Impact of language and culture on

French contributions to the Drupal open source project

Introduction

Drupal (drupal.org), the open source content management system (CMS), has grown from a college student's message board project into an internationally recognized open source project used to power such websites as whitehouse.gov and economist.com. The project currently boasts over one million users, and almost 30,000 contributors to Drupal 8, the upcoming major release[1]. A 2011 blog post published by Dries Buytaert, the creator of Drupal, shows the number of commits (i.e. submissions of code to the Drupal.org website) rising from a handful in 2001 to almost 20,000 per month in June 2011. The number of users committing code to Drupal each month has also risen, from just one committer in 2001 to over 1,000 per month in 2011 (Buytaert, 2011). Drupal usage statistics have seen a similar spike; a conservative estimate of sites using Drupal shows a jump from just under 358,500 in 2010 to 947,151 in December 2013 ("Drupal Core Project Usage," n.d.).

While the Drupal project has shown impressive growth, the continued success of the project depends on significant contributions of time, documentation and code from developers, designers and technical writers from around the world. In particular, several important additions to the Drupal project—including the Field API, which allows content types to have customized fields attached to them, Commerce, which allows Drupal sites to include full e-commerce shopping carts, and Symfony, an open-source PHP framework that will included as a major component of Drupal 8, were all created by French contributors. Despite these impressive contributions, French citizens who want to contribute their time to Drupal face several challenges; not only does Drupal contribution require large amounts of time and energy, the

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[1] https://drupal.org/

majority of the work done for the Drupal project—from documentation to issue tracking to the code itself—is done exclusively in English.

The purpose of this paper is to examine how French language, culture, and work attitudes influence the way that Drupal contribution happens in France. Specifically, this paper seeks to answer the following research questions:

1. How does Drupal's use of English as a common development and documentation language impact the willingness of non-native English speakers to contribute code and documentation?

2. How does France's *Loi Toubon* impact innovation by French developers within Drupal?

3. How does the French attitude towards work and personal/family time impact time spent on contributing to Drupal?

4. What lessons can American managers learn about working with French colleagues? How can Drupal encourage more cross-cultural collaboration with the French?

The focus of this research borrows from the literature on open source contributors, as well as literature on cross-functional, globally distributed teams. In addition to these sources, it borrows heavily from Hofstede's framework of cultural dimensions (G. Hofstede, Hofstede, & Minkov, 1991), as well as sources specific to French language, politics and culture. Information pertaining to Drupal was taken from several official project websites, including Drupal.org (the official home of the Drupal project), localize.drupal.org (home of all Drupal project translations), and Drupalfr.org (home of the French Drupal Association). Additionally, interviews were conducted over Skype with four high-volume French Drupal contributors, to gain a first-hand perspective from the French Drupal community.

The challenges of Drupal contrib in the French Context

There are three primary factors that make the French a particularly interesting case to explore in the context of Drupal contribution (henceforth *contrib*). Each of these—language, work/life balance, and risk avoidance—will be considered in turn.

French vs. English: the Challenge of Language
"The French are notoriously bad at speaking other languages." - P4, Interviews

The prevalence of English as the *lingua franca* of business and technology has been a sticking point in the French culture for decades, and has caused significant frustration among scholars and French workers alike (Deneire, 2008; Hurn, 2009). To the French, language is not just a means of communication, but what former Minister of Culture Jacques Toubon called "a symbol of their dignity… a common heritage, part of the French Dream." (Cohen, 2012) The continued addition of Anglicisms into the French language via American media and the Internet has led many to decry the "Franglais" invasion (Thody, 1995), likening it to Anglo-Saxon cultural imperialism.

At its most basic level, the requirement to speak English as a primary business language creates an automatic divide among French workers, with English speakers receiving preference for jobs, particularly in French divisions of US companies. This problem has led to a boom in language schools, called *les industries de la langue* in France, and a myriad of tests, such as the TOEFL, that measure competency in English and are often used as hiring criteria for French employees in the private sector. It also causes significant anxiety among skilled French workers; in the words of one GEMS employee, "I know my job perfectly well, but I cannot express myself. It's as if I were gagged" (Deneire, 2008).

The language divide can also create problems for French employees in the public sector, most of whom receive no training in English (Deneire, 2008). With a significant percentage of upper-level managers requiring English as part of their job, while lower-level employees work exclusively in French, it is easy

to imagine the potential for communication breakdowns between management and employees, as well as a lack of upward mobility for exclusive French speakers.

