

**KNOWLEDGE WORK AND INTELLECTUAL
PROPERTY RIGHTS: NEW CHALLENGES
FOR TRADE UNIONS**

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ABSTRACT

In a society where knowledge has become the main factor of production, intellectual property rights are an important issue in social conflicts. However, in the current debate about the reform of intellectual property (IP) law, the trade unions are playing hardly any role, although the new regulations have an impact on employed and self-employed workers as well as on the power relationship of labor and capital. This article is intended to provide a theoretical discussion of IP law issues in the context of labor market changes. Using the example of software production, the article raises two questions: What kinds of strategies does management apply to control and exploit knowledge workers? How do software patents and free software practices affect their workplace rights? The article deals with these issues on the European Union (EU) and the national level by focusing on the role and behavior of German and Austrian unions. Although these unions have become increasingly aware of the impact of IP law, they are struggling to find a common position that is fitted to defend the rights of their highly skilled (potential) members. We conclude that unions should refrain from a blind adherence to strong intellectual property rights. They should rather contribute to the creation of a new balance between free access to knowledge and culture and the protection of the individual rights of workers.

INTRODUCTION

The system of industrial relations, based on industrial work, has been challenged and even transformed by current changes toward a service and knowledge economy. Trade unions in particular need to find new modes of organization for new types of workers, for example, service and knowledge workers. In accordance with Davenport, Jarvenpaa, and Beers (1996: 54), knowledge work refers to the acquisition, creation, packaging, or application of knowledge, and—“characterized by variety and exception rather than routine—it is performed by professional or technical workers with a high level of skill and expertise.” Knowledge workers are therefore involved in activities such as research and product development, education, consulting, or management. Thus, the issue of intellectual property rather than the ownership of tangible assets can be seen as highly relevant when it comes to exploiting knowledge-intensive work. Against this background, the article raises two questions: What kinds of strategies does management apply to control and exploit knowledge workers? How do software patents on the one hand and free software practices on the other hand affect their workplace rights?

Employed knowledge workers are usually forced to grant their employers the right to exploit their intellectual products by applying for patents and copyrights. Hence, the implicit knowledge neatly linked with personal experience is being transformed into objectivated forms of knowledge owned by the employer (see Gorz, 2003), and this in turn reduces knowledge workers' control over their means of production. While for employed workers this practice—though problematic—is taken for granted, even by unions, it is more likely to become a controversial issue for self-employed workers. The latter are particularly vulnerable due to the high risk of patent infringement and, hence, the costs involved in investigating existing intellectual property (IP) rights and/or purchasing relevant licenses. As a matter of fact, in current debates on IP law, new kinds of interest organizations, such as the Free Software Foundation (FSF) and the Foundation for a Free Informational Infrastructure (FFII), that make no difference between employed and self-employed workers or even small independent enterprises, have emerged.

Hypotheses

The rise of a knowledge society is a major challenge for trade unions that emerged within industrial society. We argue that the conflict about intellectual property is an opportunity for trade unions to redefine their role as interest organizations (that is, organizations representing the interests) of workers whose working conditions and interests deviate from known patterns in the industrial sector of the economy. In current debates about IP law, the conflict of interest between knowledge workers and knowledge-based enterprises is often obfuscated. Further, there exist fundamental differences in IP law between Anglo-Saxon and continental European countries. While Anglo-Saxon law assumes

IP rights to be independent of or even in conflict with labor rights (Hiatt & Greenfield, 2005), continental European IP law also includes individual workers' rights, such as provisions granting personal protection of creative work (through the concepts of "Urheberrecht" and "Arbeitnehmererfindung," for which see below). Against this background, some German and Austrian unionists justify the enforcement of copyrights, patents, and even trademarks as being in accordance with the interests of authors, musicians, artists, and engineers who produce new knowledge and cultural works. However, these unionists often ignore the fact that these rights are normally owned by enterprises and allow the enterprise rather than the individual worker to gain control over the process and results of knowledge production. On the other hand, new organizations of knowledge workers based on the idea of a cultural commons have emerged. Proponents of "free software" and "Creative Commons" argue that a restrictive IP law threatens the free movement of knowledge and the creative use of existing cultural goods. From their perspective, an increasingly restrictive IP law only serves the interests of large companies that want to gain control over the process of knowledge and cultural production. Many Austrian and German unionists, however, who rely on the traditional values of continental European "Urheberrecht," regard "free software" and "Creative Commons" as a threat to their clientele. Against this background, we argue that unions not only need to differentiate between different types of IP rights in varying fields of knowledge work and their impact on workers' rights, but they also need to be aware of different legal systems when it comes to participating in the European debate on IP rights versus free software. The unions should concentrate on highlighting the capital-labor conflict inherent in IP rights issues regardless of the employment status of knowledge workers.

