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EGOS
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ATHENS

Organizations and the Examined Life:
Reason, Reflexivity, and Responsibility

Drupal as a runaway object: conceptualisation of peer production activities through Activity Theory

Sub-theme #17: "Activity Theory and organizations"

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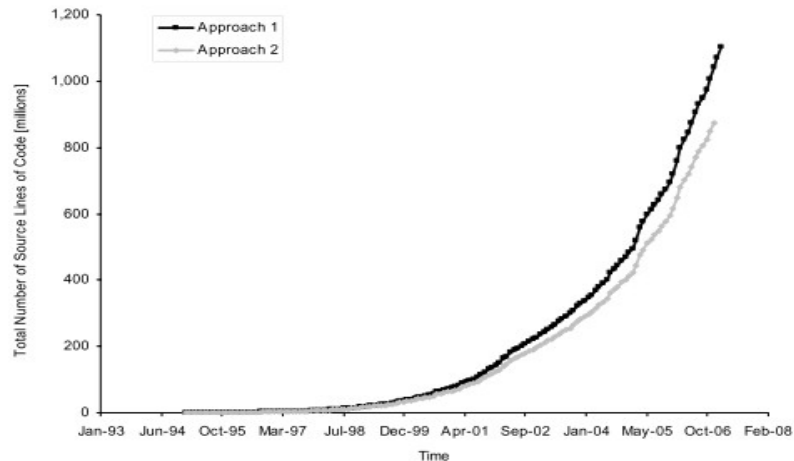University of Surrey

Outline

- Introduction: Free/Libre Open Source Software, Commons-Based Peer Production and Drupal

- Contribution activities as unit of analysis & Activity Theory in the study of peer production

- Drupal as a runaway object and conceptualisation of peer production activities: development of source code and Face-to-face events

- Future work

- Conclusion and questions

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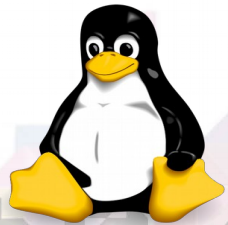# What is Free/Libre Open Source Software (FLOSS)?

- Software which allows its use, copy, study and modification in any way

- Source code released under a license which protects these rights (e.g. GNU General Public License)

- Examples: GNU/Linux, Firefox, Apache, etc.

- Huge increase in adoption and production

- A new mode of software production and practices (Raymond, 2001)
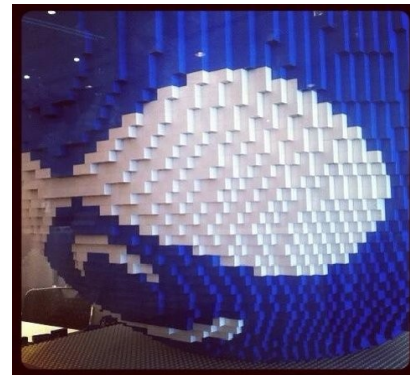

Deshpande and Riehle (2008)

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What is Commons-Based Peer Production (CBPP)?

- 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)

- Spreading to diverse areas: open science, open agriculture, Peer-to-peer urbanism, etc. (Fuster Morell et al., 2014)

What is Drupal?

- Free software content management framework

- Very modular: think of it as a "Lego". Dozens of core modules, +27k "contrib" modules

- Powering 2% websites worldwide (W3Techs, 2014)

- Employed in complex and high traffic websites: whitehouse.gov, mtv.co.uk, economist.com, etc.

What is Drupal?: the Drupal community

- Started as a personal project of a student
- Code released in 2001 under a GNU General Public License
- Currently +1M users registered at Drupal.org, +30k code contributors (Drupal.org, 2014a)
- Hundreds of local Face-to-face events, dozens of DrupalCamps and DrupalCons in 4 continents (Drupal.org, 2014b)

Drupal community as a CBPP community

- Drupal as a community whose mode of production (Fuster Morell, 2014) is:

  - **Collaborative process**

  - **Peer-based**: different levels of structure depending on the process, but not mainly based on contractual obligations nor coercion

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

  - **Favouring reproducibility**: via Free Software or Creative Commons licenses, exchange of practices, etc.