The dependence on English in Drupal—both in code and in collaboration—presents a major problem for French Drupal contributors. The majority of code produced for Drupal and its thousands of contributed modules is done in English. Additionally, most of Drupal's collaboration tools, such as groups.drupal.org and the Drupal.org issue queues, are written primarily in English. This language divide presents a problem for a significant number of Drupal developers, who "prefer to work in French" (interviews, P2, P4). While there is evidence of some cross-cultural collaboration in companies such as Acquia, which is based in the US but has a French office, the majority of Drupal development in France is still done primarily in the French language.

That said, the need for English has not stopped all French developers from contributing. High-profile French contributors include: Damien Tournoud[2], CTO of Commerce Guys; Frédéric Marand[3], CEO of French Drupal firm OSInet; Yves Chedemois[4], who maintains the Core Field API for Drupal, and Sebastién Corbin[5], who works on the French translation team and serves as Secretary of the French Drupal Association. Stéphane Corlosquet[6], who works on incorporating RDF and Semantic Web into Drupal, is also a French citizen, although he lives in Massachusetts.

Loi Toubon

In 1994, responding to the France passed *Loi Toubon*. Named for then Minister of Culture Jacques Toubon, the law mandates "the use of French in every transaction that implicates the public," and imposes harsh financial penalties for violators, up to and including criminal charges (Vanston, 1999). Although

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[2] https://drupal.org/user/22211
[3] https://drupal.org/user/27985
[4] https://drupal.org/user/39567
[5] https://drupal.org/user/412171
[6] https://drupal.org/user/52142

legislation to preserve the French language was not a new thing in France, *Loi Toubon* imposed much more stringent parameters than the previous law, *Loi Bas-Lauriol*, which was passed in 1975 and was rarely enforced by the 1990s. However, during the 80s and 90s, the political environment in France had changed. Says Vanston (1999):

"The increasing domination of English in the fields of science and technology had decimated the French vocabulary; French technocrats began to feel severed from useful information and denied access to their own ideas" (Vanston, 1999).

The new law, while not a solution to all problems facing the country, was an effort to preserve the French language and culture from what was commonly viewed as an Anglo-American invasion of arts, media and technology. The new law mandated not only that all official documents for French citizens be made available in French, it also required that French be used to market all goods and services within the French territory, and disallows information in any other language to be "'better understood' than the French version" (Vanston, 1999). It also carries implications for those who employ or make contracts with French citizens, as it requires the use of French in all contracts made with French citizens, as well as documentation and training materials.

In addition to these requirements, the law also gave several private French language protection groups the ability to bring suit against those who disobeyed. Between 1994 and 1996, these groups investigated 1,926 suspected transgressions and convicted 33 offenders. One such case was *ALF v. Georgia Tech*, in which the group *Avenir de la langue française* (ALF) sued Georgia Tech for an English-language website promoting its graduate engineering program in Metz, France. The group claimed that the website, as an advertising vehicle for the school, fell within the realm of the law and demanded a French translation be made. Georgia Tech argued that "visiting a Website constitutes a private communication, analogous to a telephone call; accordingly, the Internet intrinsically lies outside the scope of the law" (Vanston, 1999).

While the courts ultimately dismissed the case, *ALF v. Georgia Tech* was one of the first attempts by a country to force translation of information on the Internet. Since then, online access, and the amount of English language information being spread through the web, has only increased. One of every five minutes spent online in France during February 2009 was spent between social networks such as Facebook and instant messaging. Facebook and Youtube are extremely popular in France; Facebook membership in France increased 518 percent in 2009, and 25 million French people watched 2.3 billion videos on YouTube in 2008. This encroachment of English language and American culture has resulted in significant backlash from the French bureaucracy; French news agency *Agence France Press* sued Google in 2005 for $17.5 million for using AFP stories on Google news. Additionally, President Sarkozy instructed the Ministry of Finance to find a way to levy taxes on advertising revenues raised via Google and other overseas web services (Warlaumont, 2010).

In order to support the needs of French-speaking developers and site builders, the French Drupal community has formed its own *l'association Drupal France et Francophonie* (Drupalfr.org) independently of the global Drupal association. The Drupalfr.org site serves several purposes: first, it houses the French version of Drupal, as well as French documentation for Drupal; second, it provides a way for French Drupal developers to communicate with each other and give support; third, it provides a calendar of Drupal events happening throughout France. French-speaking developers also have their own IRC[7] channel at #Drupal-fr.