Outline

The article discusses the issue of intellectual property and (post-)industrial relations in three parts:

1. The first part aims to provide theoretical background on the impact of IP rights on the power relationship of labor and capital. Using the example of software production, the article addresses management strategies designed to control and exploit knowledge workers, as well as the effects of IP rights and free software, respectively, on their workplace rights.
2. The second part uses the European debate about software patents as an example to analyze new forms of organization and new interest coalitions that arise in the social conflict about the definition of "intellectual property" and its effects on knowledge workers.
3. Finally, the article examines how Austrian and German unions deal with these new challenges. In both countries, unions have difficulties in finding a common position on IP rights. This is due to both the existence of different types of IP rights (patents, copyrights, etc.) and the varying

perceptions of unionists about their effects on the workplace rights of knowledge workers. In combination with a lack of financial and human resources, these difficulties might explain why unions took no active part in the debate about software patents. Only recently have unions tried to find a way out of this impasse.

Methods

This article is the result of a preparatory study for a larger research project on (new) modes of interest articulation and representation of knowledge workers. Our findings are based on interviews and e-mail correspondence with copyright experts and federal secretaries from Austrian and German trade unions as well as on the analysis of documents regarding the failed EU directive on “computer-implemented inventions” and the unions’ positions on IP rights. We have also used interviews with employees of two German software companies, conducted as part of two other research projects on precarious forms of interest representation, and an interview with a self-employed software developer and FFII activist engaged in lobbying the Austrian government and Austrian and German members of the European Parliament (MEPs) before the second reading of the EU directive on computer-implemented inventions.

THEORETICAL BACKGROUND: KNOWLEDGE WORKERS AND IP RIGHTS

Fifty years ago, Peter F. Drucker introduced the concept of “knowledge work” (Drucker, 1959: 69) and described the new type of workers associated with it. “The only long-term policy which promises success is for developed countries to convert manufacturing from being labor based into being knowledge based” (Drucker, 1993: 74). According to Drucker, the “Productivity Revolution” based on the application of knowledge to the study of manual work (introduced by Frederick W. Taylor’s “scientific management”) became a victim of its own success. Simply because the productivity of manual work has increased, manual labor has become a less and less important factor of production. Further productivity gains can be achieved only by making knowledge work more effective, that is, by “applying knowledge to knowledge” (Drucker, 1993: 40).

The Labor Process Debate and New Modes of Control

While Drucker stresses the positive effect of the Taylorist “Productivity Revolution,” namely, the higher standard of living of industrial workers, the labor process debate discusses the shift in power relations at the workplace that “scientific management” has induced. Productivity gains are achieved by improving the control of management over the work process and by transferring

knowledge about the “best way” to work from workers to management. From this point of view, various questions arise. How does management gain control over the process and results of knowledge work, and what does this mean for the workplace rights of knowledge workers? Can management principles developed with reference to manual work be applied to knowledge work? Or does the nature of knowledge work presuppose completely new forms of management? And what are the consequences for workplace rights of the possible uses of IP rights as a means to control the production of knowledge?

Many authors argue that knowledge work presupposes new forms of work organization, where networks and partnerships tend to replace bureaucratic hierarchies (e.g., Beck, 2000; Castells, 1996; Grimshaw & Rubery, 2005). In terms of management strategies, participative and cooperative rather than authoritative principles are assumed to effectively govern knowledge work and workers in order to unleash creativity and intrinsic motivation (Kalkowski, 2004). Hence, the workers’ commitment to professional standards and the aims of the employer/client rather than the conditions of employment are claimed to shape the interests and identities of knowledge workers (Betzelt, 2006; Kotthoff & Wagner, 2008). On the other hand, we see management attempts to apply hierarchical organization and fragmentation of individual tasks to knowledge work in order to regain control of the labor process. In the particular case of software engineering, object-oriented programming, for example, provides an opportunity to divide the process of software development into a set of individual tasks with different degrees of complexity.

