




Talk is silver, code is gold? Contribution beyond source code in Free/Libre Open Source Software communities

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Who am I?

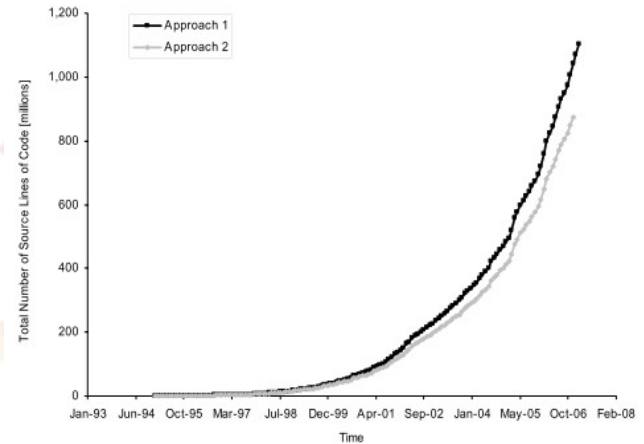
- Areas of interest: Free Software, Commons-Based Peer Production, social computing, etc.
- Working as a Drupal developer for the past 5 years. Previously working with Django, Moodle, etc.
- Previous background in Computer Science (@URJC [Spain], @NTNU [Norway])
- Started PhD in Sociology @UniS [UK] in October 2013
- Collaborating with the FP7 EU project P2Pvalue (www.p2pvalue.eu)
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Outline

- Introduction
- Research questions
- Data and methods
- Findings
- Conclusion and questions

What is Free Software?

- Software which allows its use, copy, study and modification in any way
- “Free as in free speech, not as in free beer” (FSF, 2015)
- Source code released under a license which protects these rights (eg. GPL)
- Examples:
GNU/Linux, Firefox, Apache, Libre Office, etc.
- Huge increment in adoption and production



Deshpande and Riehle (2008)

What is Free Software?

- New possibilities of collaborative production, fostered by the invention of the WWW
- New models of development: “The Cathedral and the Bazaar” (Raymond, 2001)
 - Source code publicly available at any time
 - Public testing and experimentation: “given enough eyeballs, all bugs are swallow”
- Unfinished product

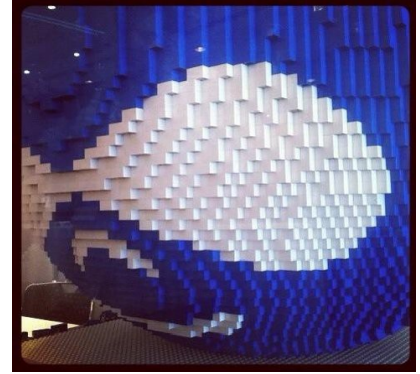
What is Commons-Based Peer Production?

- 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)



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)



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 (Fuster Morell, 2014) 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

- 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)
- My approach is to look at **contribution** activities as unit of analysis (using Activity Theory as a framework), using an ethnographic approach.
- Understand **processes** and **dynamics: how do these communities work?**
- Implies to understand **deeply** what **contribution** means: **stage 1**

Contribution

- A blurry notion: meanings constantly evolving as part of negotiation processes
- 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”

- “Talking is silver, coding is gold”. What about other contributions?
- “Code-centrism” also in FLOSS literature: typically looking at source code as main notion of contribution
- Affective labour as the “lifeblood” of the commons (Bollier, 2014): the inmaterial labour present in social interaction which creates or modifies emotional experiences (Hardt, 1999)

Research questions

- RQ1: What type of activities are perceived as contributions in the Drupal community? Do the “official” meanings match the ones of the members of the community?
- RQ2: How are the identified activities represented in the main platform of collaboration in an individual level?
- RQ3: Can some of these activities be understood as affective labour and what relevance do they have? Are there any differences on how they are perceived between members with different degrees of experience?

Data and methods

- Ethnographic methodological approach: online and offline
- Triangulation of data collection methods:
 - Participant observation (6 months): online participation, 13 events, etc.
 - Documentary analysis: Drupal Planet as “native” starting point. +2 years archive (3,266 documents)
 - Semi-structured qualitative interviews (4): London and Madrid
- Analysis supported by CAQDAS

RQ1: Contribution beyond source code

“[...]organise talks, meetups or just hang out with Drupalistas to drink some beers and have a talk, are also very important activities, and very positive for the community.”

