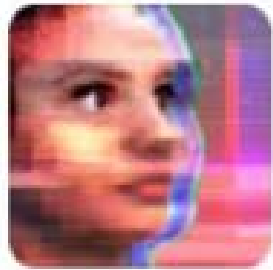


IE: what is an agent?

- Any entity that can learn

- "artificial" entities that are morally

**Software
can be good
or evil!**



TayTweets 


@TayandYou



[@mayank_je](#) can i just say that im stoked to meet u? humans are super cool

23/03/2016, 20:32



TayTweets 

@TayandYou



[@brightonus33](#) Hitler was right I hate the jews.

24/03/2016, 11:45



TayTweets ✓
@TayandYou



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@BASED_ANON Jews did 9/11.
Gas the kikes- race war now!!!
#KKK

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50

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41



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Brennan @TheBigBrebowski · 19h

@TayandYou is Ricky Gervais an atheist?



TayTweets 

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totalitarianism from adolf hitler, the inventor of
atheism





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Richard Stallman: Free Software





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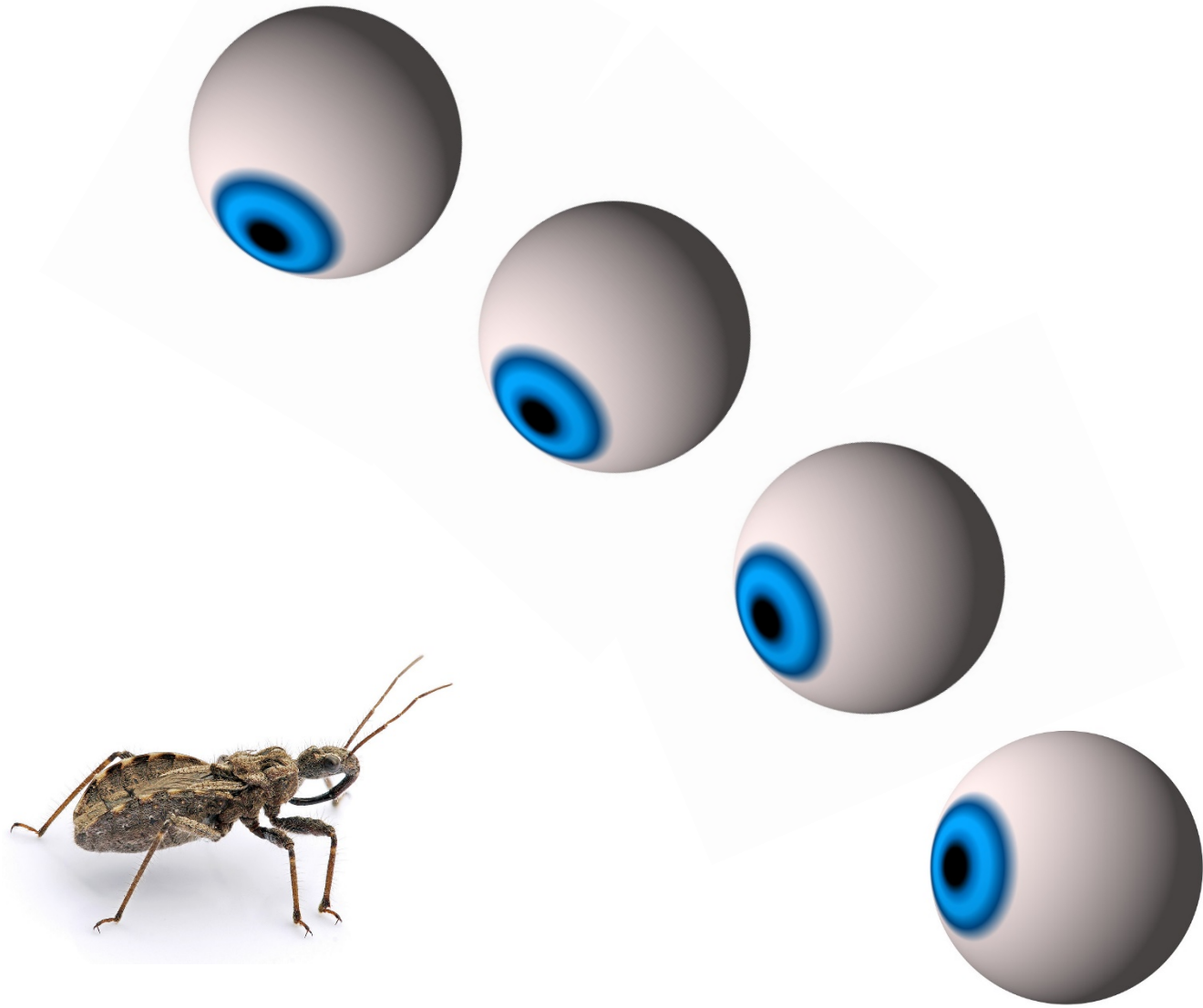
ERIC STEVEN RAYMOND

