



Drupal as a case of Commons-Based Peer Production community: a sociological perspective

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Who am I?

- Areas of interest: Free Software, Commons-Based Peer Production, social computing, etc.
- Working as a Drupal developer for the past 4 years. Previously working with Django, Moodle, etc.
- Previous background in Computer Science (@URJC [Spain], @NTNU [Norway])
- Started PhD in Sociology @UniS [UK] in October 2013
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Outline

- Drupal as a Commons-Based Peer Production community
- Activity as unit of analysis and Activity Theory
- Pilot Study: understanding contribution. Future work
- Summary and questions

What is Drupal?



- Free software content management framework
- Very modular: think of it as a “Lego”. Dozens of “core modules”, +27k contributed 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 GPL
- Currently +1M users registered at Drupal.org, +30k code contributors (Drupal.org, 2014a)
- Hundreds of local F2F events, dozens of camps and cons in 4 continents (Drupal.org, 2014b)



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)
- Classification of goods according to:
 - **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?

- 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)
- 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/>)



Drupal as a CBPP community

- Ongoing discussion on the differences between CBPP, Peer Production, the delimitation criteria, etc.
- Drupal as a community whose mode of production is (P2Pvalue, 2014):
 - **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

- 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), Nordin and Meir (2013), Sims, J. P. (2013)
- My approach is to look at activities as unit of analysis (using Activity Theory as a framework), using a virtual ethnographic approach.
- Understand **processes** and **dynamics**
- Implies to understand **deeply** what **contribution** means: pilot study

What is Activity Theory?

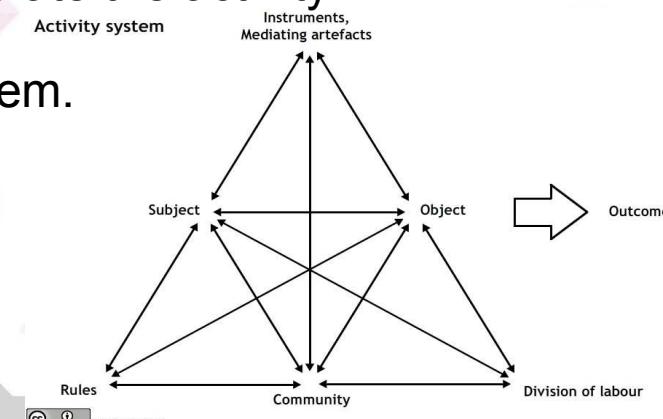
- Historical roots in the idea of object-oriented activity and relationship between object and subject (Marx, 1845): subject produces herself by producing the object
- 1st AT generation [1920s]: Soviet Cultural-historical psychology - Vygotsky, Leont'ev,..
- **“Mediated action”**: by collaborating in the development of activities with other humans, meanings, social norms, artifacts, etc. are internalised by the individuals. (Vygotsky, 1979).

What is Activity Theory?

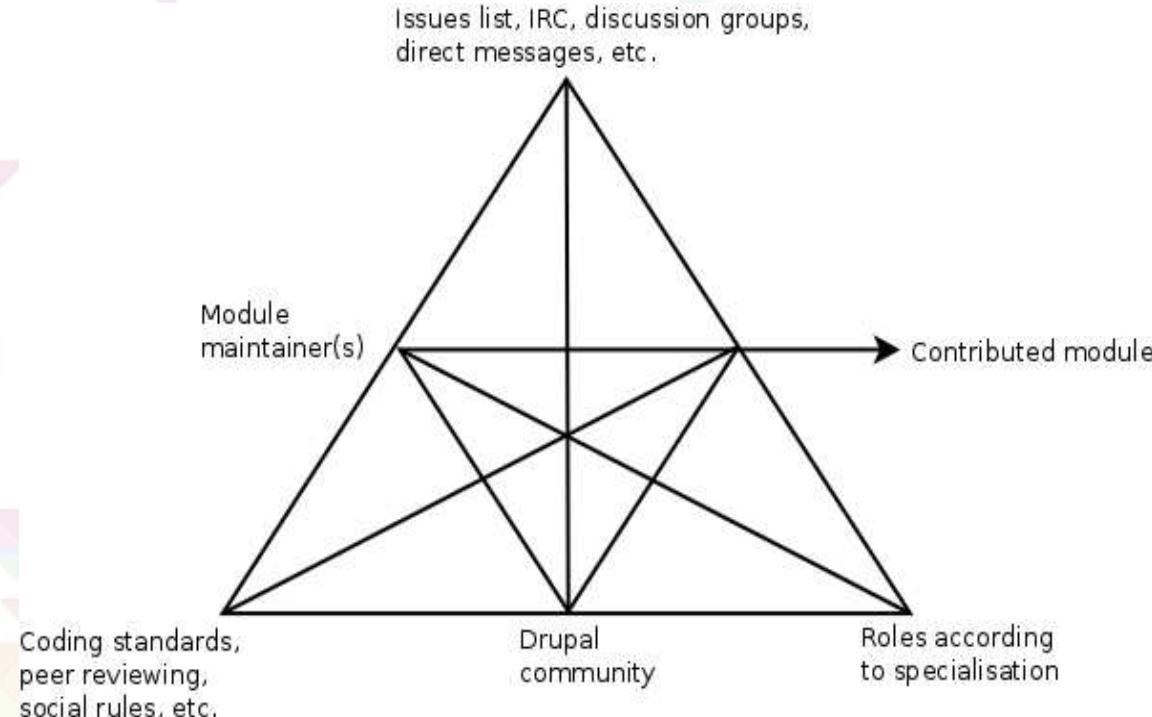
- 2nd AT generation [1980s]: Engeström and the AT Scandinavian school
 - Human activity system as unit of analysis: dynamic, culturally-mediated, specific to human-beings, analysable in its context. (Engeström, 1987).
 - Extends Leont'ev's model: adding the rules that regulate the activity, community sharing the interest and the division of labour. (Engeström, 1987).