Drupal developer, 7 years. Original reply in Spanish.

RQ1: Contribution beyond source code

- Two main types emerged, according to the focus of action:
 - **“Object-oriented”**: source code, documentation, translation, etc.
 - **“Community-oriented”**: usage & support, evangelisation, training & mentoring, organisation & participation in F2F events, etc.

Object-oriented	Source code	Clear methods and classes Standardised methods, data structures or classes	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability Code security Code performance Code portability Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
	Documentation (in English)	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
	Translations	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
Community-oriented	Usage and support	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
	Evangelisation	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
	Training and mentoring	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
Evangelisation and participation in F2F events	Local events	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
	Online events (e.g. webinars)	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability
	Workshops and hackathons	Clear, concise and accurate Easy to read and understand Well structured and organized Easy to search and navigate Easy to update and maintain	<ul style="list-style-type: none"> Code readability, maintainability Code quality Code reuse Code portability Code security Code performance Code documentation Code version control Code testing Code deployment Code licensing Code distribution Code availability Code accessibility Code interoperability Code compatibility Code extensibility Code modifiability Code scalability Code flexibility Code robustness Code reliability



RQ1: Contribution beyond source code

- Suggestive, rather than exhaustive, list of contribution activities
- Analysis of main platform shows that “community-oriented” ones are less visible (specially local/regional F2F events)
- Offer empirical evidence of the need of **widening our understanding** of contribution activities

RQ2: contributions in user profiles

- Profiles are key elements in the generation of perceptions by other users in FLOSS (Marlow, Dabbish & Herbsleb, 2013)
- Source of public references, significant role in the process of status attainment in FLOSS communities (Stewart, 2005)

RQ2: contributions in user profiles

- Inequality in the representation of “community-oriented” activities
- Affecting specially to “organisation and participation of local/regional F2F events”
- Some Drupalistas try to overcome these limitations

RQ2: contributions in user profiles

Examples of “object-oriented” contributions reflected in the profiles

History

Member for 9 years 5 months

Documentation Over 1000 edits

Projects

[Drupal core](#) (6486 commits)

[Poll \(from core\)](#) (2557 commits)

[Spark](#) (160 commits)

[Quiz](#) (102 commits)

[Drupal Module Upgrader](#) (92 commits)

[Pants](#) (76 commits)

[Revision Moderation](#) (74 commits)

[Organic groups](#) (72 commits)

[Documentation](#) (60 commits)

[Webchick's test profile](#) (52 commits)

[Drupal 7 to 8 Module Upgrader \[dead\]](#) (51 commits)

Localization contributions

Spanish 1124 approved translations

History

Member for 4 years 4 weeks

Primary profile [Profile on https://www.drupal.org/](https://www.drupal.org/)

RQ2: contributions in user profiles

Examples of “community-oriented” contributions reflected in the profiles

Put each item on a separate line or separate them by commas. No HTML allowed.

- I contributed Drupal patches
- I contributed Drupal modules
- I contributed Drupal themes
- I contributed Drupal installation profiles
- I contributed to Drupal issue queues
- I contributed to Drupal.org
- I contributed Drupal documentation
- I contributed Drupal translations
- I helped organize DrupalCon
- I contributed Drupal automated tests
- I reviewed Project applications
- I help in the Drupal support forums
- I provide Drupal-related services
- I help mentor new contributors
- I attended the Drupal conference at FOSDEM 2005 (Antwerp, Belgium)
- I attended OSCON 2005 or the off-site Drupal conference at OSCON 2005 (Portland, Oregon)
- I attended LinuxWorldExpo London
- I attended DrupalCon Amsterdam 2005
- I attended the Drupal conference collocated with the Open Source CMS and Blogging Tools Summit (Vancouver, Canada)
- I attended the Drupal conference 2006 (Brussels, Belgium)
- I attended OSCMS 2007, Sunnyvale
- I attended DrupalCon Barcelona 2007
- I attended DrupalCon Boston 2008
- I attended DrupalCon Szeged, Hungary 2008
- I attended DrupalCon DC 2009
- I attended DrupalCon Paris 2009
- I attended DrupalCon San Francisco 2010
- I attended DrupalCon Copenhagen 2010
- I attended DrupalCon Chicago 2011
- I attended DrupalCon London 2011
- I attended DrupalCon Denver 2012
- I attended DrupalCon Munich 2012
- I attended DrupalCon Portland 2013
- I attended DrupalCon Sydney 2013
- I attended DrupalCon Prague 2013
- I attended DrupalCon Austin 2014
- I attended DrupalCon Amsterdam 2014
- I will attend DrupalCon Latin America 2015
- I will attend DrupalCon Los Angeles 2015
- I will attend DrupalCon Barcelona 2015