The need to localize software and documentation

The prevalence of English in business, technology and software development brings with it the potential for much more dire issues than those of national pride. In one extreme example, a 2007 radiation accident that killed four people and left another twenty seriously injured was linked to the use of English software

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[7] Internet Relay Chat, a common way for Drupal developers and contributors to communicate with each other.

for which no French translation existed (Deneire, 2008). In another case, trade unions went to court on behalf of workers at General Electric Medical Systems (GEMS) near Paris, who were forced to refer to English-only documentation to install complex medical equipment. The case was won in 2005 and GEMS was required to translate all of its documentation and training materials, as well as to provide employees with French versions of MS Office (Deneire, 2008).

The influence of *Loi Toubon*, along with the general French preference to communicate in French, creates a particularly salient reason for French developers to focus a majority of their contrib efforts on creating French translations of Drupal and its documentation. In order to use Drupal to power foreign-language websites, the interface and all of its underlying code, comments, etc. must be *localized*, or translated into other languages (Costales, 2009). This localization effort involves not only the translation of Drupal core (the main files that power the framework), but also thousands of contrib modules, which are vital to expanding the framework.

At the time of this writing, France has the highest number of translators (447) on localize.drupal.org, the home of all Drupal project translations. 3 of the 4 developers interviewed were actively working on translating Drupal; additionally, localizing Drupal for the French audience was noted as a major issue for all French developers interviews. This lies in stark contrast to American developers, who will often build their sites in English, even when intended for multilingual audiences.

French attitudes towards work and non-work time
While language barriers are clearly a significant challenge for French Drupal contributors, there are also significant differences in French attitudes towards work/life balance. France is considered a relatively "feminine" country along Hofstede's masculine-feminine cultural dimensions,[8] meaning that they "work to live," as opposed to America, a more "masculine" country, where much of life's focus is on work-

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[8] http://geert-hofstede.com/france.html

related successes, and the lines between home life and work life are consistently blurred[9]. This difference in attitudes suggests that, unlike the American contributor who might spend large amounts of his or her free time doing Drupal development and contrib, the French developer might view this as too much like doing "work after work," and prefer to spend time after work doing other things.

French Employees Want Their Free Time

Preliminary interviews with French Drupal contributors appear to back up this observation. While most of the developers I spoke to made time for contrib during their workday, or were sponsored by their employer to work on contrib, they were less willing to extend these activities into their free time. An exception seemed to be with students; P2, who holds a high position in the French Drupal Association, noted that students would spend a lot of their free time on contrib, in order to learn more about Drupal and enhance their reputation as developers. Once they graduated and had jobs, however, "their personal life takes over, and they want to enjoy their time in their personal life" (interviews, P2).

P3, a developer in Brittany, tells a similar story. When he was a student in Dublin, he was able to give a lot of time to Drupal contrib; now that he has a full time job, he finds it harder to do so because he has less free time. P1, who works in an American Drupal company's French office, notes that a key difference between French and American developers is that his American colleagues don't tend to take vacations, whereas the French "like to relax and not burn out" (interviews, P1).

An exception to the "no work after work" rule was P4, who owns a Drupal development shop in France and works on several high-visibility modules. He sees the work that his firm contributes to Drupal as an important way to showcase the expertise of his shop, as well as to contribute to the open source movement—an ideology that he holds dear. He makes it clear, however, that while he personally spends large amounts of his time on Drupal contrib, he is "not representative;" most of his employees "make a

[9] http://geert-hofstede.com/united-states.html

clear distinction between work and free time" (interviews, P4). He also points out that many of the high-output French Drupal contributors "have complete mastery over our time;" for example, Damien Tournoud, a key contributor to Drupal 7, who is also CTO of Commerce Guys.

Company Culture Makes A Difference

As part of this French emphasis on "working to live" and enjoying their free time, those who want to contribute look for ways to sponsor their work on contrib. P3, after graduating from university, specifically looked for an employer that "embraced the community" and would allow him to work on Drupal contrib in his downtime (interviews, P3). P2 worked with Commerce Guys, who allocate 20% of employee time to Drupal contrib, before leaving to start his own shop. Similarly, P4 allocates some of his employees' time to contrib, and puts specific language in his contracts that gives his shop ownership of source code, and the ability to contribute it back to the community.

