



Contribution beyond source code in Free/Libre Open Source Software: the role of affective labour in the Drupal community

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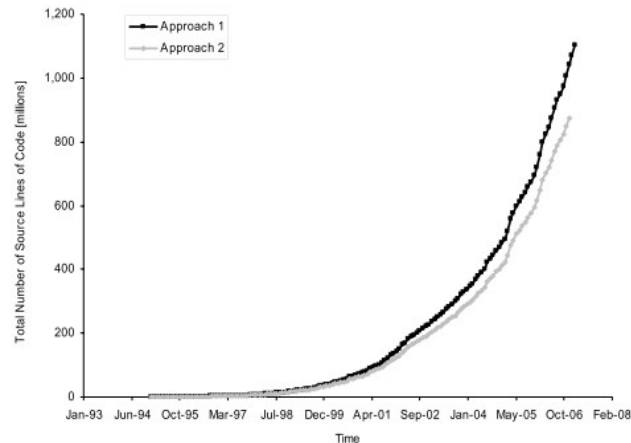
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Outline

- 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
- Source code released under a license which protects these rights (e.g. GPL)
- Examples: GNU/Linux, Firefox, Apache, etc.
- Huge increase in adoption and production
- A new mode of software development (fostered by the WWW): public testing and experimentation, unfinished product, etc.



Deshpande and Riehle (2008)

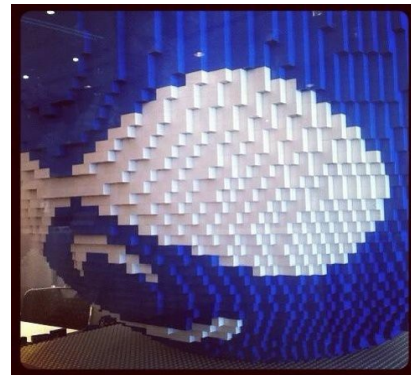
What is Commons-Based Peer Production?

- 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)



Contribution activities as unit of analysis

- Understand **processes** and **dynamics**: how do these communities organise themselves?
- 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 (Engeström, 1987) as a framework], using an ethnographic approach
- Implies 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
 - In FLOSS communities: “Talking is silver, coding is gold”
- What about other contributions?
- **Affective labour** as the **“lifeblood”** of the commons (Bollier, 2014): the immaterial 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). See http://www.davidrozas.com/lab/drupal_planet_archive.php
 - Semi-structured qualitative interviews (4): London and Madrid
- Analysis supported by CAQDAS

Findings: Contribution beyond source code (RQ1)

“[...]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.

Findings: Contribution beyond source code (RQ1)

- 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.
- Suggestive, not exhaustive, list

Object-oriented	Source code	<ul style="list-style-type: none"> Clear modules and libraries Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment
	Documentation (in English)	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment
	Translations	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment
	Changes	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment
Community-oriented	Usage and support	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment
	Dissemination	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment
	Training and mentoring	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment
	Organisation and participation in F2F events	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment 	<ul style="list-style-type: none"> Clear structure and organization Clear documentation Clear licensing Clear versioning Clear release process Clear build system Clear test suite Clear deployment

Findings: Contribution beyond source code (RQ1)

- Analysis of main platform shows that “community-oriented” ones are less visible (specially local/regional F2F events)

User support

Even the most gifted Drupal developers were new once, and chances are someone has helped you at some point along the way. No matter your skill level, you can give back by sharing what you know with other users needing support. It's a nice thing to do, and who knows? You might learn something, too!

[Find out how to help with user support.](#)

Documentation

Whether you're interested in providing fine-grained API documentation, writing step-by-step tutorials for the handbook, or producing multimedia screencasts to show people how Drupal works, you can help improve Drupal's documentation and provide a valuable resource to the community.

[Find out how to help with documentation.](#)

Translations

Drupal supports several languages, from Afrikaans to Turkish. If you know another language, you can offer your skills to help maintain Drupal core and contributed module translations.

