

**Understanding Free Software  
Developers:  
Findings from the FLOSS Study**

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Understanding Free Software Developers: Findings from the FLOSS Study

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# Overview

- Background
- Model & Hypothesis
- Survey Methodologies
- Survey Results
- Conclusion

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## Background

- Lots of research done on the impacts of FOSS on industry and the economy.
- Not much information about how or why this works.
- Hard data was hard to find on this phenomenon.

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## Background

- Most existing data was from small studies or it involved anecdotal evidence.
- FOSS is “unusual in its avoidance of the use of money as a mode of exchange.”
- No official information on the FOSS population.

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# Why Do Developers Contribute?

- Self Improvement
- Fame
- Money
- Job Advancement
- Politics
- Destroy Evil Companies

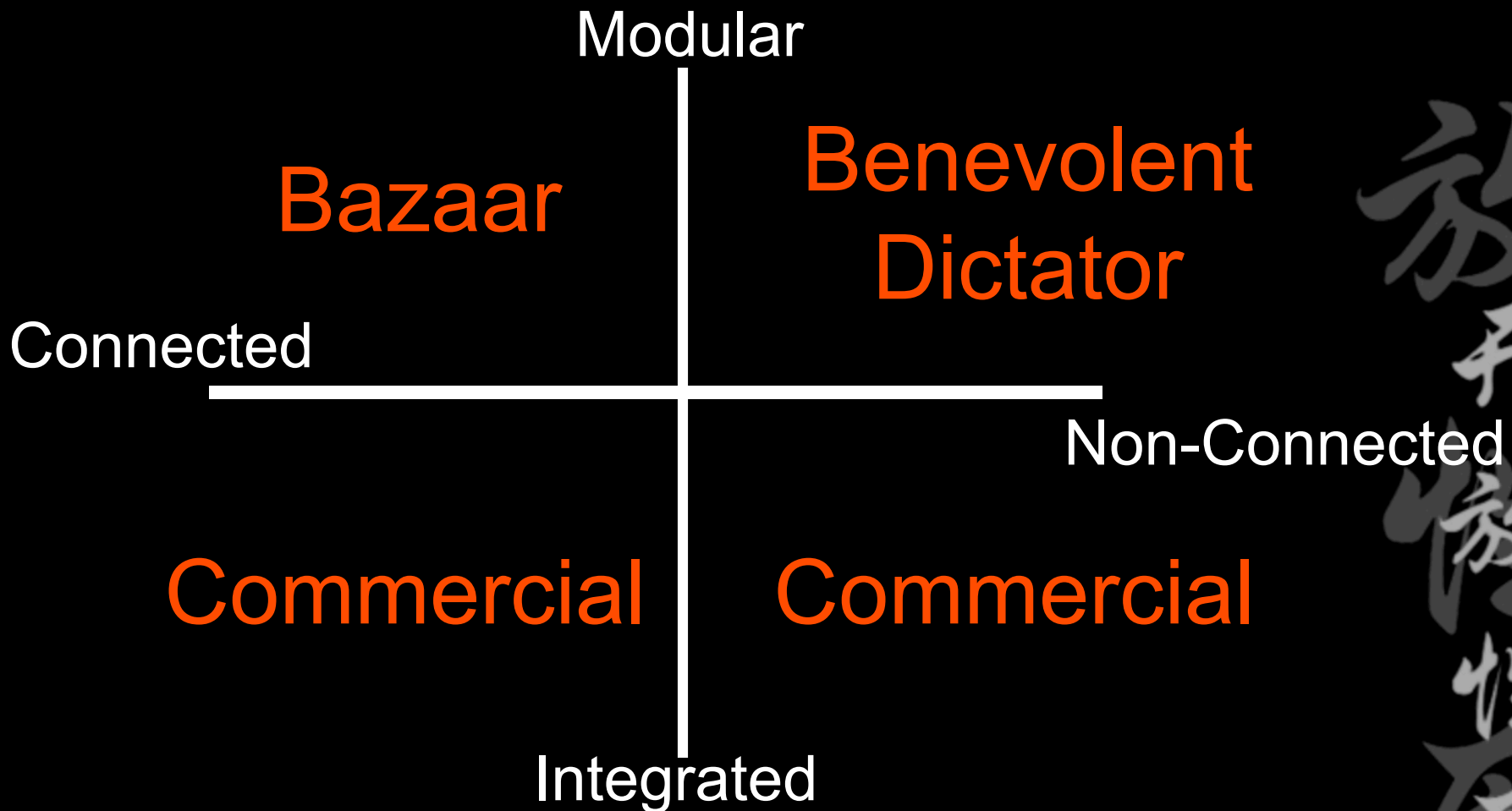
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# How Are Developers Organized?