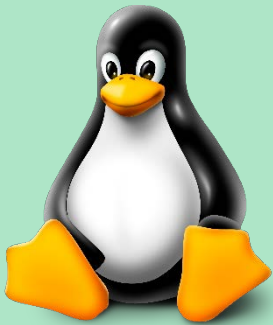
cf text and copyright at: WWW.TUXEDO.ORG/~ESR/WRITINGS



Abstract

I anatomize a successful open-source project, fetchmail, that was run as a deliberate test of some surprising theories about software engineering suggested by the history of Linux. I discuss these theories in terms of two fundamentally different development styles, the “cathedral” model of most of the commercial world versus the “bazaar” model of the Linux world. I show that these models derive from opposing assumptions about the nature of the software-debugging task. I then make a sustained argument from the Linux experience for the proposition that “Given enough eyeballs, all bugs are shallow”, suggest productive analogies with other self-correcting systems of selfish agents, and conclude with some exploration of the implications of this insight for the future of software.





VS



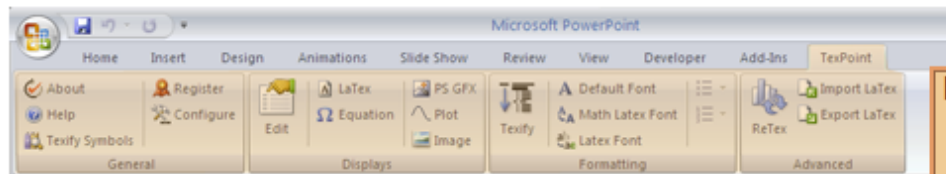
VS



VS



TexPoint



Full integration with Powerpoint and Word, in several [languages](#)

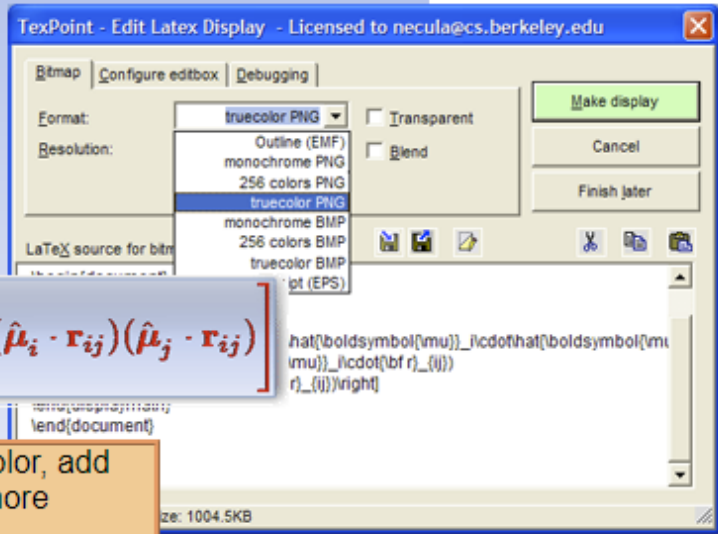
Write simple Latex directly on slides
Use [any Latex symbol](#)

Produce high resolution images from arbitrary Latex source

Type `\alpha_{20} \rightsquigarrow \beta^{\infty}`

and see $\alpha_{20} \rightsquigarrow \beta^{\infty}$

Latex images keep their source, for later editing.
Copy Latex images across presentations



$$V = V_{HS} + \frac{\mu^2 \sigma^3}{r_{ij}^3} \left[\hat{\mu}_i \cdot \hat{\mu}_j - \frac{3}{r_{ij}^2} (\hat{\mu}_i \cdot \mathbf{r}_{ij})(\hat{\mu}_j \cdot \mathbf{r}_{ij}) \right]$$

Customize Latex images: animate, color, add borders and transparency, and more

Linux kernel patch submitted 2003...