Knowledge work differs from industrial work in objective, structural, and behavioral terms, which in turn influence knowledge workers’ interests and orientations. Moreover, labor relations in this area cannot be reduced to those of employed labor. Even if they are not self-employed, knowledge workers often see themselves as entrepreneurs of their own labor power, as “entrepreneurs” (“Arbeitskraftunternehmer,” for which, see Voß & Pongratz, 1998). These particularities of knowledge work influence workers’ orientations toward interest articulation. Individual self-representation tends to replace collective forms of interest articulation (see Heidenreich & Töpsch, 1998; Kotthoff & Wagner, 2008; Trautwein-Kalms, 1999). And where feasible, knowledge workers seek new forms of interest representation—often outside of trade unions. Knowledge workers who enjoy relatively high levels of autonomy and decision-making capacity are claimed to be confident and skilled enough to pursue their work-related interests individually rather than collectively (see e.g., Heidenreich & Töpsch, 1998). Some authors even assume that industrial conflict between labor and capital has come to an end. Reich (1992: 176), for instance, claims that a new class has already evolved, the class of “symbolic-analysts,” who might replace the capitalist class. However, groups of knowledge workers diverge from each other in terms of their social and institutional circumstances as well as their power relations in the labor market. Employed and well-paid knowledge

workers exist in the research departments of core industries, while the employment structures of solo-self-employed knowledge workers in the emerging services sector (new media, consultancy, etc.) deviate from previously known patterns. Some of the occupations and freelance arrangements of the latter group are characterized by low incomes and risky market conditions (Betzelt, 2006). And individual working conditions may quickly turn into precarious situations characterized by fixed-term contracts and indefinite work schedules without social insurance.

Social Conflict over Intellectual Property Rights

In a knowledge-based society, access to knowledge has become a crucial issue. Knowledge has turned into the main factor of production, demoting land, labor, and capital, the three factors of production of classical political economy, to mere “limitations on the effectiveness of knowledge” (Drucker, 1959: 62). However, free movement of and easy access to knowledge is in conflict with the effort to transform knowledge into a marketable, that is, scarce good. From their origins, IP rights were designed to create a balance between easy access to knowledge and the protection of the rights of those who produced this knowledge. Patents, for example, are intended to create both a protection for the inventor and an incentive to publish inventions. Economic studies, however, show that patents and other intellectual property rights are increasingly used not to protect single inventions but to gain control over the process and results of knowledge production (Pagano & Rossi, 2009). Strategic patents are used to exclude competitors from whole areas of technological development. As means to control the process of knowledge production, IP rights also affect labor relations in the realm of knowledge work, particularly in terms of the balance of power between knowledge workers and their employers.

The current conflicts over access to knowledge and the definition of intellectual property rights can be compared to the social conflicts that accompanied the rise of capitalism in the 15th and 16th centuries. The extension and redefinition of intellectual property law may transform knowledge work in a manner similar to that of the transformation of manual work that Karl Marx analyzes in his theory of “primitive accumulation” (Marx, 1867/1962). It is marked by the double process of transforming public goods (i.e., the “commons”) into private property and expropriating workers from their means of production.

Many authors agree that there is a similarity between knowledge protection strategies and what Marx describes as the first aspect of “primitive accumulation”: the transformation of communal territory into private property through the enclosure of the commons (see Gorz, 2003; Rifkin, 2000; Weber & Karlhuber, 2002). Lawrence Lessig, for instance, analyses how the development of IP rights in the 20th century has led to the transformation of public goods into private property through the extension of IP terms (e.g., in the Sonny Bono Copyright

Term Extension Act, often called the “Mickey Mouse Protection Act”) and through the application of IP rights to a wider field of uses and objects. Not only has copyright’s duration increased dramatically but so have its scope—from regulating only publishers to regulating nearly everyone—and its reach—as every use becomes a copy and presumptively regulated (see Lessig, 2004).