- Organization determines outputs and effectiveness.
- Organization structure can be determined by individuals' motives.
- Organization structure can predict behaviours.

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# How Are Developers Organized?



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## Methodology

- Take random sample of developer population as there is not enough empirical data on the general population.
- Sent out a self-distributing survey.
  - Posted on developer forums.
  - Spread through [Slashdot](#).
- Survey translated to lessen bias towards English speakers.



## Validation

- Definition of a developer:
  - “[anyone] who has contributed source code to an free/libre/open source software package.”
- Asked for developer’s e-mail addresses
  - Attempted to match addresses to source code contributions.

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## Validation

- Statistically compared subset of developers to the respondent population to check for differences.
- They received 2774 responses.
- 2280 respondents completed the entire survey.

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## Results - Demographics

- 98.8% male (2774 sample size)
- Comparison
  - 97.5% male (684 sample size from SourceForge) – Kirby's Presentation
  - 95.7% male (141 sample size from Linux subsystem) – Nav's Presentation
- 60% aged 16-25

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# Geek Stereotype – Invalid?



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## FOSS == Aphrodisiac?

- 41% of respondents are single.
- 40% living with spouse/partner.
- 17% of respondents have children.
  - Half of them have one child.

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## Started FOSS Development

- Most developers joined in 2000.
- “As most children were reported to be under 2 years of age at the time of the survey. One might think, as the free software baby boom coincided with the dot com peak, that developers saw their earning possibilities soar and took on financial and familial responsibilities?”

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## Motivations

- 1990s - Assumed that FOSS was fuelled by hobbyists and irrational people who were driven by warm fuzzy feelings of communal sharing.
- Now – Assumed that FOSS is fuelled by rational people who have self-interested motives, expecting better career prospects.

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# Motivations

- Main Categories of Motivation
  - Social/Community
  - Career/Monetary
  - Political
  - Product-Related
- Majority contribute to FOSS to learn new skills, participate in a community, and to improve career prospects.

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## Motivations

- All motivation groups felt they were selfish, ie took more than they gave to the community.
- 55.7% Felt they took more than they gave.
- 14.6% Felt they gave as much as they took.

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## Organization

- Extremely concentrated and widespread.
- Small minority contribute to majority of code base.
- Large majority contribute small amounts of code and participate in few projects.
- This organization seems universal across all projects at SourceForge.