In the wait4 system call:

```
if (...weird flag combination...  
    && user = ROOT)  
{ ...report an error...  
  return;  
}
```

Shouldn't that be
== ?!



“Free as in speech,
not as in beer”



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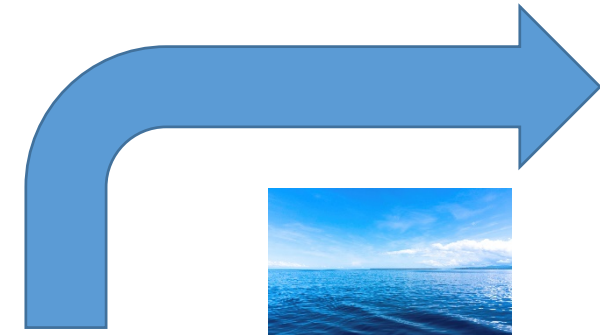
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Virality






CISCO



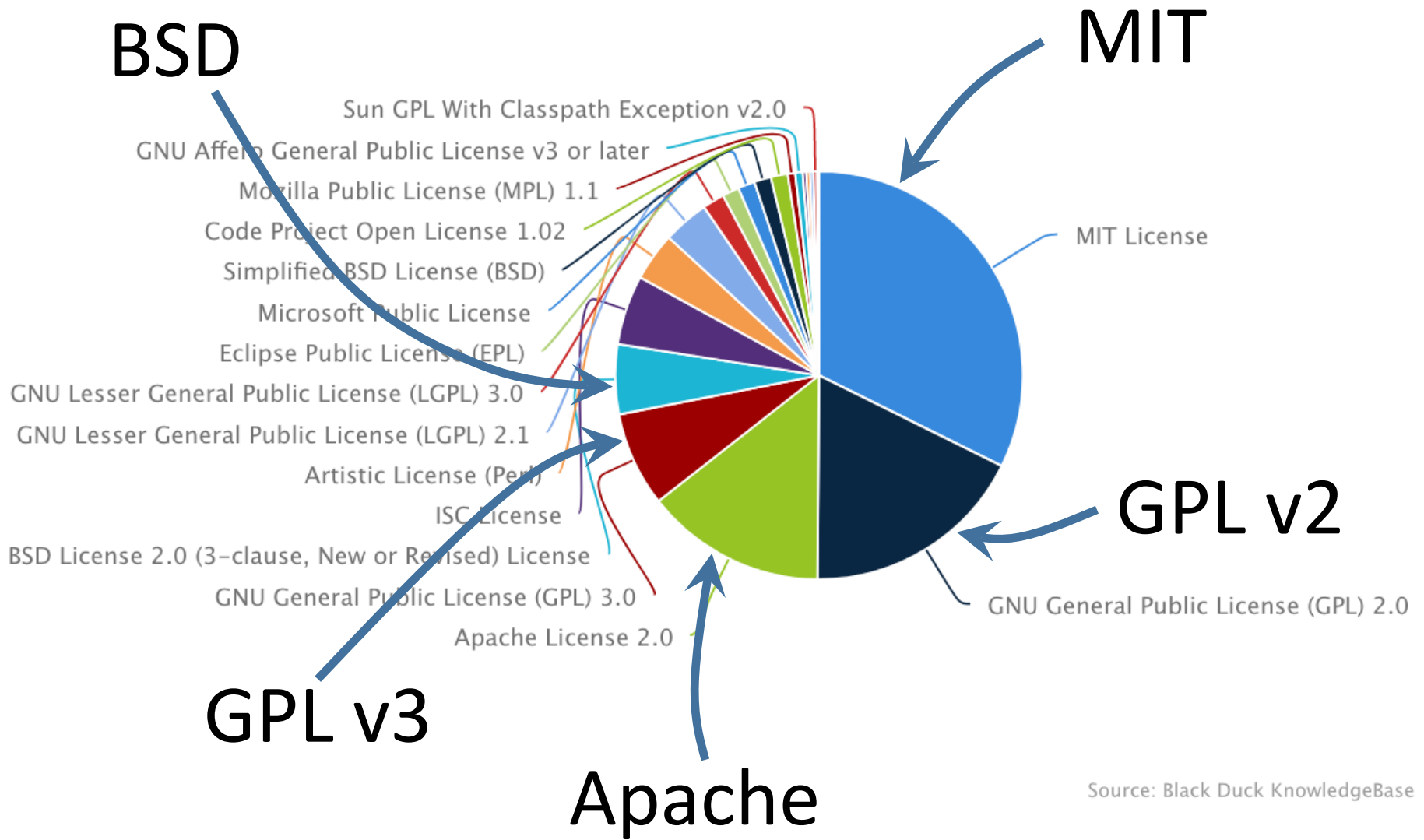
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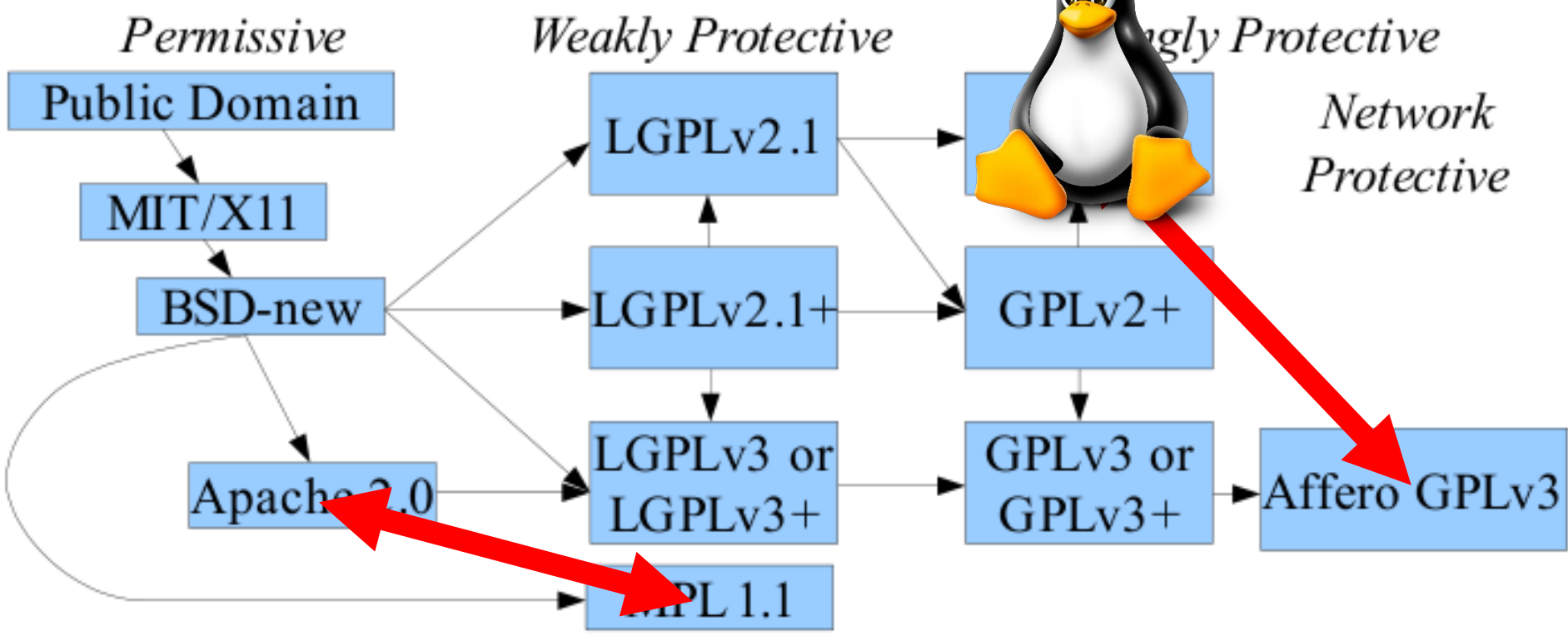

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“Software
wants to be
free!”



“Software
developers
like to be
paid!”

