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IT FIRMS' WORKING TIME (DE)REGULATION MODEL

A BY-PRODUCT OF RISK MANAGEMENT STRATEGY AND PROJECT MANAGEMENT ORGANISATION

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INTRODUCTION

Videogame developers (VGDs) and software designers (SDs) working in business-to-business technological services (B2BTS) are highly qualified knowledge workers part of the bigger information technology (IT) industry (Corbeil, 2011). As such, they are marginalized in research on working time and overtime compensation.

First, they earn much higher wages than average workers of comparable level of education (150-200% in Canada). I am focusing here on IT jobs that demand a great deal of knowledge, use a workforce highly specialized in the production of one-of-a-kind or customized goods or services, with their added value being directly related to their innovativeness. Mean gross weekly pay in the IT industry varies significantly; the two subindustries in which it was the highest in 2009 are software publishing (\$1,247) and system consulting and design services (\$1,053), compared with a mean of \$724 for all Quebec industries (Corbeil, 2011, p. 38). The occupation with the highest mean was IT engineer, at \$1,430 a week (Corbeil, 2011, p. 39). IT pay in Quebec rose 8% between 2008 and 2010, that is, 2 or percentage points more than for all areas of the Quebec economy in the same period (Corbeil, 2011, p. 39). These recent pay increases in IT may be explained by the shortage of specialized workers in the field and could accelerate over the next few years, given the drop in registration in IT training programs (Corbeil, 2011, p. 40; ESAC, 2011, p. 22). Furthermore, IT workers are younger on average than in most Quebec industries, so that their pay levels are even higher than those of the rest of the population of the same age.

Second, they have also long been considered as working with great autonomy and using their creativity (Castells, 2000, 2001; Reich, 2002; Florida, 2002, 2005), thus occupying professional-managerial level jobs wherein contracts are assimilated to result-based contracts, while in fact matters are not that clear. Videogame industry still has maintained the non-conformist feel of the dotcom era and image of a hip, fun, and free culture where you get paid to play games (Dyer-Witthford et DePeuter, 2009; DePeuter & Dyer-Witthford, 2005; Ross, 2003, 2009), with a *work as play ethos* (Deuze, Bowen et Allen, 2007; Dyer-Witthford, 2002, 2005) where work is really *playbour* (Kuchlich, 2005).

The reality is somewhat different. As creators cannot be managed with the Taylorist methods of the Fordist era, these workers do, of course, enjoy a certain freedom (Dyer-Witthford, 2002). Workforce management must foster creativity by allowing a culture of individualism, diversity and so on (DePeuter & Dyer-Witthford, 2005; Hardt & Negri, 2000). But it must also encourage meritocracy, risk taking and high performance (Leadbeater, 1997).

Highly skilled VGD and SD jobs are, in fact, full time (96%) and permanent (93%), while the part-time and contract jobs are in testing and manufacturing (Dumais, 2009, p. 7). These

workers recognize the gratifying creative nature of their work, with its undeniable complexity and stimulation (Chasserio & Legault, 2009; IGDA, 2004, p. 12). Flexible working hours, a casual dress code, free meals, fitness facilities, funky interior design and relaxed atmosphere that accepts a twisted sense of humour and rebellious personality (DePeuter & Dyer-Witheford, 2005) exist, but do not tell the whole story. The industry also has a dark side.

Workers face some problems and risks at work, the main one common to both being *unlimited unpaid overtime* (UUO), entailing poor work-life balance, a high incidence of musculoskeletal disorders and burnout and, as it is a barrier to entry, exclusion of workers with family responsibilities, and thus a scarcity of women (Legault & Chasserio, 2010, 2012; Legault & Ouellet, 2012).

In this paper, based on 140 interviews in two successive case studies led in Montreal, I'll draw on previous demonstration of the existence of UUO among VGDs and SDs, and use these two case studies to illustrate an emerging workplace regulation model, stemming from combined IT firms' risk management strategy and project management (PM) as an organisation mode, closely tied to the high international mobility of both capital and workforce. Here I focus on (de)regulation of working time only, but it opens a path to theoretically account for (de)regulation of work among an expanding workforce: the "new professionals" in the knowledge work.