## Leadership & Involvement

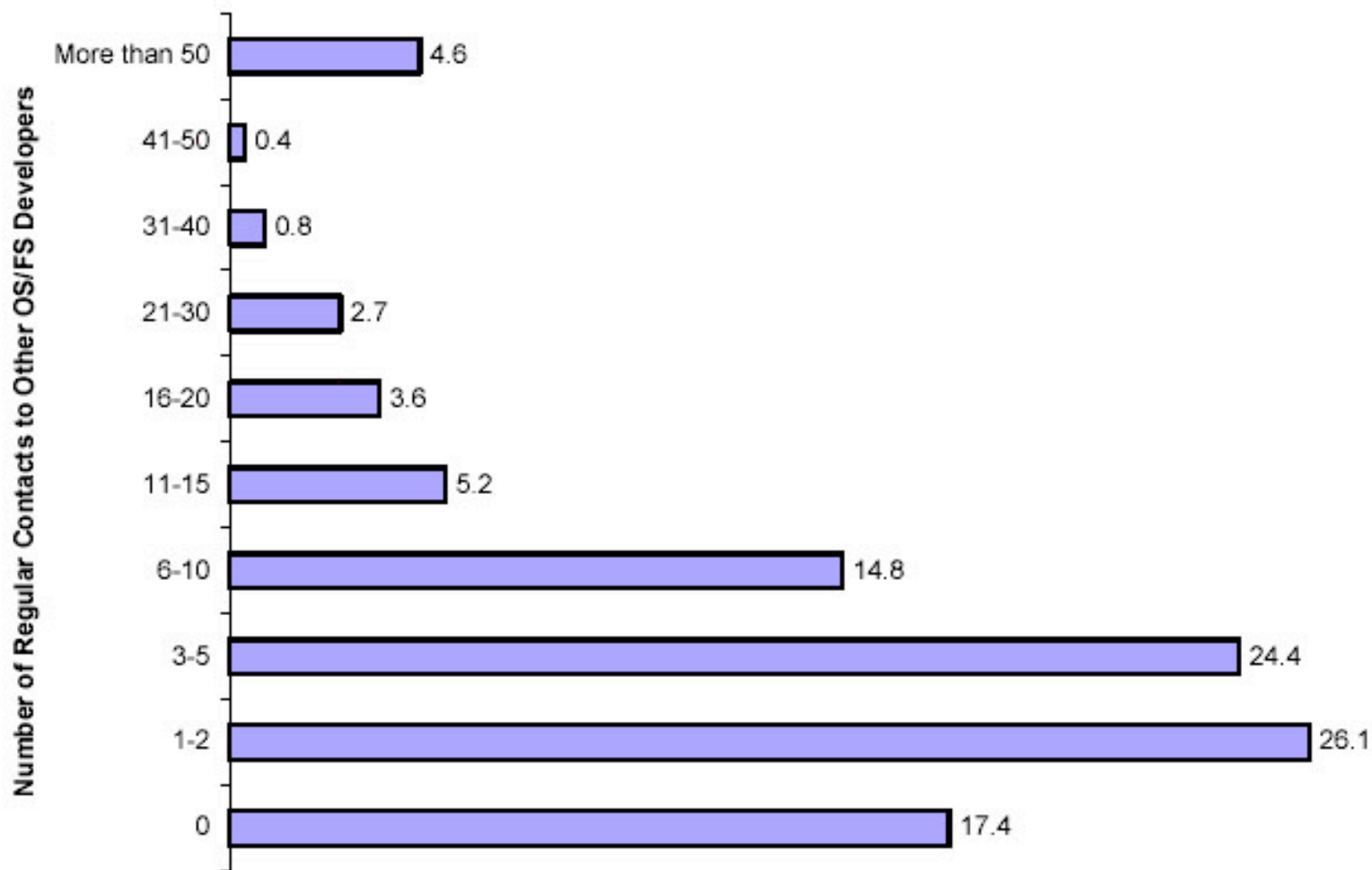
- 1/3 of developers don't lead any projects.
- 1/3 of developers lead one project.
- 71.9% of developers have worked on 1-5 projects.
- 18.7% of developers have worked on 6-10 projects.

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# Communication

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Figure 8: Regular contact with other developers, % of respondents



## Monetary Rewards

- Developers motivated by monetary rewards most likely to make money directly from FOSS.
- Politically motivated developers least likely to make any money off FOSS.
- Product-related motivations least likely to make money off FOSS, but make the most on average when they do.

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## Conclusions

- This survey seems to validate the points brought up by the two previous papers presented on motivation of FOSS developers.
- The average FOSS developer is not your stereotypical nerd.
- All FOSS projects tend to have a small core that contributes the majority of the code base.