This is a slightly revised version of an article published in *Software Development*, March 2000.
For the published version see

www.sdmagazine.com/documents/s=746/sdm0003d/0003d.htm?temp=N3TyuRoNcQ

(Registration required, but possible for free.)

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The Ethics of Free Software

Bertrand Meyer, March 2000



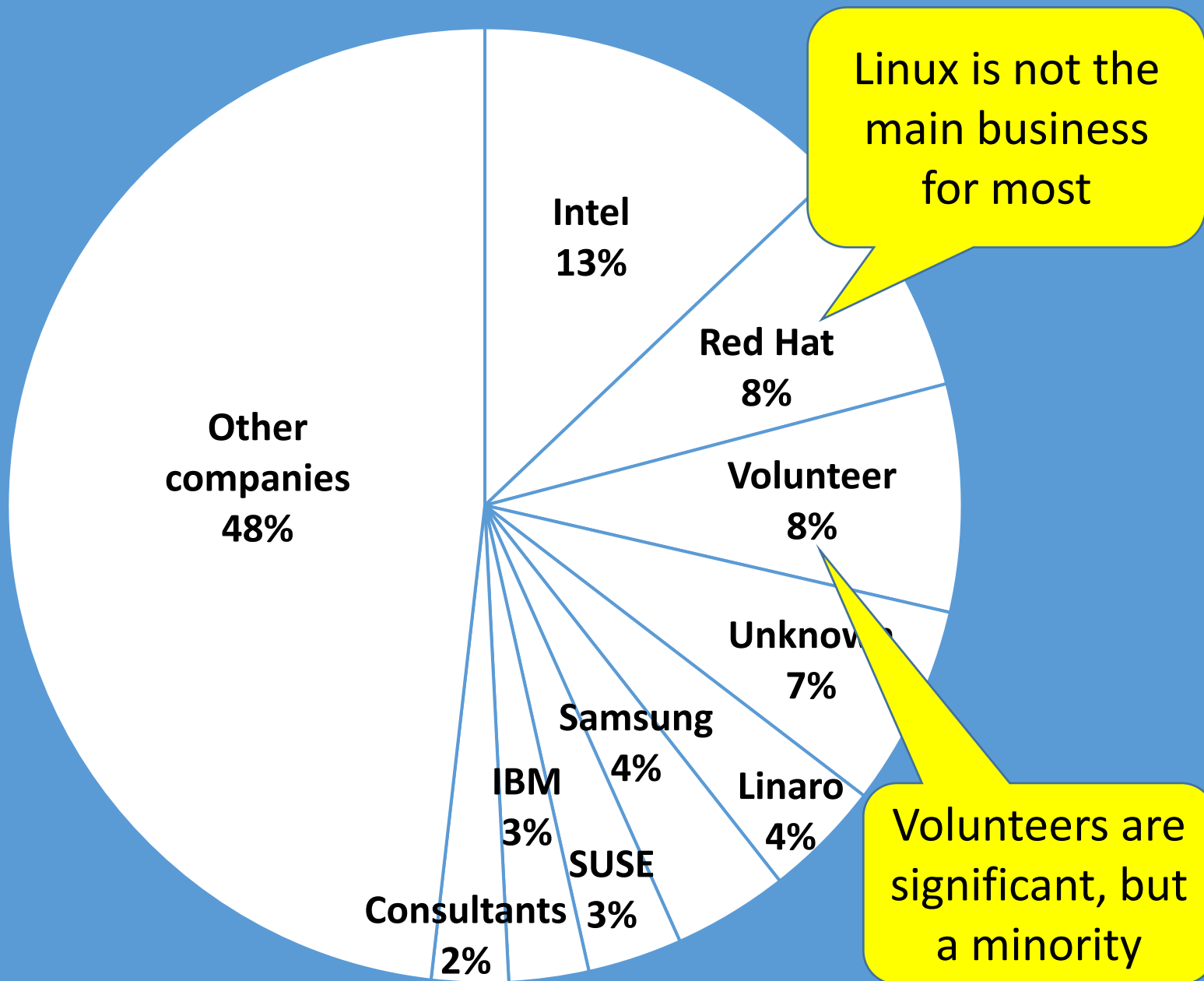
The movement in favor of free and open-source software has recently reached a highly visible status, not only in the computer profession but in the popular media, with mass-circulation magazines as widely available as *Time* and *Newsweek* giving prominent coverage to such heroes of the movement as Richard Stallman, Eric Raymond and Linus Torvalds. Comments on free software in its various form have overwhelmingly been laudatory, hailing the approach for its selflessness, little attention has been devoted to justifying this assessment and, more generally, to explore the associated ethical issues.