[Find out how to help with translations.](#)

Testing

If you have a keen eye for detail, or even just a knack for breaking things, you can help Drupal with testing. Good testing directly contributes to the stability of the platform, and is an excellent way for people of all backgrounds to make a valued contribution to the project.

[Find out how to help with testing.](#)

Design and Usability

Have access to someone who's never used Drupal before or are new to Drupal yourself? Have specialized knowledge in web accessibility and other standards? Contribute feedback to Drupal's usability!

[Find out how to help with Drupal core UX](#) or visit the [Drupal Usability group](#).

Donations

Want to help but don't have the time? Want to say "thank you" to the folks who have put work into making Drupal what it is? Want to ensure that Drupal's infrastructure stays healthy and strong? Why not consider a monetary donation?

[Donate now](#) or [find out how to help with donations](#).

Development

Drupal thrives on developer contributions, in the form of both contributed modules and patches to core. Helping out in development helps the project move forward and stay competitive, and is the best way to ensure that Drupal can do what you need it to do on your next project!

[Find out how to help with development.](#)

Themes

Have an eye for design? Live and breathe XHTML and CSS? Contribute your knowledge to Drupal in the form of themes!

[Find out how to help with themes.](#)

Marketing

Help get the word out about Drupal! Put your graphic design skills or marketing savvy to work in promoting Drupal and spreading the word!

[Learn more in the Drupal marketing group](#)

Findings: Contribution beyond source code (RQ1)

- Offer empirical evidence of the need of **widening our understanding** of contribution activities
- This lack of visibility is also reflected in the main platform of collaboration

Findings: Contributions in user profiles (RQ2)

- 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)



Spain

[LinkedIn](#)
[Twitter](#)
[Drupal Answers](#)
[GitHub](#)

Current Role(s):
 PhD Student
 University of Surrey

IRC: drozas

Professional Info

Companies Worked For
 University of Surrey, Educatic,
 Infosys, Norwegian University of
 Science and Technology, Solusoft

<http://www.davidrozas.com>
http://www.surrey.ac.uk/sociology/people/phd/david_rozas/index.htm

Personal Info

Gender: male

Languages spoken: English
 Spanish

Bio:

I am a free software enthusiast and I have been learning and having fun with Drupal and its community since 2010.

I am currently studying a PhD under the supervision of Professor Nigel Gilbert and Dr Paul Hodgkinson. My research concerns individual involvement and group dynamics of Commons-Based Peer Production communities, focussing on the Drupal community as a case study. More info: http://www.surrey.ac.uk/sociology/people/phd/david_rozas/index.htm

History

Member for 5 years 2 weeks

Documentation Over 100 edits

Areas of Expertise:

Site builder
 Developer
 project manager,

Drupal Events:
 DrupalCon Copenhagen 2010
 DrupalCon Amsterdam 2014

Projects

FB Likebox (79 commits)

QScience (51 commits)

Patterns (47 commits)

Patterns Installation Profile (41 commits)

Patterns Client (16 commits)

Patterns Server (15 commits)

Total: 249 commits

You Rock! Thank you for purchasing a [Drupal Association](#) membership. Your support has helped us to support the Drupal community. Your membership will expire on Nov 08, 2016.



drozas helps support and grow the Drupal community with the [Drupal Association](#).

My mentors:



2 people list drozas as a mentor

I contributed Drupal patches
 I contributed Drupal modules
 I contributed Drupal installation profiles
 I contributed to Drupal issue queues
 I contributed Drupal documentation
 I contributed Drupal translations
 I provide Drupal-related services

Findings: Contributions in user profiles (RQ2)

- 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

Findings: Contributions in user profiles (RQ2)

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/)

Findings: Contributions in user profiles (RQ2)

Examples (the few) 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 colocated 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](#)

Findings: Contributions in user profiles (RQ2)

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

Findings: Contributions in user profiles (RQ2)

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

Findings: Role of affective labour (RQ3)

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

Findings: Role of affective labour (RQ3)

“[...]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.

Findings: Role of affective labour (RQ3)

“[...]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.