Still more evidence of the French "work to live" philosophy can be seen in a ritual observed at P3's workplace. Every Friday morning, everyone in the company gathers to have "a French breakfast with paté and cheese" (interviews, P3). This ritual, along with regular shared drinks after work, is an opportunity for everyone in the office to talk about things other than work, and develop relationships that he finds harder to develop when working remotely.

The impact of risk avoidance
Finally, there is the issue of risk and uncertainty avoidance, another area in Hofstede's cultural dimensions where France and America diverge. As a country with low risk avoidance, Americans are generally comfortable with jumping into things they aren't familiar with; the French, with a significantly higher risk avoidance score, are less comfortable doing so and may worry about appearing stupid or unprofessional.

How does this impact the willingness of young or new developers to contribute to an open source project, where his or her coding skills will be judged by potentially thousands of other developers? P2 notes that

when new members are starting to contribute to Drupal, there is a lot that they have to learn on their own, via the various tutorials, blog posts and issue discussions that the Drupal community uses to spread knowledge. Unfortunately, the skills they need to be successful at this kind of learn-as-you-go philosophy don't seem to be taught in French schools (interviews, P2).

"Before we do something, we want to be the expert" (interviews, P2)

Additionally, Drupal's "doocracy" is something that many French contributors are unaccustomed to. Typically, a module is created by an independent developer, often in the context of a work project, and pushed out to the community. Modules are reviewed for coding and documentation standards, and given a project page on Drupal.org. As the module's popularity grows, bugs are discovered, and other developers create patches to fix issues that come up with the module. Eventually, other community members might step up and become co-maintainers of the module.

All of this requires a certain willingness to have your code judged and tested by other people, something that can be hard for French developers. Says P2, "In France, if you are founding a company and it fails one time, you hear 'wow, you really failed; why did you fail?' Before we do something, we want to be the expert; we want to make sure we know it really well." This desire to show expertise is also seen in P4's decision to incorporate contrib into the workday of his employees. For him, contrib is a way to showcase his firm's Drupal expertise, while also supporting open source ideology.

Language is another area that can make French developers nervous about contributing. As so much of Drupal contrib is done in English and via English communication channels, developers can feel nervous about communicating with other developers, particularly when their English isn't very good. In a survey of French workers, Deneire (2008) uncovered significant anxiety in French workers, who felt that new American colleagues and bosses were questioning their competence due to their imperfect English skills.

Conclusions

In this paper, we have examined the impact of French language and culture on Drupal contrib. While there can be no doubt that the French have given much to the Drupal project, including several of the project's key modules, this study provides a few key lessons for the American Drupal community.

- *Localization and translation are vital to communicating in an increasingly global world*. As Americans, it's easy to assume that everything can be done in English. But we live in an increasingly global world, and we need to focus more effort on making Drupal easier to deploy in multiple languages. While localize.drupal.org has an impressive number of non-English versions of Drupal available, the process of actually making a standard Drupal site multilingual[10] is difficult for many developers, and we need to find ways to make it easier.

- *Provide employees with time to volunteer*. When shops make time in their employees' days to work on Drupal contrib, it allows them to support the community without having to sacrifice their free time. It also provides important reputation benefits for the shop itself. While there are several American companies, such as Lullabot and Palantir, who already do this, more Drupal shops should follow their lead.

- *Understand the factors that drive employees' sense of competence (or incompetence)*. The need to feel competent is a primary human motivator (Ryan & Deci, 2002). While many aspects of the Drupal community support the competence of those who choose to volunteer their time—for example, our commitment to providing documentation and support for new contributors—we also should take into account the impact that working in English can have on a non-native speaker's feelings of competence.

- *Understand the impact of different cultures in work teams*. In Drupal, multi-cultural, widely distributed teams are quickly becoming the norm. Understanding how someone's culture impacts

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[10] https://drupal.org/documentation/multilingual

their work life, and their ways of giving feedback or collaborating, can go a long way towards

resolving many of the issues these teams face.

- *Take the time to build relationships, preferably through face-to-face contact*. Another important

  lesson from the French community is the importance of face-to-face contact, and building

  relationships with coworkers. Finding ways to encourage that kind of contact in a distributed

  team—whether through regular Google Hangouts or yearly retreats where everyone converges in

  one place—can help provide important feelings of relatedness among colleagues, another primary

  motivator (Ryan & Deci, 2002).

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