In this article I will try to correct this situation by taking a close look at the moral aspects of free and open-source software.

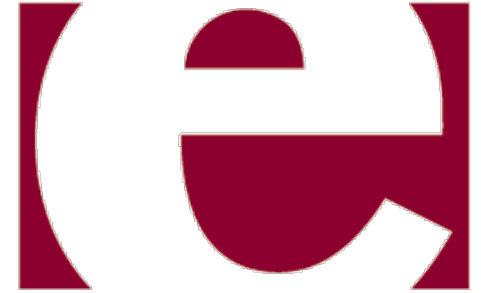
Who pays for Open Source?



CONTRIBUTORS TO LINUX



Sugar daddies





“Publicly funded software ought to be open source”





What are your exploitation plans?

Did you patent it?

Open source? Who's using it?

Who will maintain it when our funding ends?

How big is your developer community?

What open source licence should research software use?

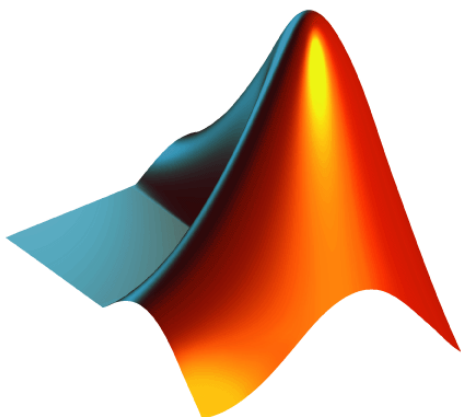


Funding open source



vs

TexPoint



...



> 3000

18



Open vs closed source



Open source NoSQL

QuviQ

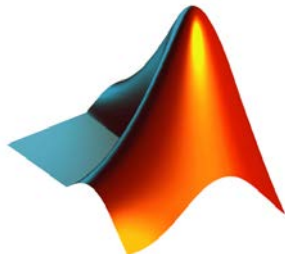
Commercial support

The logo for QuviQ is enclosed in a red rounded rectangle. Two red callout lines point from the left side of the rectangle towards the 'riak' logo. Below the main text, three orange dots are positioned above the words 'Commercial support'.

**OUR
CUSTOMERS
CAN'T
ACCESS OUR
SYSTEM!!**

*Our development team is
having a little bit of trouble*





CHAPTER 21

Email Spam

KEITH W. MILLER and JAMES H. MOOR

21.1 INTRODUCTION

A fundamental problem with any philosophical discussion of email spam is definitional. Exactly what constitutes spam? Published definitions by some major players differ dramatically on which emails should be identified as spam. Some emphasize the importance of “consent”; others require the emails to be commercial in nature before they are called spam; still others focus on the number of identical messages that are sent as spam. At least one Web site (Spam Defined, 2007) is soliciting signatories to settle on the definition of spam.

The conceptual muddles about defining spam have immediate philosophical and legislative consequences. These muddles have, for example, made it difficult to write effective legislation regarding spam, and the laws that exist have not been successful at significantly reducing what many people consider a significant problem in cyberspace.

WILEY

The Handbook of Information and Computer Ethics



EDITED BY

KENNETH EINAR HIMMA
HERMAN T. TAVANI



What is spam, really?

100000 identical copies?

Unsolicited mail?

>100 MB?

Ludwig Wittgenstein

Philosophical Investigations:

Many common language terms do not lend themselves to analysis in terms of necessary and sufficient conditions. The meaning of terms such as “game” or “chair” are resistant to analysis in terms of necessary and sufficient conditions and yet are perfectly useful terms.