Contribution activities as unit of analysis

- Previous studies looked either at the individuals or at the whole community (e.g.: motivations to contribute, structure of the community, etc.). Huang, Le & Panchal (2011), Sims, J. P. (2013), Nordin (2014)

- Understand **processes** and **dynamics: how do these communities organise themselves?**

- My approach is to look at **contribution** activities as unit of analysis. Drawing on Activity Theory (AT) and following an ethnographic approach

- Implied to understand **deeply** what **contribution** means: **stage 1**

Contribution

- A blurry notion: meanings constantly evolving as part of negotiation processes between the participants

- Critical in CBPP communities focussed on digital commons: economy of contribution [not based on direct reciprocity] rather than economy of gift [based on direct reciprocity] (Wittel, 2013)
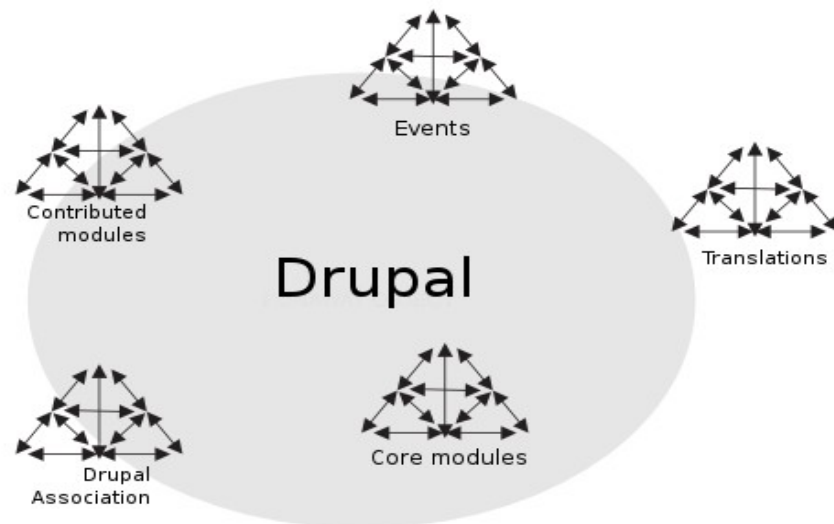
Contribution: "code-centrism"

- **"Code-centrism"** in FLOSS literature: typically looking at source code as main notion of contribution; and in FLOSS communities: "Talk is silver, code is gold"

- Relevant role of less visible contribution activities. For example, organisation and participation in Face-to-face events (Rozas & Gilbert, in press)

- Role of "affective labour" (Hardt, 1999) to foster collaboration: avoid barriers, increase commitment, generates and scale up the sense of community

Activity Theory in the study of CBPP: challenges

- These communities, as being "difficult if not impossible to bound and close" and defining their formation as being in a constant living and expanding process (Engeström, 2007)

- CBPP requires and creates "bounded hubs of concentrated coordination efforts" (Engeström, 2009, p. 310)

- More concrete description through the concept of benign runaway object (Engeström, 2009):
  - Intrinsic properties which **transcend the utilitarian profit** motive
  - Object must yield useful intermediate products, yet remain an **incomplete** project
  - Object must be visible, **accessible** and cumulable
  - Effective feedback an **exchange among the participants** acting on object
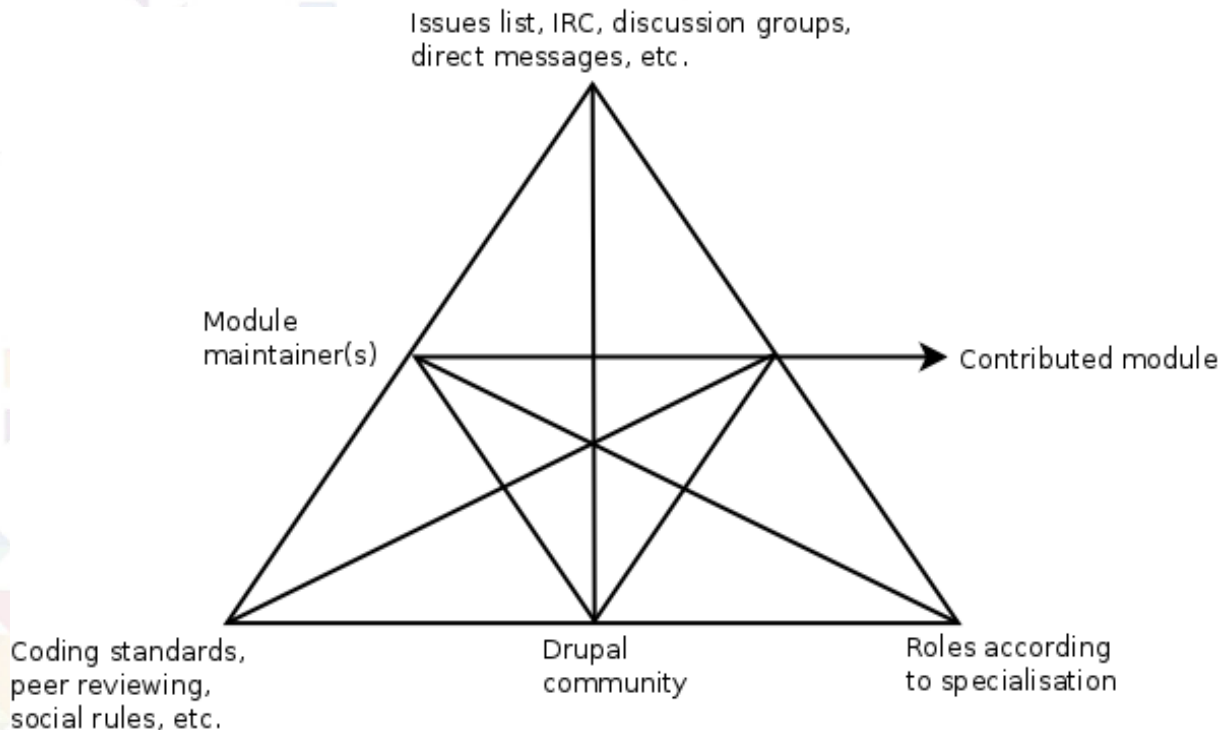
Drupal as a runaway object