METHOD

The empirical material here draws on two case studies that are part of a larger research program I have been pursuing since 2000, to account for (de)regulation of work among an expanding workforce: the "new professionals" who do knowledge work, that is, non liberal professions that are not state-regulated or certified.

As for the SDs, I investigated seven Montreal companies. The core sample consists of five small, loosely structured Business to Business technology services firms (B2BTS) and two IT departments of big bureaucracies (a corporate real-estate management company and an insurance firm) as a comparative sample.

I conducted 88 extensive individual interviews with managers, computer analysts, programmer-analysts, project managers, systems analysts, systems architects, testing engineers, software designers, optical engineers, process engineers, operating engineers, optics-photonics researchers, and IT engineers. The data were collected between January 2001 and April 2002. To make things simple, we refer to them all as software designers

(SDs).

In each company, we interviewed the HR manager, one or two project managers, and ten to twelve IT experts, virtually equal numbers of women (45) and men (43). In our sample of 88 respondents, the average age for men and women was around 35 years old. A proportion of 60% of our respondents had a university degree and 26% had a technical college diploma.

Our respondents were chosen randomly from the lists provided by the HR manager. The in-depth interviews lasted one and a half to two hours, and the interview guide was semi structured. Everyone was asked certain standard questions, so simple descriptive statistics can be summed up, though the study was qualitative.

To draw up a profile of VGDs in Quebec, I investigated 4 big on-line or console game studios in Montreal. I interviewed 53 designers: producers (project managers) or associate producers, game or level designers, programmers, sound designers, 2D or 3D artists, modellers or animators; some were 'leads' (team leaders) or support employees for designers in each of these areas. We excluded senior managers and managerial staff who are not subject to the provisions regarding payment of overtime hours [Quebec Act respecting labour standards, sec. 54(3)]. The data were collected during the summer 2008.

Each of the big studios has between 300 and 2,000 employees. Our sample consists of equal numbers of men and women, despite the low proportion of female workers in the industry (Legault, 2005, 2006). We make no claims about statistical representativity, as our aim in establishing the sample was to help us understand the low numbers of women in the sector.

We recruited our respondents by word of mouth, to begin with, and then by using the snowball method (asking respondents to refer other potential respondents to us), as well as by posting notices on the *International Game Developers Association* (IGDA) website and by soliciting respondents during IGDA social activities.

The VGDs are well educated: 98% of them have completed some form of post-secondary education, whether a diploma from a junior college or specialized private institute, a university certificate, or a bachelor's degree or master's degree. The breakdown of respondents by level of education (highest level attained) is shown in Table 1.

The two samples are from Montreal because close to 90% of the economic value of IT in Quebec as a share of GDP (as well as 68% of companies) is provided by business-to-business services (including software products), 85% of which are located in the greater Montreal and Quebec City areas (Corbeil, 2011, p. 8).

UNLIMITED UNPAID OVERTIME IN IT - SALIENT FACTS

Overtime among SDS

Long working hours are a common characteristic of companies that practice PM and employ highly skilled workers (Chasserio & Legault, 2005, 2010; IGDA, 2004: 30; Gale & Cartwright, 1995; Lapointe, 2005; Legault, 2005; Perrons, 2003; Singh & Vinnicombe, 2000).

Among the respondents in both the B2BTS companies and the IT departments of the two large bureaucracies I investigated in 2001-2, employees put in overtime hours at home in the evening or on weekends. As these results have been published yet, I'll just briefly recall that 14 out of 45 women and 27 out of 43 men bring work home in the evening, after the workday; 46% of the women and 83% of the men regularly put in a significant number of overtime hours (Chasserio & Legault, 2005): 49% of our respondents work over 40 hours a week (40% of the women and 58% of the men) and 13.6% over 50 hours a week (6.6% of women and 20% of men). Only very rarely are these overtime hours paid or compensated by time off (Chasserio & Legault, 2005; Legault & Chasserio, 2003).