The second aspect of primitive accumulation can also be applied to the field of knowledge. For the primary means of knowledge production is knowledge. Hence, the means of production of software developers are not restricted to hardware (computers, networks, etc., as Nuss, 2006, seems to presuppose). Even more important are the necessary software tools: editors, compilers, debuggers, libraries, and so forth. In addition, only a very small number of software programs are written from scratch. In most cases, software engineers enhance existing programs whose copyright belongs to a particular software company. For this reason, as early as the beginnings of the computer age, hackers claimed that “all information should be free” (Levy, 2001: 40). However, with the commercialization of software in the 1970s, access to the source code that is necessary to enhance software or to remove “bugs” became not only legally but also actually restricted. Annoyed by this situation, Richard Stallman, in 1983 called “the last of the true hackers” by Steven Levy (2001: 415), decided to found the “GNU project” (where “GNU” stands for the recursive acronym “GNU’s not UNIX”). It was intended to create a complete Unix-compatible software system. Stallman wanted to develop a “sufficient body of free software so that I will be able to get along without any software that is not free” (Stallman, 1985). In 1985, he founded the Free Software Foundation as a nonprofit organization to support free software development. In 1989, he wrote the GNU General Public License (GPL) in order to legally protect the freedoms intended to accompany “free software,” that is, the freedom to run, copy, distribute, study, change, and improve the software. With the development of the Linux kernel by Linus Torvalds in 1991, the goal of a completely free operating system was achieved. Since then, free software has become an increasingly influential part of software development and software business. Based on the freedom not only to copy but also to modify software, the free software movement can be understood as an attempt by software developers to regain control over their means of production. Consequently, the first programs developed for the GNU project were software development tools (i.e., means of production): the EMACS editor and the GCC compiler.

However, the freedom of free software has to be understood in the sense of “free speech, not free beer,” in that free software development also involves the input of labor power and other resources. Hence, the question of how software developers can earn a living by developing free software remains open. Currently, the most important threat to free software is the increasing influence of large corporations on free software development. The most recent example is the debate about the possible consequences of the takeover of Sun Microsystems

by Oracle on the future of the open source database system, MySQL, which is part of the “portfolio” of Sun. Economic structures, market power, and employment relations, as well as the regulation of IP rights, are therefore decisive for the future of the free software movement and its implications for knowledge workers’ rights.

Knowledge Workers and Trade Unions Caught between the Enforcement of IP Rights and Free Software

Trade unions could be the appropriate groups to define a genuine employee perspective in the debate about IP rights. However, internal controversies as well as the complexity of the subject matter hinder them in their attempt to find a common position on the issues at stake. On the one side there are unionists who argue that intellectual property rights can be used to defend knowledge workers’ rights. They rely on the specific character of IP rights in continental European law. In contrast to Anglo-Saxon “copyright,” which protects the rights of publishers, Austrian and German “Urheberrecht” protects the personal right of the author. As a result, the “Urheberrecht” can be claimed by publishers and other media companies only in the name of the author. Hence, some trade unions (e.g., the German Journalists’ Union, DJU, as part of the services union ver.di) understand the “author’s right” as a genuine right of knowledge workers. In a similar way, both Austrian and German patent law includes the concept of “employee invention” (“Arbeitnehmererfindung”). The German Act on Employees’ Inventions of 1957 and the Austrian patent law of 1970 regulate the financial remuneration that employees should receive for patented inventions they have developed during their work. Thus, employees can benefit directly if the results of their work are protected by patents. In reality, however, the strong legal position of knowledge workers in Austrian and German law has hardly any practical effect. Journalists, for example, normally grant all exploitation rights to their publishers. Software developers have to sign copyright agreements that grant all rights to the employer. Moreover, the “harmonization” of IP rights on the international level in organizations such as the World Intellectual Property Organization (WIPO), the World Trade Organization (WTO), and the EU is used to redefine intellectual property rights in favor of business interests only (see below).