What is Activity Theory?

- **Subject**: the actors that performed the activity and who are subjected to the internalisation process.
- **Instruments, mediating artifacts**: the tools employed by the actors in the system. Influence on actors, structure and change
- **Object**: the element to which activity is directed towards. Transformed as the activity progresses, possesses social and cultural properties.
- **Rules**: they are the explicit and implicit rules which regulate the activity in the system.
- **Community**: they are all the actors involved in the system.
- **Division of labour** : it represents the distribution of processes between the actors of the system.



Dev. Of contrib modules under AT lenses



Pilot study: understanding contribution

- Pilot study (ongoing) identify **what** activities are perceived as contributions and some of its outcomes (for further exploration)
- What activities are perceived as contributions? Do the “official” meanings match the perceptions of the members of the community? Do perceptions vary according to degree of experience? And the role/specialty?
- Virtual ethnographic perspective (Hine, 2000): study of online communities and its culture. **Online and offline. Qualitative. Inductive** approach.

Pilot study: methods and *data outcomes*

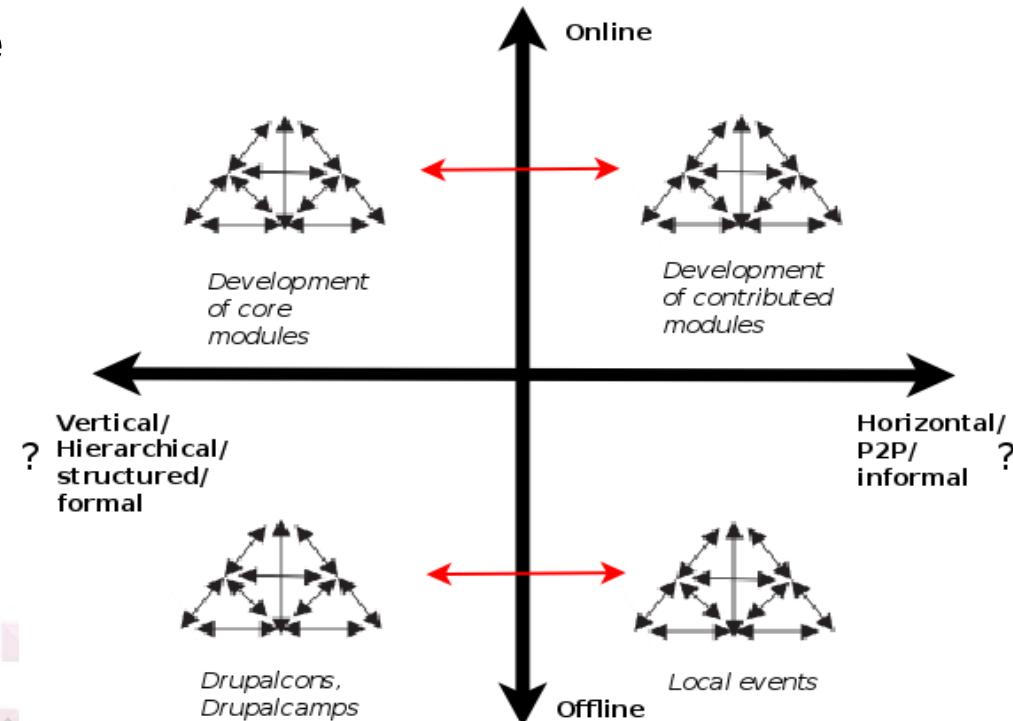
- Methods:
 - Participant-observation: online and offline (local, national, international events). *Full-field notes*
 - Qualitative semi-structured interviews: Drupal community members, following a strategic sampling. *Transcriptions*.
 - Documentary research: selection and pre-coding of materials from Drupal Planet (+5k links), including *blog posts, podcasts, videos*, etc.
 - Data analysis: Qualitative content analysis, using CAQDAS

Pilot study: preliminary insights

- Contribution beyond source code, in a code-centric community. Nordin and Meir (2013), Sims (2013), Zilouchian, Bongen and Twidale (2011)
- Role of affective labour (Hardt, 1999) as outcomes of some of the activities: immaterial labour in human interaction that creates or modifies emotional experiences. Produces satisfaction, passion, sense of community, etc.
- The lifeblood of the commons (Bollier, 2014)
- Unevenly represented in the main platform of collaboration?

Future work

- Select and deeply study some of the activities identified in the pilot study (preliminary proposal)



Summary

- Drupal community (diverse, complex, etc.) as a case study of CBPP, to study processes and dynamics
- AT as lenses, using a virtual ethnographic approach
- Preliminary insights of the pilot study and thoughts on possible future work

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Any questions/feedback?

Thanks! ¡Gracias!
Obrigado! Grazie!

Danke!

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