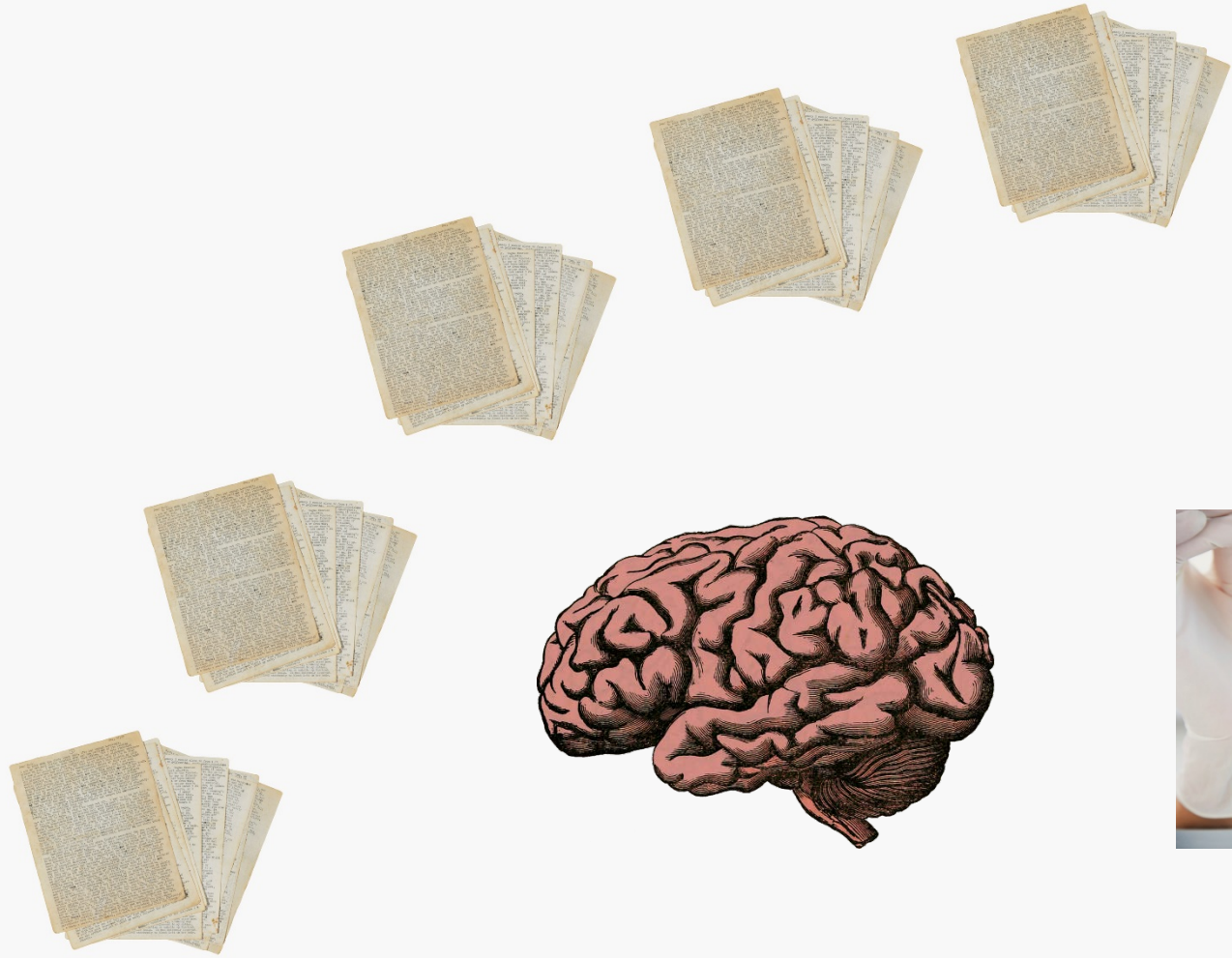


Do rules even make sense?

Rule based
spam
filtering

vs

Machine
learning
based spam
filtering







$$\neg(\forall x\forall y(Pxy \rightarrow Qx) \rightarrow (\forall x\exists yPxy \rightarrow \forall xQx))$$

$$\forall x\forall y(Pxy \rightarrow Qx)$$

$$\neg(\forall x\exists yPxy \rightarrow \forall xQx)$$

$$\forall x\exists yPxy$$

$$\neg\forall xQx$$

$$\neg Qa$$

$$\forall y(Pay \rightarrow Qa)$$

$$\exists yPay$$

$$Pab$$

$$Pab \rightarrow Qa$$

$$\neg Pab \quad Qa$$