These findings about working hours reveal major differences between men and women. We can remark that women work less in overtime compared to their male colleagues. This difference can be explained by women still being primarily responsible for childcare (Benoit, 2006, Legault & Chasserio, 2006). Working overtime, whether at the office or at home, is a form of commitment behavior (Tremblay & Wils, 2005: 43), and one that is very advantageous for the employer when it is unpaid (Legault & Chasserio, 2003).

These professionals set no limits on their availability — especially for answering calls from customers — and consider it to be part and parcel of their job. For instance, four women and six men wear a pager even at night. The following expressions keep coming up in their explanations: "You have to be available 24 hours a day," "Be available day and night," "You always have to say yes, agree to do anything," "Respond to the needs of users and customers." Moreover, project managers assess their employees' commitment to the company on the basis of their availability to respond to customers, which becomes a key point in promotion, reputation and mobility (Legault & Chasserio, 2003).

Crunch time among VGDs

In an earlier publication (Legault & Ouellet, 2012), I discussed the problem of overtime revealed by a survey conducted in Montreal. I will not repeat those published findings, but I would like to recall some of the highlights. Overtime hours are long, frequent and unpaid. Underestimated for decades, the problem of *crunch time* and associated burnout has now been documented (DePeuter & Dyer-Witheyford, 2005; Dyer-Witheyford & Sharman, 2005,

pp. 203-4; Dyer-Witthford & DePeuter, 2006, pp. 607-12; IGDA, 2004). Theoretically, designers are asked to work evenings and weekends as a game shipping deadline approaches, or at an important milestone for presenting progress on a game to a publisher (IGDA, 2004, p. 13) to continue to receive funding. In practice, however, overtime is more the rule than the exception, according to a 2004 online Quality of Life International Survey of 994 members of the International Game Developers Association (IGDA, 2004), amounting to 10% of its members.

According to data from the 2009 Quality of Life international survey¹, almost half of the sample (N=1943) receive no compensation for crunch. Nine percent receive overtime pay, 20% get time off, 15% receive perks during crunch and 13% receive a bonus.

Overtime is actually used as much preventively as out of necessity because the uncertainty inherent in the process of getting out an original product, which cannot be planned ahead, forces managers to take precautions. I will come back to this later. In Quebec, this devastating tendency considerably harms the industry, in which 47% of studios have problems of recruiting (Beauchamp, 2010, p. 4) and many have trouble holding on to their creators (IGDA, 2004, p. 21; Chung, 2005).

Long working hours and unlimited and unpaid overtime are a paramount problem in the trade (IGDA, 2004). In Québec, where our interviews took place, the *Act respecting labour standards* (RSQ, ch. N-1.1, sec. 52-55) clearly states that an employer *who explicitly asks an employee to work overtime* must pay for the overtime hours at premium rate; conversely, if the employer does not want to pay for the overtime, he cannot require an employee to work it. Still, studios' practices are legally ambiguous because managers and supervisors do not actually ask designers to work overtime. They claim that overtime is never compulsory, but that developers do it on their own initiative. Some of our interview respondents did refuse to work overtime; however, they usually end up having to limit their career ambitions as a result. While some developers are compensated for these 'willingly worked' overtime hours based on a bonus system and compensatory free time, compensation is never guaranteed. Moreover, when they are compensated, it is only in part, and its level is uncertain and discretionary, the proportion of hours for which compensation is granted is haphazard. The way overtime is managed is a source of significant dissatisfaction. As with SDs, it must be acknowledged as a factor in the underrepresentation of women in the industry.

As a result, in the industry, the existence of overtime is more or less denied. This starts with the use of the term *crunch time* instead of *overtime*. It continues with the fact that designers are never actually *required* to work overtime. Project managers note the project's needs, ask

¹ Johanna Weststar and I are in the process of analysing these data for IGDA; they should be soon published on association's website.

designers to do overtime or attempt to make them want to do it, mentioning the possibility of two forms of compensation (bonus and time off in lieu), and in the end, the designers decide to stay at work *on their own initiative*. The *Act Respecting Labour Standards* excludes some employees from its benefits, especially senior managerial personnel [s. 3(6)] and other managerial personnel who are not subject to the provisions governing payment of overtime [s. 54(3)]. With the exception of game designers who have this status, most industry employees could be covered by the definition of employees to whom the act applies. Counting overtime would mean admitting that it exists, which, incidentally, is a breach of the *Act Respecting Labour Standards* if not paid at a premium rate. So in the studios where our respondents work, no overtime records are kept.