Findings: Role of affective labour (RQ3)

“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

Findings: Role of affective labour (RQ3)

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

References

- Deshpande, A. & Riehle, D. (2008). The total growth of open source. In Open Source Development, Communities and Quality (pp. 197–209). Springer.
- Benkler, Y. (2006). The wealth of networks: how social production transforms markets and freedom. Yale University Press.
- W3Techs (2014). Usage of content management systems for websites.
http://w3techs.com/technologies/overview/content_management/all
- Drupal.org (2014a). <https://www.drupal.org/>
- Drupal.org (2014b). Drupal upcoming events. <https://groups.drupal.org/events>
- Huang, Le & Panchal. (2011). Analysis of the structure and evolution of an open-source community.
- Sims, J. P. (2013). Interactive engagement with an open source community : a study of the relationships between organizations and an open source.
- Nordin, D. (2014). Motivation and Collaboration in an Open Source Project: A Qualitative Study of the Drupal Community. (Master's thesis, Bentley University).
- Engeström, Y. (1987). Learning by expanding. An activity-theoretical approach to developmental research.
- Wittel, A. (2013). Counter-commodification: The economy of contribution in the digital commons. Culture and Organization, 19 (4), 325, 327–328.
- Bollier, D. (2014). Affective Labor as the Lifeblood of a Commons. Retrieved from
<http://www.bollier.org/blog/affective-labor-lifeblood-commons>
- Hardt, M. (1999). Affective labor. Boundary 2, 26 (2), 89–100.
- Marlow, J., Dabbish, L. & Herbsleb, J. (2013). Impression Formation in Online Peer Production: Activity Traces and Personal Profiles in Github. In Proceedings of the 2013 Conference on Computer Supported Cooperative Work (pp. 117–128). CSCW '13. San Antonio, Texas, USA: ACM. doi:10.1145/2441776.2441792

References

- Stewart, D. (2005, October). Social Status in an Open-Source Community. American Sociological Review, 70 (5), 823–842. Retrieved from <http://search.proquest.com/docview/218806561?accountid=17256>
- Singh, N. M. (2013, June). The affective labor of growing forests and the becoming of environmental subjects: Rethinking environmentality in Odisha, India. Geoforum, 47, 189–198. doi:10.1016/j.geoforum.2013.01.010
- Images:
 - http://www.britsoc.co.uk/media/73566/AC2015_header_final.jpg
 - <http://upload.wikimedia.org/wikipedia/commons/a/af/Tux.png>
 - <http://upload.wikimedia.org/wikipedia/commons/5/53/Wikipedia-logo-en-big.png>
 - http://upload.wikimedia.org/wikipedia/commons/d/d7/Amsterdam_Fab_Lab_at_The_Waag_Society.JPG
 - http://farmhack.net/sites/default/files/The%20Garlic%20Master%20001_0.JPG
 - <http://www.garfieldtech.com/presentations/sfsf2012-drupal8/images/lego-druplicon.jpg>
 - <http://www.siftdigital.co.uk/sites/default/files/drupal-community.png>
 - <http://blog.101financial.com/wp-content/uploads/2014/03/Making-A-Contribution-To-Society.png>
 - Screenshot from <https://drupal.org/contribute>, retrieved 11th November 2014
 - Screenshot from <https://www.drupal.org/user/>, retrieved 24th March 2015 (not available unless logged in)
 - Screenshot from <https://www.drupal.org/u/webchick>, retrieved 5th November 2014
 - Screenshot from <https://groups.drupal.org/user/8713>, retrieved 5th November 2014.
 - Screenshot from <https://www.drupal.org/user/740628/edit/Drupal>, retrieved 22nd October 2014 (not available unless logged in)
 - Screenshot from <https://www.drupal.org/u/lewisnyman>, retrieved 5th November 2014
 - Screenshot from <https://www.drupal.org/u/chandeepkhosa>, retrieved 5th November 2014

Any questions/feedback?

Thanks! ¡Gracias!
Obrigado! Danke!
Grazie!

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