Drupal as a case of Commons-Based Peer Production

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Who am I?

- Free software enthusiast

- Working as a Drupal site builder/developer for the past 4 years

- Background in CS (@URJC [Spain], @NTNU [Norway])

- Currently studying a PhD in Sociology @UniS [UK]: analysing the Drupal community from a sociological perspective, as part of the wider phenomena of CBPP

- Collaborating with the FP7 EU project P2Pvalue

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Outline

- The study of the Drupal community in Academia

- Introducing the commons and CBPP

- Drupal as a CBPP community

- Conclusions

- Questions

Academic research on Drupal

- Rich literature on FLOSS (Free/Libre Open Source Software)

- Krogh and Hippel (2006) identified three main research streams:

  - Motivations for contributors

  - Governance, organization and innovation process

  - Competitive dynamics

- Incremental interest in Drupal as a case study. Some **compelling examples**.

Academic research on Drupal: some examples

- Huang, Le, and Panchal (2011):

  - Social Network Analysis to study the structure of the Drupal community: networks of people and networks of modules

  - Drupal community has the characteristics of a scale-free network (follows a power law)

  - Underlying mechanism of preferential attachment to contribute to existing projects

Academic research on Drupal: some examples

- Moghaddam, R. Z., Bailey, B., & Fu, W.-T. (2012)

  - Interviews with Drupal and Ubuntu designers and developers + collection of online data to study how consensus is built (focusing on UI design discussions)

  - Invitation of participants with strong social connections when consensus is not reached

  - Key role of personal interactions to build consensus

  - Comments from more experienced users and/or socially closer ones are more valued

Academic research on Drupal: some examples

- Nordin and Meir (2013)

  - Pilot study (surveys) to study the motivations of Drupal contributors

  - Looking at the nature of contribution and barriers to contribute:

    - Lack of coding skills

    - Not clear how to do it

    - Skills not related to coding not properly valued

- **New survey!**: https://bentley.co1.qualtrics.com/SE/?SID=SV_867YnDNqpOkp6HX

Academic research on Drupal: some examples

- Sims (2013)
  - Combination of quantitative and qualitative methods to study relationships between firms and the Drupal community
  - Firms using Drupal code are more productive
  - Few "free-riders": high correlation between taking and giving back (code, help)
  - Giving code creates stronger social relationships than giving help
- Blogging at DA: https://assoc.drupal.org/blog/jonsims/business-side-drupal-research-journey

What are the commons?

- A notion present in a wide range of cultures from all eras

- E.g.:

  - Corpvs iuris civilis (529-534, emp. Justinian I): Res Communis (cannot be owned) and Res Nullius (no owner)

  - Siete Partidas (1252-1284, kingdom Alfonso X): "those goods that belong to all the creatures of the World [...], the city [...] or its residents [...]"

What are the commons?

- Let's define it according to classical economics:

  - **Excludability**: feasible to prevent its access to it

  - **Rivalry**: its use or consumption prevents or affects the consumption by others

	Rival	Non-Rival
Excludable	Private goods. E.g.: bread	Toll goods. E.g.: cable TV
Non-excludable	Common Pool Resources E.g.: fish taken from the ocean	**Public goods** E.g.: lighthouse, **Free Software**

V. Ostrom and E. Ostrom (1999)

What are the commons?

- The commons: as a **resource or good shared by a group of people that may be subject to social dilemmas**, such as over-exploitation or free-riding. (Hess & E. Ostrom, 2007)
- "The tragedy of the commons", Hardin (1968) states how resources shared by individuals acting out of self-interest in order to maximise its own benefit produces the depletion of the common-resource

What are the commons?

- However, the research of Ostrom showed that under certain conditions these resources can indeed be managed in a sustainable way by local communities of peers

- Furthermore, some of these goods are **anti-rival**: the more people use them, the more utility each person receives (e.g.: Free software). Weber (2004)

What are the commons?

- One more dimension: the scope of the ownership:

- "those goods that belong to **everyone and no one at the same time**, therefore not following the rules of the market"

  Lafuente et al. (2007)

The Drupal goods as a commons

- **Anti-rival**: its use by a person increases the value for other users

- **Non-excludable**: accessibility is protected as part of the licenses applied for the code, the contents created in the community, etc.

- **Global** : the ownership does not belong to any individual or state, as protected by the licenses chosen (exception: the trademark)

What is Commons-Based Peer Production?

- A new model of socio-economic production in which groups of loosely connected individuals cooperate with each other to produce meaningful products without a traditional hierarchical organisation (Benkler, 2006)

- Emerging model (see http://directory.p2pvalue.eu/)

What is Commons-Based Peer Production?

- Ongoing discussion on the differences between CBPP, Peer Production, the delimitation criteria, etc.

- Criteria used in P2Pvalue project (P2Pvalue, 2014):

  - **Collaborative process**

  - **Peer-based**: not solely or mainly coordinated by contractual relationships, hierarchical command, large degree of self-assignment

  - **Commons-process**: process driven by the general interest

  - **Favouring reproducibility**: of the goods, practices, methodologies, etc.