- Studying self-organisation via contribution activities, in which the runaway object acts as a hub
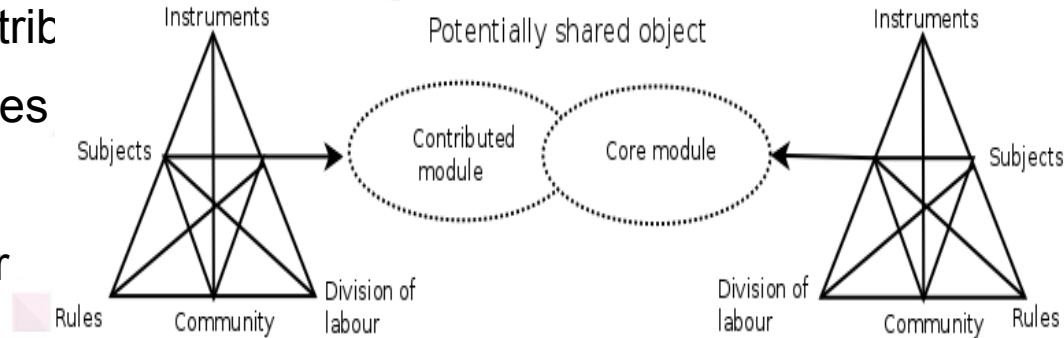- Object pervasive, position of activity systems ambiguous

Based on figure 19.2 of Engeström (2009)

Development of "contrib" modules through AT

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

Module
maintainer(s)

Contributed module

Coding standards,
peer reviewing,
social rules, etc.

Drupal
community
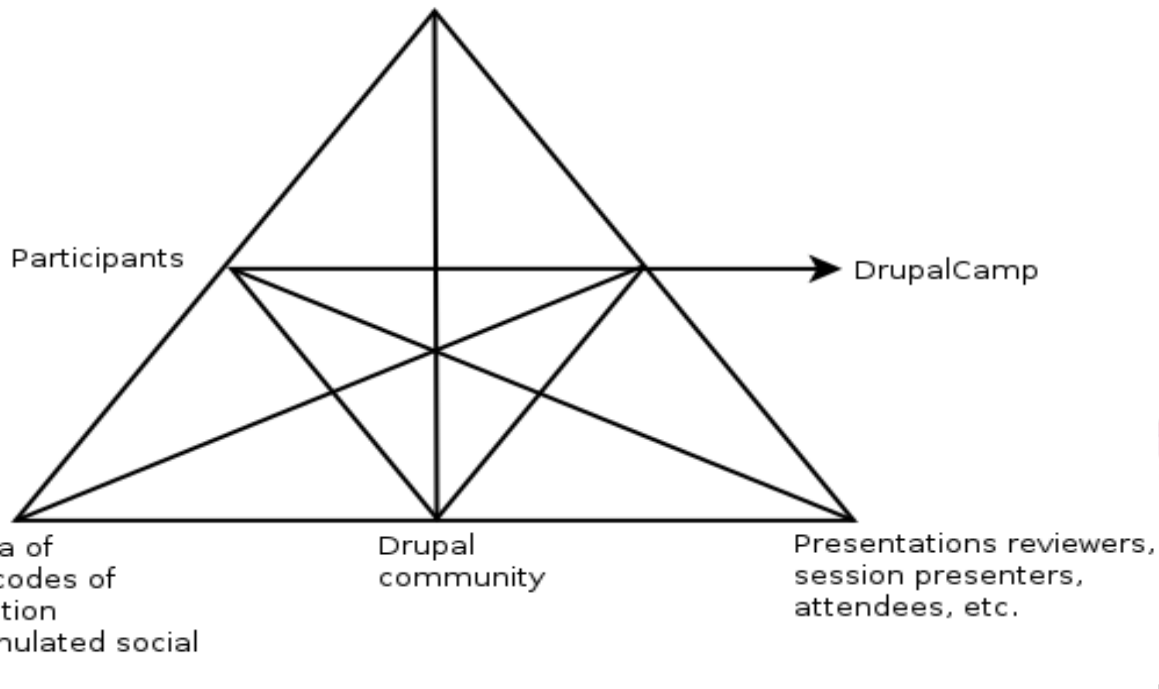
Roles according
to specialisation

