

Hacker Culture and the FLOSS Innovation

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ABSTRACT

This article aims to contribute to our understanding of the free/libre open source software (FLOSS) innovation and how it is shaped by and also shapes various perceptions on and practices of hacker culture. Unlike existing literature that usually normalises, radicalises, marginalises, or criminalises hacker culture, the author confronts such deterministic views that ignore the contingency and heterogeneity of hacker culture, which evolve over time in correspondence with different settings where diverse actors locate. The author argues that hacker culture has been continuously defined and redefined, situated and resituated with the ongoing development and growing implementation of FLOSS. The story on the development of EMACSen (plural form of EMACS—Editing MACroS) illustrates the consequence when different interpretations and practices of hacker culture clash. The author concludes that stepping away from a fixed and rigid typology of hackers will allow people to view the FLOSS innovation from a more ecological view. This will also help people to value and embrace different contributions from diverse actors including end-users and minority groups.

Keywords: Free/Libre Open Source Software (FLOSS), Hacker Culture, Information and Communication Technology (ICT), Perceptions, Practices, Typology

INTRODUCTION

Free/libre open source software (FLOSS) has emerged as an important phenomenon in the information and communication technology (ICT) sector as well as in the wider public domain. A new research strand has attracted scholars and practitioners to analyse the development of FLOSS from many perspectives. While the FLOSS community continues to grow, diverse actors (e.g., developers, firms, end-users, organisations, governments, etc., just to name a few) are brought into play. Meanwhile, a variety of apparatus and inscriptions (e.g., technical ones such as software and hardware tools, so-

cioeconomic ones such as licences, educational ones such as certificates, and sociocultural ones such as online/off line discussion forums) are developed and employed to maintain the practice. The complex composition of the FLOSS community entails a heterogeneous field where innovation is *sociotechnically constructed*. Practices and values in the FLOSS community are interpreted differently in support of individual and organisational demands (social, economic, political, and technical) of the actors. Such a heterogeneous world resembles an ecological system that contains diversity while resources (information, knowledge, and tools) are commonly shared amongst actors.

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Technically speaking, current research on FLOSS, across academic disciplines and industry fields, mainly focuses on measuring the efficiency and productivity in terms of code reuse, density of bugs, and complexity of code or frequency of release, usage, and adoption in the software engineering approach of productivity cycles. A prominent example with regard to determining the benefits of the FLOSS development model is improving security. Given the nature of software technologies, it is generally agreed that “given enough eyeballs, all bugs are shallow” (Raymond, 1999). Moreover, FLOSS also contributes to open standards and interoperability because the availability of source code increases the transparency of software and eases the development of compatible complementary software (DiBona, Ockman, & Stone, 1999; Feller & Fitzgerald, 2001).

While these studies focus on a technologically deterministic perspective of the FLOSS innovation, the intense interactions between people all over the globe in the FLOSS community indicate the importance of mutual shaping between all economic, sociocultural, and technical factors in the FLOSS innovation process. One of the key factors that shape the FLOSS innovation is said to be the hacker culture (Himanen, 2001; Levy, 1984; Moody, 2001; Raymond, 1999; Williams, 2002). Much of the existing literature dedicated to understanding the motivations of those participating in the FLOSS development have treated hacker culture as an incentive that drives programmers to compete or collaborate with each other. A collaboration-oriented argument highlights the features of gift culture, community-forming, knowledge-sharing, and social networking in the FLOSS innovation, whilst a competition-oriented argument emphasises the mutual challenging and self-exploring aspects in a reputation-reward system. Either account, nonetheless, repeatedly overstates “the hackers” as such a homogeneous group that “fails to account for the plasticity of human motivations and

ethical perceptions” (Coleman, 2005, chap. 5). As MacKenzie comments on Himanen’s work:

Its focus on hacker heroes and their individual ethical values as the core of hacker culture largely ignores the complicated practices of software development for the sake of what I can only read as an uncritical individualism centred on passion: “hackers want to realize their passions.” (MacKenzie, 2001, p. 544)

In line with MacKenzie, I argue that sociological research on FLOSS communities should go beyond the idealised and self-serving versions of FLOSS projects towards understanding the FLOSS development as a sociological phenomenon. It is important to analyse material practices and mechanisms as well as social practices that “developers commit themselves to an ethical vision *through*, rather than prior, to their participation in a FLOSS project” (Coleman, 2005, chap. 5). That said, hacker culture shall not be seen as a preexisting norm in the FLOSS social world; it is negotiated semantically and contextually practised to embody different voices towards hacker culture. Thereby, FLOSS should be better treated as socially-informed algorithms where hacker culture is defined, annotated, practised, situated, and redefined by a diverse range of actors.

BACKGROUND

As said, a *hacker-driven* innovation has been proposed to denote the FLOSS development and this idea has been appropriated widely by researchers and practitioners in this field. It is generally recognised that FLOSS was originated from the hacker culture of the 1960s and 1970s, when hackers defined themselves as “clever software programmers who push the limits of the doable” (Rosenberg, 2000, p. 6). Existing studies on participants’ motivations of sharing source code usually presume a firm open

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