Drupal as a CBPP community

- Drupal as a community whose mode of production is:

  - **Collaborative process**

  - **Peer-based**: different levels of structure depending on the process, but not mainly based on contractual obligations neither forms of coercion

  - **Commons-process**: process driven by the general interest, results in openness of the resources

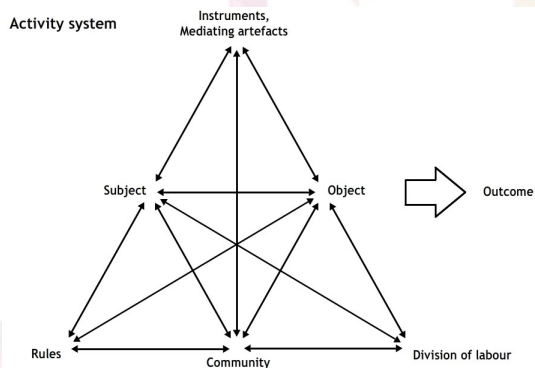 - **Favouring reproducibility**: via Free Software/CC licenses, exchange of practices, etc.

Contribution activities as unit of analysis

- Studies have traditionally looked either at the individuals or at the whole community (e.g.: motivations to contribute, structure of the community, etc.)

- My approach is to look at activities as unit of analysis (using Activity Theory as a framework)

- Implies to understand **deeply** what **contribution** means: pilot study
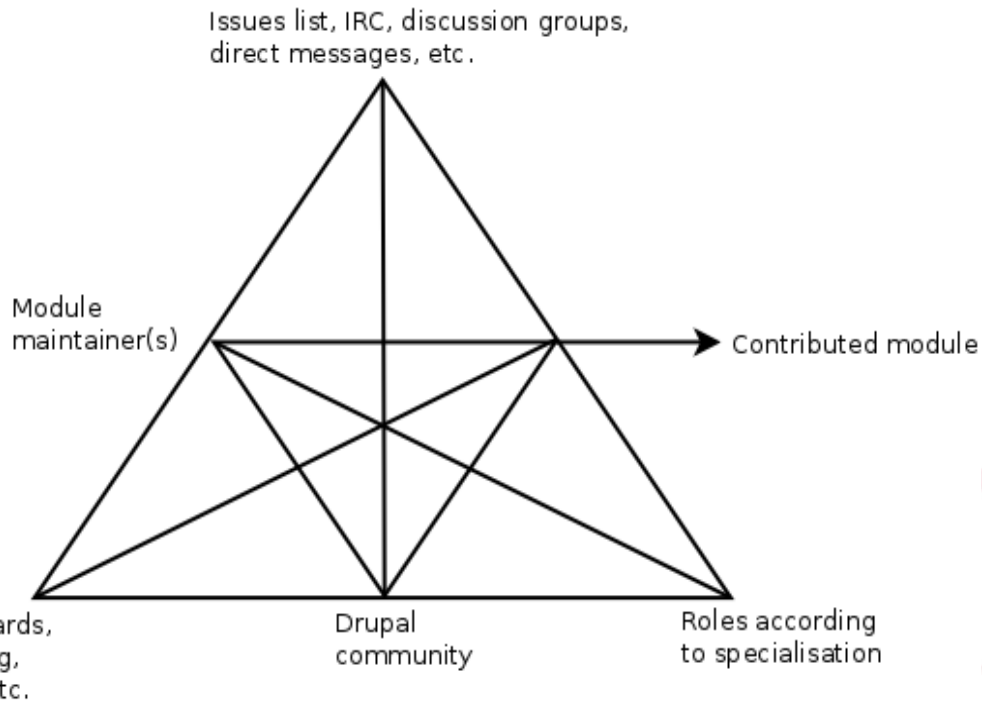
Pilot study

- Attending Drupal events

- Qualitative interviews to understand **what** activities are perceived as contributions and **how**

- **Looking for interviewees!**: please ping me @drozas // drozas@surrey.ac.uk

- Once the pilot finishes, look deeper into certain activities (using Activity Theory as a framework)

Example of AT: contributed modules

Activity system

Instruments, Mediating artefacts

Subject → Object ⟹ Outcome

Rules — Community — Division of labour

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Issues list, IRC, discussion groups, direct messages, etc.

Module maintainer(s) → Contributed module

Coding standards, peer reviewing, social rules, etc.

Drupal community

Roles according to specialisation

Conclusions

- Drupal as part of a wider phenomena

- As community, we can also benefit from the insights of these studies

- How to improve it?... doing **research** in a "**Drupal way**"

Conclusions

- Some ideas (proposal for Community Summit @DrupalCon Amsterdam)

  - Increase contact between those interested in the study of the community

  - Make the results available for discussion in the community

  - E.g.: Group at Drupal.org: "Research about the Drupal Community"

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Any questions?

Thanks!   ¡Gracias!

Obrigado!   Grazie!   Danke!