On the other side there are unionists who argue that intellectual property rights are actually used to expropriate the rights of knowledge workers and who, hence, are in favor of free software. Apart from the misuse of personal IP rights to the disadvantage of employed and self-employed knowledge workers due to the strong economic position of publishers and employers, software patents in particular pose additional problems. While software is normally protected by copyright or “Urheberrecht” affecting only the copying of nontrivial parts of the

source code, software patents do protect technical concepts or ideas realized with software. Hence, while an unintentional infringement of copyright is hardly possible because it implies an exact copy of nontrivial parts of the source code, software developers can hardly control whether their work violates existing patent rights due to the large number of concepts and ideas protected by software patents. To make matters worse, many software patents are rather trivial and, hence, lack the requirement of non-obviousness but are not contested due to the high costs of patent litigation. In order to use protected material, knowledge workers are required either to hold an employment contract with a company that can afford to purchase relevant licenses or to face prohibitive costs. Hence, the risk of unintentionally violating patents forms an important obstacle for self-employed software developers. However, even employed knowledge workers are assumed to have an interest in avoiding patents on software, since patents limit workers' employment mobility due to the often close relationship between patented software and (both explicit and implicit) knowledge that cannot easily be transferred to other uses.

However, free software also has its limits when it comes to protecting the interests of individual knowledge workers. First of all, free software developers are dependent on adequate economic resources in order to earn a living and to coordinate large software projects. The increasing influence of large multinational companies such as IBM and Nokia on open source and free software production challenges the further development of free software. Nokia, normally a promoter of a rigid enforcement of intellectual property rights and one of the most important lobbyists in favor of software patents, acquired in June 2008 the Norwegian open source company Trolltech, developer of the cross-platform application framework Qt, the basis of KDE, one of the most important free software projects. Another argument against the free software model is the risk that "open source" and "open innovation" are misused to exploit unpaid voluntary work.

The conflict between the freedom intended by free software and the necessity of creating an efficient economic basis for free software development erupted in the late 1990s in the debate about relabeling "free software" as "open source." Proponents of the term "open source" argued that in order to earn money it was necessary to transform the free software movement from a political campaign into a "marketing campaign" (Raymond, 2001: 175). Thus, they proposed the term "open source" to avoid both the connotation of "free" as in "free beer" and "the strong association of the term 'free software' with hostility to intellectual property rights, communism and other ideas hardly likely to endear it to an MIS [management information systems] manager" (Raymond, 2001: 176). Raymond's campaign for "open source" as a business strategy has its political roots in his active support for the Libertarian Party, while Richard Stallman's campaign for free software as a political movement has anarchistic roots (see Imhorst, 2004, 2005).

THE EUROPEAN DEBATE ABOUT INTELLECTUAL PROPERTY RIGHTS

The Issues at Stake

The failed EU directive on computer-implemented inventions, negotiated between the years 2000 and 2005, provides an excellent example of a political debate regarding the redefinition of intellectual property law. Although the failed directive aimed to regulate only a very specific area of patent policy, a small group of activists originating in the free software movement succeeded in initiating an intense political debate on the issue and provoking unprecedented reactions from political institutions. For the first time, national parliaments (Danish, Dutch, and German) requested their governments to withdraw their approval from a political agreement in the European Council of Ministers—albeit without success, as the ministers did not respect their parliaments' votes. Furthermore, for the first time the European Parliament voted against a directive at its second reading, which normally is used only to change the wording. To understand the issues at stake and the reasons for the failure of the directive, two background factors should be kept in mind: the special situation in Europe and the crisis in the patent system in general.

The European Patent Convention

European patents are granted by the European Patent Office (EPO), which is not an institution of the European Union. It is bound by the European Patent Convention (EPC), signed in 1973 and currently covering 35 European countries. The definition of “patentable inventions” in article 52 of the convention explicitly excludes “programs for computers” from patentability. However, by restricting this exclusion to software programs “as such,” the text offers a great deal of room for interpretation. As most technical innovations nowadays use software programs, the question is: What is a genuinely technical invention controlled by a software program? And what is a computer program “as such”? The European Patent Office has used this room for interpretation to grant a large number of patents to “inventions” that simply describe functions of computer programs. The most prominent examples are IBM's patent on the progress bar (EP0394160), Sun's shopping cart patent (EP0807891), and Amazon's One-Click patent (EP0927945). However, decisions about the ownership, validity, and infringement of a European patent are made independently under the national law of the country concerned. So it remains unclear whether software patents granted by the EPO can be enforced in national courts. The failed EU directive was intended to remove this legal uncertainty by defining a clear legal distinction between patentable “computer-implemented inventions” and nonpatentable computer programs “as such.” In fact, though, the draft text presented by the European Commission and favored by national governments confirmed the EPO's policy

and would have legalized software patents in all EU member states. This was due to the close connection between patent offices, government bureaucracies, and the patent experts at the European Commission. Their aim was to avoid a directive that would have made thousands of software patents granted by the EPO invalid in the EU. This situation had very special effects. Officially, the term “software patents” was completely avoided, and the credibility of the commission’s proposal was not enhanced by the fact that software companies like SAP lobbied in favor of this proposal with the argument that they needed patents to protect their “intellectual property.”

