

to entire operating systems. Open Source Software is given away for free by the **developers** who write it, both in the sense that it is provided at a nominal charge and that it is licensed to users without the legal restrictions typical of commercial software.<sup>1</sup>

Although OSS **development** is an important phenomenon closely linked to the growth of the Internet, we do not know much about how it works in practice, who is involved or why they participate. From a theoretical point of view, the OSS approach does not fit with standard models of software **development** (Sandred 2001, Vixie 1999) or formal organization more generally (Neff and Stark 2002). It is a hybrid: part social movement, with idealistic principles and goals; part formal organization, with an intensive schedule and innovative products; part volunteer network, with time and energy to donate.

In this paper, we present data from a large sample of OSS projects as a first step towards understanding the social organization of OSS **development**. We argue that, as a collaborative project of great size and scope, rooted in networks of volunteers and embedding innovative organizations and new markets within itself, OSS **development** is of strong interest to economic sociologists. We find that the social structure of OSS **development**, as measured by the size, composition and activity pattern of projects, differs significantly both from typical characterizations by movement “evangelists” and from broad claims by theorists of OSS.

We begin by providing some basic background about OSS and then discuss the emerging theoretical literature. We then present some hypotheses from this literature and test them against a large sample of OSS projects. A central finding is that the OSS community is spectacularly stratified on a variety of activity and participation measures. The observed structure challenges both the common image of the OSS community as a relatively “flat” network of interacting peers (Raymond 2001) and to an emerging theory of the community as an efficient router of human capital information

<sup>1</sup>For an accessible narrative overview of the OSS movement, including samples of the various software licenses, see Wershler-Henry (2002). For some of the foundational texts of the movement, and a sense of its internal diversity, see the essays in DiBona et al. (1999).