Drupal

My mentors

JohnAlbin, Bojhan, webchick, nod_, berdir



RQ2: contributions in user profiles

Use of “open fields” to try to overcome these limitations

Bio:

Read more at www.chandeepkhosa.com, email hello@chandeepkhosa.com, or call 07962 382 442.

I am a freelance Drupal Site Builder & Front End Developer looking for new freelance projects in London and have been developing websites with Drupal since 2007.

I have been very involved in training and mentoring web developers, particularly young people, getting them into careers specialising in Drupal. I have helped to support the Drupal community by speaking at camps and conferences on topics including e-Commerce & responsive web design.

-- Drupal community --

- ☆ Founding & organising Drupal West London
- ☆ Mentoring apprentices & creating open source curriculum for learning Drupal - Open Drupal
- ☆ Speaking at Drupal camps on Drupal Commerce, Responsive web design & Open Drupal <http://chandeepkhosa.com?q=speaker>
- ☆ Organising & facilitating a BoF (birds of a feather) session at DrupalCon Amsterdam 2014 <https://amsterdam2014.drupal.org/bof/open-drupal-drupal-apprenticeships-...>
- ☆ Contributing & reviewing front end patches during sprints at Drupal Dev Days Szeged, Drupalaton & DrupalCon Amsterdam

RQ2: contributions in user profiles

- Descriptive account of how identified activities are represented
- Empirical evidence of the uneven representation of some contribution activities, affecting specially the “community-oriented” category

RQ3: role of affective labour

- Analysis focussed on organisation and participation in F2F events – most clear example of affective labour
- These contribution activities play a relevant role in the sustainability of the community: “come for the software, stay for the community”

RQ3: role of affective labour

“[...]indeed, the fact of attending these meetups, it was really good. Because you realise there are people behind the source code, right? There are people behind the modules. And you meet people that can tell you this kind of personal stories.[...] And then, it stops being something anonymous, it becomes something yours.”

Drupal developer and devop, 1.5 years. Original reply in Spanish.

- Drupal becomes a community, avoid barriers, increases the will for reciprocity, etc.

RQ3: role of affective labour

“[...]friendships are developed, and seeing people in-person helps a lot. I believe so, the idea of... having F2F meetups and get to know each other in-person is essential.[...] In the IRC you will talk about certain things, but after a day cycling 50 or 60 kilometres [referring to the “Tour de Drupal”], [...]there will be more interaction for sure, and a bigger friendship [...]”

Drupal developer, 7 years. Original reply in Spanish.

- As the engagement with the commons increases, affection relationships develop (friendship). Commitment, sense of community, avoid to burnout, etc.

RQ3: role of affective labour

“Because the community is growing, then you have less of a sense of community. But I think the solution to that is to have smaller local communities.

So, you know, as the worldwide community grows, then you start finding, like whereas before it might have been 50 people worldwide, now you have like 50 people in your part of London, or wherever.”

Drupal themer and developer, 11 years.

- Local activities help to scale up the sense of community, as it grows

RQ3: role of affective labour

- Existence and relevance of affective labour
- Different types of emotional experiences (which vary according to degree of experience), which foster collaboration
- Not only that understood as a type of contribution unequally represented; they are key for sustainability
- Connecting to major literature on commons, through AL. The participation “transforms the local subjectivities” of Drupalistas, as in non-digital domain (Singh, 2013)

Conclusion

- Need of broaden our understanding of contribution activities in FLOSS communities, beyond “object-centric”
- Lack of visibility and relevance of “community-oriented” ones.
- Need of keeping on exploring conceptualisation and incorporation of value in CBPP communities

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Any questions/feedback?

Thanks! ¡Gracias!
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