The Crisis of the Patent System

In addition to being seen as an example of the problems of the special legal situation in Europe, software patents are also seen as a prominent example of the crisis of the patent system in general. Patents that were intended to create both a protection for the inventor and an incentive to disclose the technical foundation of their inventions are increasingly used to gain control over whole areas of technological development. Cross licensing is used by large corporations to protect their markets from small start-ups. Other firms, the so called “patent trolls,” specialize in patent litigation without using patents for real production. Even patent offices seek a way out of the work overload created by the sheer number of often very trivial patent claims. Many economists criticize the existing patent system and software patents in particular. Bessen and Hunt (2004) even argue that software patents, instead of creating an incentive for innovations, work as incentives to invest more in legal departments than in R&D.

In general, software is protected by copyright. However, copyright violations can only be discerned by comparing the source codes. Hence, for free and open source software companies, protection by copyright is completely sufficient. For closed source software firms, those that regard the source code as a trade secret, this poses a problem. Some of these firms use software patents as an opportunity to protect software developments without disclosing the source code, for patent claims apply to the (technical) function of a software program, not to its source code.

New Actors and New Coalitions

The failure of the EU directive on computer-implemented inventions was due to the intense lobbying of a broad movement against software patents, a coalition of free software organizations, business and professional organizations, small and medium enterprises, and individual software developers. A main actor in initializing and coordinating the movement against software patents was the Foundation for a Free Information Infrastructure (FFII), an association founded 1999 in Munich with the purpose of “making accessible, creating and legally securing public information goods,” that is, open standards and free software.

Though its members include employed and self-employed software developers and other individuals, the key to its success was the mobilization of small and medium enterprises. Very early in the debate, FFII gained support from the European small and medium enterprise (SME) organization CEA-PME (the Confédération européenne des associations de petites et moyennes entreprises). Later, several campaigns by SMEs against software patents emerged from FFII's activities, for example, the campaign of NoSoftwarePatents.com, supported by important medium-sized enterprises such as the Swedish software company MySQL AB and the German Internet provider 1&1.

The position in support of software patents was originally promoted by large companies such as Siemens, Nokia, and Microsoft. However, in response to the first successes of the "stop software patents" movement, patent-friendly lobbyists changed their strategy and claimed to speak in the name of SMEs and independent developers. A successful example is the Association for Competitive Technology (ACT), a U.S. organization founded during the antitrust case against Microsoft in order to support Microsoft in the name of SMEs. ACT claims on its Web site to be "an international grassroots advocacy and education organization representing more than 3000 small and mid-size information technology firms," but it mainly lobbies in favor of the interests of large companies, particularly Microsoft. Another organization, specially created for the EU debate about software patents, was less successful. The Campaign for Creativity, operated by Campbell Gentry, a London-based public relations firm, claimed to be a grassroots organization of "creatives" (artists, writers, musicians, designers, and software developers), but it was obviously fake. It disappeared soon after the rejection of the directive.

Confusion of Interests and Mystification

A bizarre effect of the lobbying campaigns was a confusion of the interests behind the conflicting positions—partly due to efforts to mystify. While software developers who were against software patents hoped to gain credibility when they spoke in the name of small and medium enterprises, large multinational companies that were in favor of software patents claimed to have the support of individuals and small enterprises. In addition, however, the confusion was related to real conflicts of interests within the same groups of actors. While free software organizations were clearly against software patents, not all closed source software firms were in favor of them. Moreover, while a majority of SMEs, individual software developers, and their interest organizations lobbied fiercely against software patents, some small enterprises joined the pro-patent side. In some organizations, internal conflicts arose about the position to take. For instance, within the Gesellschaft für Informatik, a German association of software developers, members successfully rebelled against the pro-patent position of the organization's steering committee (Krempel, 2005). In general, however, the division between proponents and opponents of software patents was not related to

the opposition of labor and capital but to different market positions (individual developers and small firms vs. large enterprises) and software development models (open vs. closed source). Interests are a social construct. And knowledge workers normally do not refer to the opposition of labor and capital, or at least to their position as employed or dependent self-employed workers, when they define their interests. Irrespective of their status, knowledge workers have been found, rather, to identify themselves with professional and/or market imperatives when it comes to articulating their interests (Pernicka, Lasofsky-Blahut, Kofranek, & Reichel, 2010). Hence, their preference for free software clearly mirrors their weak position in the software market.