Hence the question: If designers are not paid for working overtime, why are they so willing to do it? I will come back to this later.

BROADER DEREGULATION OF WORKING TIME: SALIENT FACTS

Increasing unlimited unpaid overtime in the Western world as in Québec

Traditionally the preserve of men, especially managers and professionals (Bouffartigue & Bouteiller, 2001; Boulin & Plasman, 1997; Johnson, Lero & Rooney, 2001), voluntary unpaid overtime has been increasing since the '80s and expanding into new job categories, including highly skilled (the so-called new professions, acknowledged but unprotected and uncertified) or intermediate service jobs (Campbell, 2002a, p. 96).

Although there is a general long-term trend toward shortening the regular workweek and reducing extreme schedules, which might give the impression that the problem is a minor one (Campbell, 2002b, p. 122; Usalcas, 2008), there is great diversity, even polarization, in working hours (Hall, 1999; Lapointe, 2005), and some groups are affected by an opposite trend: a longer workweek and unpaid overtime.

This can be seen in many industrialized countries and yet the issue has scarcely been touched on by North American researchers, although it has been studied elsewhere since 1990: Australia (Burgess, 1998; Campbell, 1997, 2002a, 2002b, 2003; Gale, 1999; Healy, 2000; Pocock, 2001; Pocock, Van Wanrooy, Strazzari & Bridge, 2001; Wooden, 2001a, 2001b), the United Kingdom (Bell & Hart, 1999; Fagan, 2001; Fagan & Lallement, 2000; Harkness, 1999; Rubery, 1998), Scandinavia (Aronsson, 1999; Julkunen and Nätti, 1999), Germany (Anger, 2004; Bell, Hart, Hübler & Schwerdt, 2000; Croucher & Singe, 2003) and Japan (Mizunoya, 2001).

There are a number of constants:

- Unpaid overtime is increasing and exceeds paid overtime worked (Campbell, 2002b, pp. 118-21); the increase in unpaid overtime is even the primary factor in the extension of working hours in Australia, outstripping paid overtime and the regular workweek (Campbell, 2002b, p. 121).
- Unpaid overtime is more common among men, managers and professionals (Aronsson, 1999; Campbell, 2002b, p. 112-116); 40% of respondents to Statistics Sweden's regular Work Environment Study reported it. More men work overtime, in part because more men work full time.
- Blue-collar workers (in manufacturing) are much better protected than highly skilled white-collar workers, who do more overtime (Campbell, 2002b, p. 113). Blue collars are generally paid for overtime.
- More and more highly skilled white-collar workers are affected: middle managers, accountants, IT workers, teachers, health-care professionals, technicians (Campbell, 2002b, pp. 130-1; Healy, 2000).
- In fact, overtime has been studied more among full-time workers, about whom precise data can be obtained. Very few part-time workers report working overtime, both because they work less overtime and because when they do, they do not interpret it as such (Campbell, 2002b, pp. 111 and 147).

Canada is no exception:

About one in five employees in Canada works overtime, averaging about nine extra hours per week. Only about half of these employees are compensated with overtime pay. That means potentially one in ten Canadian employees are working unpaid overtime hours. This represents over C\$15 billion in potential claims for unpaid overtime every year, just at straight time. At time and a half, this is more than C\$22.5 billion. Relatively few individual employees make claims for unpaid overtime. With the recent proliferation of class action lawsuits for unpaid overtime, however, the risk of claims encompassing a significant proportion of that liability is growing (Rousseau, 2009).