Development of "contrib" modules through AT: examples

- Relationship between profiles (mediating artefact), social capital (rules) and Drupal role (division of labour); or tensions between developers and designers (division of labour) from Zilouchian Moghaddam, Twidale and Bongen (2011)

- Between activity systems through shared objects (3GAT): between which "contrib modules "become core"; or differences in dynamics and social practices between these processes with similar object (source code)

Participation in DrupalCamps through AT

Mailing lists, groups at drupal.org, main event website, etc.

Participants

DrupalCamp

Selection criteria of presentations, codes of conduct, reputation based on accumulated social capital, etc.

Drupal community

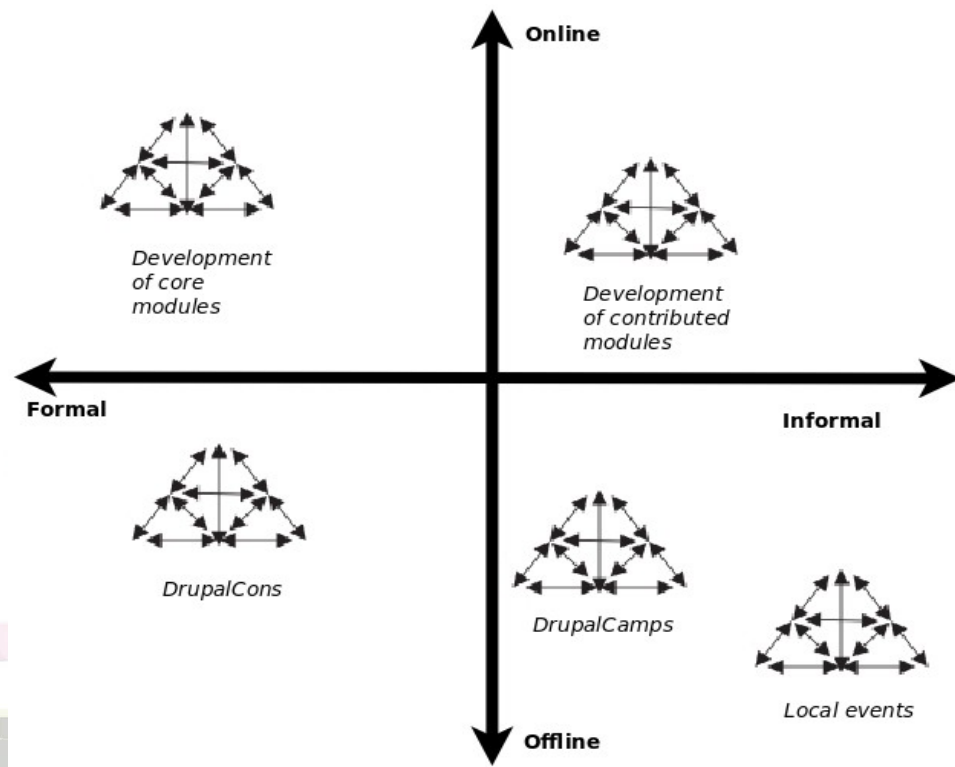Presentations reviewers, session presenters, attendees, etc.

Participation in Drupal F2F events through AT:examples

- Framing intangible outcomes such as affective labour (Hardt, 1999)

- Tensions on more transparent processes: reflected in artefacts (inclusion of peer-reviewing tools), explicit and implicit rules (e.g. creation of specific criteria), etc.

- Tensions between activity systems (3GAT): Cons vs Camps vs local events. Compare its outcomes

Future work

- Furthermore, emergence of dimensions: online/offline & formal/informal
- Allows to study according to these dimensions, even in diverse contribution activities: "object-oriented" vs "community-oriented"

Conclusion

- Lack of clear boundaries, distributed and blurred nature of CBPP represents a challenge for AT

- Nevertheless, useful to untangle dense and multidirectional dynamics in CBPP communities, as in this case study:

  - Applying model of activity system to diverse contribution activities

  - Drawing on runaway object as a nexus of these efforts of coordination

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Any questions/feedback?

Thanks!

¡Gracias!

Ευχαριστώ!

Obrigado!

Grazie!

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