Chapter 12
Scientific Authorship and E-Commons

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ABSTRACT

This contribution tries to assess how the Web is changing the ways in which scientific knowledge is produced, distributed and evaluated, in particular how it is transforming the conventional conception of scientific authorship. After having properly introduced the notions of copyright, public domain and (e-)commons, the author will critically assess James Boyle's (2003, 2008) thesis that copyright and scientific (e-) commons are antagonistic, but the author will mostly agree with the related claim by Stevan Harnad (2001a,b, 2008) that copyright has become an obstacle to the accessibility of scientific works. He will even go further and argue that Open Access schemes not only solve the problem of the availability of scientific literature, but may also help to tackle the uncontrolled multiplication of scientific publications, since these publishing schemes are based on free public licenses allowing for (acknowledged) re-use of texts. However, the scientific community does not seem to be prepared yet to move towards an Open Source model of authorship, probably due to concerns related to attributing credit and responsability for the expressed hypotheses and results. Some strategies and tools that may encourage a change of academic mentality in favour of a conception of scientific authorship modelled on the Open Source paradigm are discussed.

INTRODUCTION

In this contribution, I try to gauge the impact of the Web on the production and distribution of scientific knowledge, especially on the notion of scientific authorship. In particular I will venture some extrapolations as to a more open, i.e. collaborative, form of scientific authorship modelled on the Open Source paradigm in software engineering.

The background section sets the stage by providing a conceptual analysis of the intertwined notions of copyright, public domain and what

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one may call, after Lessig (2001, 2002) and Boyle (2003, 2008), the "electronic commons" or "e-commons", which covers both the public domain and resources that are distributed under free public licenses.

The main section of this chapter assays two recent reflections as to the need for redefining the scope of intellectual property in the digital era for the sake of protecting the freedom of scientific research. The one pertains to scientific endeavour as a whole, while the other focuses on scientific authorship. First, I will assess James Boyle's (2003, 2008) criticism of what he calls the "second enclosure movement", a general tendency in current national and international legislations to carve up the public domain, and I will qualify his worry that this evolution may stifle intellectual and scientific creativity by reducing the "commons" of freely available research results and data.

Second, I will discuss Stevan Harnad's (2001a,b, 2009) defense of Open Access scientific literature. Harnad pleads for keeping apart protection from theft of ideas (plagiarism) and protection from theft of text (piracy). He argues that only the former is relevant for scientific authorship that aims for impact and not for income. I will take up this line of thought and ask whether one can go further and apply the Open Source model to scientific writing. However, it seems that there are considerable obstacles to this move, not so much on the side of copyright, since sufficiently liberal free public licenses are available, than on the side of scientists themselves. In the absence of empirical studies, one can only venture some plausible hypotheses as to reasons for the general resistance of academic mentality to an open form of authorship.

The section on Future Issues proposes some strategies and tools that may overcome academic reticence regarding an open and collaborative form of authorship. In particular I will emphasize the need to refine the notion of contributing to a scientific publication and to adopt a modular conception of scientific works. As an example of a current initiative to integrate these strategies and tools I introduce the European project „Liquid Publications".

BACKGROUND: COPYRIGHT, PUBLIC DOMAIN AND (E-)COMMONS

Copyright

Copyright is a kind of intellectual property, the other two categories being patents and trademarks (Koepsell, 2000). The rationale of patent law is to protect the exclusive rights as to the exploitation or distribution of inventions, i.e. new products, devices and processes, or improvements thereof, with the explicit exclusion of ideas and methods of operation, e.g. the buttons on a radio (ibid.). Trademark protection aims at the exclusive right to use a certain product name (ibid). The scope of copyright is original expressions (ibid.).

More precisely, the purpose of copyright is to grant the author of an original work exclusive rights for a limited time period with respect to the publication, distribution and adaptation of that work. After that period time the work enters the public domain (Berry & McCallion, 2001). However, most legislations allow for "fair" exceptions to the author's exclusive rights, and concede certain rights to the public, such as to make copies for private use or to quote from published works, under the condition to give credit to their authors.

Copyright applies to the expression of any idea or piece of information that is sufficiently original. In other words, copyright does not concern ideas or bits of information, but primarily the manner in which they are expressed (Koepsell, 2000). As such, a wide range of creative, intellectual, or artistic forms are covered, including news paper articles, poems, scientific papers, academic theses, plays, novels, personal letters, but also movies, dances, musical compositions, recordings, paintings, drawings, sculptures, photographs, software, radio and television broadcasts.