According to Statistics Canada, of the 2.9 million Canadians who worked overtime in 2008, 11.4% were not paid at all for it (Conference Board, 2009). Over 1.6 million Canadians worked an average of 8.4 hours of unpaid overtime per week (Statistics Canada, 2008a, 2008b). According to 90% of employers surveyed by the Conference Board (2009), the issues of legal action or complaints involving unpaid overtime are set to become extremely important in the near future. A number of employers are facing class actions in common law courts; KPMG had to pay out \$10 million in compensation, and in the banking industry, there are several lawsuits and class actions in progress:

Many employers in Canada have a 37.5 or 35-hour contractual work week standard with their employees, including municipalities and the financial sector for example. The financial sector is also where we are seeing the first major class action lawsuits on unpaid overtime in Canada, with employees claiming years of unpaid overtime worked at CIBC, Scotiabank and KPMG. Employees routinely worked up to 90 hours a week

according to the recent lawsuit against KPMG and were “pushed out” by the employer if they tried to claim compensation for the overtime (Pereira, 2009, p. 19-20).

The Quebec labour force as a whole worked 36.4 unpaid overtime hours in 2010, with men doing 40.5 and women 32.3. The same population worked 34.1 paid overtime hours in 2010, with men doing 47.8 and women 20.4 (ISQ, 2011, p. 254).

On the other hand, between 2000 and 2010, the regular number of hours put in by full-time workers declined slightly, from 38.7 to 38 hours per week, and the proportion who worked 41 hours or more per week dropped from 11% to 6.1% (ISQ, 2011, p. 237). Even in the private sector, the proportion who worked 41 hours or more per week dropped from 10.9% to 5.8% (ISQ, 2011, p. 245). During this same period, there were still more men than women working 41 hours or more per week, although the numbers went down for both sexes: from 14.2% to 8% for men and from 3.6% to 1.9% for women. For the entire working population, both sexes, it declined from 9.2% to 4.9% (ISQ, 2011, p. 231).

In Canada in 2007, over 22.6% of employees worked overtime, either paid or not. They were more likely to be unpaid (11.4%) than paid (10.4%) (Statistics Canada, *Labour Force Survey*, CANSIM table 282-0084).

It is a popular misconception that professionals are not protected by law because they are compensated by a flat fee or on an annual basis. IT firms come under provincial jurisdiction. In Quebec, professionals and non-senior managers are not, however, excluded from the application of the *Act Respecting Labour Standards*, despite a widespread belief that only hourly employees are entitled to be paid extra for overtime:

44.75% of organizations said their non-management, salaried employees are expected to work overtime without pay. Whether an employee is paid on an hourly or salary basis is not criteria for overtime entitlement. Salaried employees have the same entitlement to overtime as hourly employees. Salary versus hourly pay are merely methods by which wages are paid and affect how the entitlement to overtime is calculated, not whether it exists (Rousseau, 2009).

In North America, employers are regularly sued and ordered to compensate employees claiming payment for overtime and in Canada, law firms are sounding the alarm (Rousseau, 2009). The State does not intervene to prevent violations of existing laws (by means of inspections, fines or public awareness campaigns) or to regulate situations where laws allow workers to be exempted from overtime pay (Pereira, 2009, pp. 4-5):

Workers may not complain because they are ignorant of their rights under Part III, because they fear employer reprisals, or because they lack the stamina or means to pursue their remedies. (Arthurs, 2006, p. 220). Workers are so concerned that they will be fired that they abandon their statutory rights (Arthurs, 2006, p. 192-3).

Provincial enforcement [of labour legislation in the areas of hours of work, vacation, unjust dismissal and reprisals against employees, and overtime pay] has been essentially non-existent, with companies having a less than 1 % chance of ever being inspected for labour violations, and almost no possibility of being fined or prosecuted

even when they are found to be in violation of provincial labour law in Canada's most populous province, Ontario. Even if federal legislation was enforced, the recent federal commission into the matter has called the penalties against employers who violate labour laws "derisory" and a "virtual license fee" for doing so. We are thus left with a culture of labour violations in Canada, as there is no penalty or virtually no penalty for violating workers' rights and dignity (Pereira, 2009, p. 72-3).

