Open Source

The Church of Emacs

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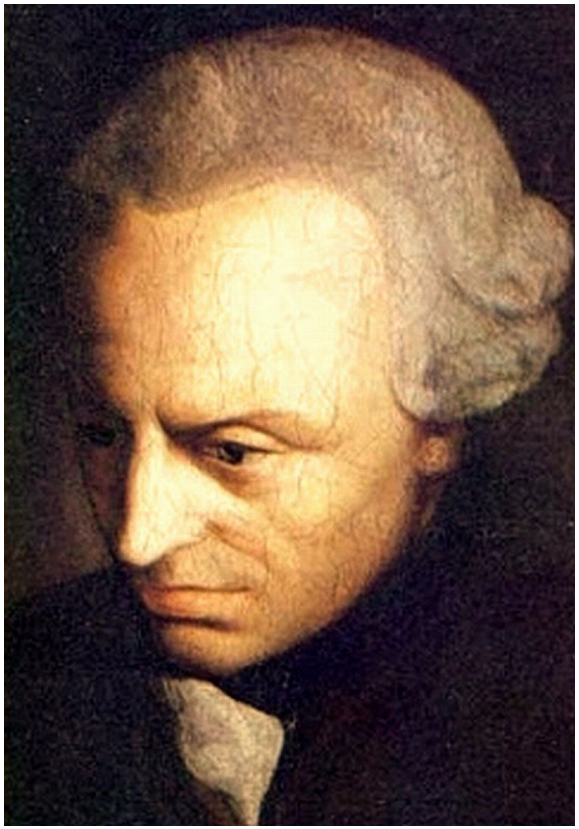
Analysis

Stallman's Argument: Basis

- A deontological standpoint
- Stallman as an ethical essentialist
  - proprietary software
  - restricted data formats
  - internet services
  - surveillance
  - "always bring up [free software] as an ethical issue" (Stallman, 2011, para. 63)



Stallman's Argument: Logos

- Deductive reasoning
  - tobacco and proprietary software comparison (Stallman, 2011, para. 55)
- Contradictory premises
  - dismissing economics of free digital society (para. 34)
  - later addressing economics of digital media (para. 109)

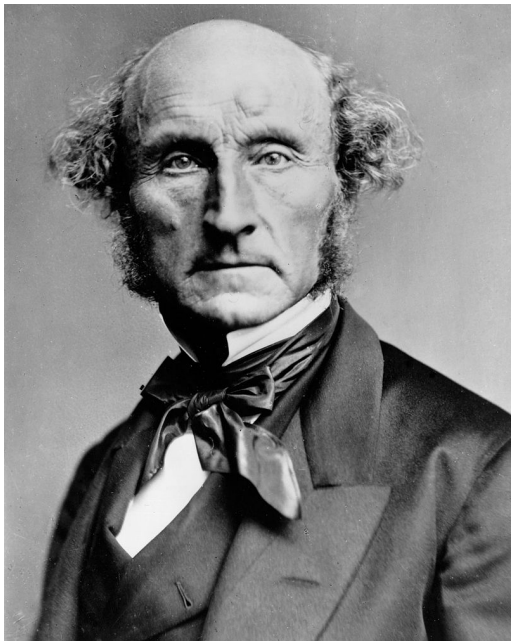
Stallman's Argument: Pathos

- Use of strong characterizations
  - "Computers are Stalin's dream" (Stallman, 2011, para. 3)
  - All DRM should be illegal (para. 30)
- Strong appeals to tradition
  - values derived from a non-digital society
  - Amazon Kindle (para. 98)
- Calls Amazon Kindle (para. 98)
  - an immediate end to digital surveillance
  - "you can't wait until there is another dictator" (para. 13)

Practical Advantages of Open Source

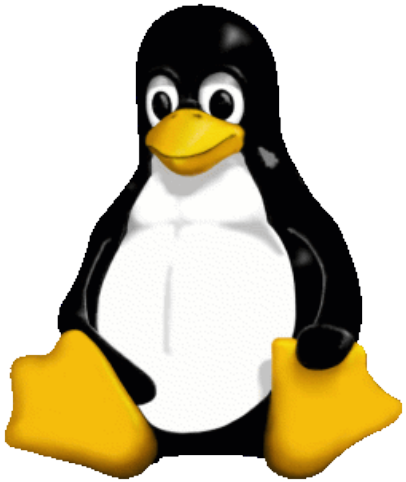
Software for Freedom vs. Freedom for Software

- Needs fulfilled by free software
  - a need for software
  - a need for ethical software and practices
- Stallman's emphasis on a "free digital society"
- Consequentialist stance on free software
  - open source vs. free software
  - a less radical approach
  - weighing the utility of open source
  - need-driven software (Bisson, 2007, p. 17)



GNU + Linux, GNU/Linux

- The GNU operating system
  - "written for your freedom" (Stallman, 2011, para. 48)
- The need for a kernel
  - 1990: GNU Hurd
  - 1991: Linux
- Fusion of Linux and GNU
  - GNU + Linux, or just Linux?
  - Torvalds vs. Stallman



Linux: open source success principles

- Using / creating the best tools for the job
- Not started with open source in mind (Torvalds, 2016, 3:30)
- Open source contributions
  - GPL and copyleft
  - Collaborative efforts and development
  - Formation of a communities around open-source code
- Flexibility
  - Availability of source code promotes reuse
  - power saving on Linux cellphone benefit Linux supercomputers (Zemlin, 2013, 11:34)

Another Success Story - Apache HTTP Server

- Most popular web server since 1995
- Open source project
- Inherited the NCSA Common Gateway Interface.
- Repurposed software components
  - enabling efficient software development (Bisson, 2007, p. 17)

Preventing Obsolescence

- Vendor lock-in
  - warned against by Stallman (2011, para. 54)
- Proprietary software creates vendor dependency
  - maintenance
  - updates
  - support
- Case Study: Electronic voting machines (Colannino, 2012, p. 916)
  - migration to electronic voting machines
  - software escrow
  - code was licensed for testing, not deployment.

Quality Assurance

- Linus's Law
  - 6,782 lines of code added/subtracted from Linux daily (Zemlin, 2013, 12:03)
- Software peer-review
- Core developers and user developers
- Mozilla bug reports (Wang, Shih, & Carroll, 2015, p. 352)
  - value differences
  - skill differences
  - reciprocal skill transfer
  - disorganization preventable

References I

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Stallman, R. M. (2011, October 19). *A free digital society - what makes digital inclusion good or bad?* [Lecture transcript]. Retrieved from `http://www.gnu.org/philosophy/free-digital-society.en.html`

Torvalds, L. (2016, Feb). *The mind behind linux* [Video file]. TED. Retrieved from `https://www.ted.com/talks/linus_torvalds_the_mind_behind_linux#t-199962`

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