AUSTRIAN AND GERMAN TRADE UNIONS

Austrian Trade Unions and the Debate about Software Patents

The European debate about software patents affected Austrian unions only marginally. There was almost no internal debate on the EU directive within the trade unions, mainly due to scarce financial and personal resources, although some individual activists in the small interest grouping *work@it* within the Trade Union of Salaried Employees (the GPA, which in 2007 merged with the Printing, Journalism and Paper Union to become the GPA–DJP) took up the issue. An activist with a free software background who was also a member of the federal committee of the GPA (the *Bundesausschuss*) seized the opportunity of an extraordinary meeting of almost 500 works councillors, called to elect a new union president in 2005, to present a brief outline of the core problems of patenting software. In addition, the free software activists mainly organized in FFII entered the public debate and launched a campaign against patents on software in Austria. In combination with their lobbying of Austrian and German members of the European Parliament (MEPs) in Brussels, this campaign may at least have influenced the decision of social-democratic MEPs to reject the EU directive at its second reading.

In the first reading, these MEPs supported the directive in favor of software patents due to the argument that patents are important to protect large companies, which are a stronghold of trade unions, against foreign competitors. However, in a later stage of the debate, this position was criticized by the Austrian Federal Chamber of Labor (the *Bundesarbeitskammer*, or BAK), which—operating under public law—provides an additional structure for the representation of employees' interests in Austria. By European standards, the BAK is a unique institution and one that draws on larger financial and personal resources than those of the trade unions, due to the compulsory membership of dependent employees in the BAK. In 2009, the BAK represented more than 3 million blue- and white-collar workers. Before the second reading of the directive, the BAK published a

statement indicating that patents on software as such would hinder competition and lead to market concentration and hence would lead to entry barriers for self-employed software developers and small- and medium-sized companies, which predominate in the Austrian economy in general and the software market in particular. The BAK welcomed an EU-wide harmonization of regulations for computer-implemented inventions, but it rejected patents on software as such (Bundesarbeitskammer (BAK), 2005). In contrast, the trade unions in Austria so far have in large part remained reluctant to take up the issue of software patents, mainly due to their lack of resources and, hence, their prevailing concentration on national rather than international issues.

German Trade Unions Caught between “Author’s Right” and Cultural Commons

Although prominent members of the German Confederation of Trade Unions (DGB) and of IG Metall, the metalworkers’ union, supported the movement against software patents, this position remained controversial. Some unionists argued, with reference to the remuneration employees can receive for patented inventions, that knowledge workers in the IT industry may profit from a broad definition of “computer-implemented invention.” In the end, however, the argument that software patents are mainly used as market barriers and bring no benefits to workers prevailed.

Recently, the DGB has recognized the significance of the debate over intellectual property rights for the trade union movement. In September 2007, the DGB started an internal debate about IP rights by publishing a report on the legal questions and their impact for the labor movement. The report was written by Till Kreutzer, a legal consultant to the free software movement. The debate proper started with a workshop in December 2007 that revealed how controversial the issues are among unionists. The opposing positions can be illustrated by two prominent exponents: Wolfgang Schimmel, who defends intellectual property rights; and Ulrich Klotz, who favors creative commons and expresses criticism of IP rights.

Wolfgang Schimmel, copyright expert of the German services union ver.di, represents the point of view of a traditional type of unionized knowledge workers: journalists and artists working in the media industry. As most of them are self-employed, their relations with their publishers are not regulated by labor law but by civil law. Hence, the inalienable “author’s right” (“Urheberrecht”) has become the “labor law of creative workers” (Schimmel, 2007a). Although Schimmel concedes that IP rights are often misused by enterprises and that creative workers are normally in a weak position with regard to their publishers, he argues that only the granting of exclusive rights of publication can enable creative workers to earn a living. In defending the “Urheberrecht” as a genuine right of knowledge workers, Schimmel feels himself squeezed between the misuse

of IP rights by large media companies and the complete rejection of IP rights in cyberculture. In particular, he criticizes Creative Commons as an attack on authors' rights (see Schimmel, 2007b). Instead, he argues for an improvement in the legal position of creative workers, for instance through the right of collective bargaining for all self-employed workers. For self-employed workers whose working conditions in large part resemble those of employees ("arbeitnehmerähnliche Selbstständige") the right of collective bargaining was introduced into German law in 2002.

Ulrich Klotz, IT expert from the German metalworkers' union IG Metall, takes the opposite position. He praises developments such as open source, crowd sourcing, and creative commons as new forms of autonomous and voluntary work that are the antithesis of the alienated and hierarchically controlled work in Taylorist organizations. While Klotz's position on intellectual property rights remains unclear, the main focus of his critique is on the prevailing type of union organization. He claims that union mergers have led to even more bureaucratic and hierarchical structures and aggravated the alienation of knowledge workers. Instead, he argues, unions should learn from free software projects and social networks (see Klotz, 2008). A similar argument was put forward by Diamond and Freeman (2002) in their article on unionism in cyberspace, where they claim that the use of the Internet challenges Michel's "iron law of oligarchy" with regard to the organizational forms of modern unions and enhances union democracy. This is due to the broader access of union members to information on union meetings and policies and members' opportunity to communicate their views about these policies. Moreover, Diamond and Freeman argue that unions should implement customer relations management (CMR) to improve their services to members and hence to attract new members. However, the prospect that a union will transform itself into an "e-union" largely depends on decisions by its—often pre-Internet—leaders, who are expected to be particularly reluctant to act when Internet activities are likely to change the organization's power structure (Diamond & Freeman, 2002).

CONCLUSIONS

In a knowledge-based economy, "intellectual property" and access to knowledge have become crucial issues. As means of control of knowledge production, intellectual property rights affect the power relations of labor and capital and hence the workplace rights of knowledge workers. However, in current debates the topic of labor relations is often neglected or even obfuscated. Just as strong IP rights can be used to expropriate knowledge workers by transferring their knowledge into "intellectual property" owned by the employer, alternatives such as open invention or crowd sourcing can be used to exploit voluntary unpaid labor. By exposing such distortions, trade unions could reaffirm their role as advocates of workers' interests in the new world of knowledge work.

In order to achieve this, however, trade unions have to overcome their adherence to the belief that more restrictive intellectual property rights would automatically benefit authors, musicians, software developers, and knowledge workers in general. Even in the context of continental European law, where the “author’s right” (“Urheberrecht”) is formally granted to the individual author or developer and where the concept of “employee invention” regulates the benefits an employee has to receive for patented inventions, such rights have hardly proved to strengthen the position of knowledge workers vis-à-vis their employers or clients. Some unionists argue that, nonetheless, more restrictive IP rights are necessary as a protection against illegal copying and competition by low-cost competitors. Thus, only if the profits of their employers are protected can employees claim their share of these profits. This argument, however, neglects the fact that knowledge workers not only need a reward for the knowledge they produce but also need free access to existing knowledge. The more dependent they are on their employers to get this access, the weaker their bargaining position becomes.

Social movements such as the free software movement and cultural commons try to resolve this impasse by protecting both the rights of knowledge workers and the free access to knowledge and culture. Not only do these movements aim to protect the free movement of knowledge by granting the rights to share, modify, and enhance existing knowledge according to the main principle of the hacker ethic, “All information should be free” (Levy, 2001: 40), but they also promote an idea of a cultural commons that respects the rights of the individual knowledge producer. By means of free software licenses such as the GPL, developers are protected from expropriation by companies who misuse the ideas of free knowledge and open innovation to exploit unpaid voluntary labor.

However, while many trade unionists blindly adhere to strong intellectual property rights, large numbers in the movement for cultural commons ignore the labor-capital conflict, which must be considered in order to understand the power relations in the economy. By collaborating instead of working against each other, both sides can overcome their differences. Hence, instead of propagating more restrictive intellectual property rights, trade unions should participate in the efforts to create a new balance between free access to knowledge and culture and the protection of the individual rights of knowledge workers.

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