Considering how much research has been done on paid overtime among North American academics, scant research on UWO is remarkable; some studies of overtime fail to distinguish between paid and unpaid overtime, as if it did not matter (Pereira, 2009, p. 6). The North American and Canadian public opinion has reacted much less strongly to unpaid overtime than has been the case in Australia, the UK, Ireland, Spain or Italy (Pereira, 2009, pp. 4-6).

In short, there is a general declining trend in unpaid overtime, and that may be one reason for the lack of interest. Nevertheless, some specific fields are more affected, as knowledge work, and no matter how few workers there may be in relation to the entire labour force, the costs to employers may be considerable.

En 1998, Chez les gestionnaires canadiens, 40 % travaillaient plus de 40 heures par semaine en 1998; parmi eux, 14 % travaillent entre 40 et 60 heures et 8 % travaillent plus de 60 heures. Chez les professionnels, 25 % travaillent plus de 40 heures par semaine (Hall, 1999, p. 33). Ils sont nombreux à le faire sans rémunération : 29 % des gestionnaires et 23 % des professionnels en 1998. Chez les gestionnaires, 8 % travaillent 15 heures ou plus en heures supplémentaires non rémunérées et 8 % en travaillent 10 à 14 heures. Chez les professionnels, 6 % travaillent 15 heures ou plus en heures supplémentaires non rémunérées et 6 % en travaillent 10 à 14 heures. Par comparaison, chez les travailleurs de la production manufacturière et des métiers, moins de 3 % travaillent en heures supplémentaires non rémunérées (Hall, 1999, p. 35-6). Dans l'ensemble des travailleurs, 8 % des travailleurs travaillaient en heures supplémentaires rémunérées, pendant que 10 % n'étaient pas rémunérés pour le faire (de même en 2000, selon Statistique Canada, 2001). Ceux qui ne sont pas rémunérés pour les heures supplémentaires consenties sont légèrement plus nombreux (4 %) à travailler 10 heures supplémentaires et plus par semaine que ceux qui sont rémunérés pour le faire (3 %). Les hommes sont plus nombreux (11 %) à les consentir que les femmes (6 %) et en travaillent plus (Hall, 1999, p. 34).

Au Canada, la situation est différente; en vertu de la partie III du *Code canadien du travail* (LC, c. L-2), qui contient les dispositions concernant les heures supplémentaires, les dispositions portant sur les heures de travail ne s'appliquent pas au personnel de direction et de gestion, ni aux autres employés qui assument des fonctions de gestion, ni aux membres du groupe professionnel : architectes, dentistes, ingénieurs, avocats et médecins. Les SDs, s'ils travaillaient dans des entreprises de compétence canadienne, seraient donc protégés.

De toutes façons, ces dispositions sont relativement impuissantes à protéger les travailleurs assujettis, car les instances étatiques qui peuvent poursuivre un employeur délinquant ne l'ont jamais fait depuis 1987 : et au qc? appeler Gesualdi

Importance of unpaid overtime in knowledge work in general and IT in particular

The IT industry is part of the knowledge economy, which also includes VGDs under the banner of the multimedia and SD industry (Corbeil, 2011, p. 40). As such, the trend toward more unpaid overtime is important because employment in the knowledge economy is set to expand (Chartrand-Beauregard & Gingras, 2005).

The skill level required for IT jobs in Quebec is evidence of the degree of sophistication of jobs in the industry: close to 50% require a university education and 40% a college diploma. Almost all other jobs require a managerial profile (Corbeil, 2011, p. 8).

In Quebec in 2010, total hours worked were proportionate to education: university graduates worked an average of 121 hours overtime per year, while college graduates worked 61.2, high school graduates 49.8 and those without a high-school diploma 41.1. This overtime is much less often paid than in other occupational categories. University graduates work 99 hours of unpaid overtime per year, college graduates 22.6 and others even fewer (ISQ, 2011, p. 254). On the other hand, between 2000 and 2010, there was no general increase in working hours among university graduates: the regular workweek declined from 35.8 hours to 35.1 and the proportion of workers with this level of education who worked 41 or more hours per week went from 8.8% to 4.1% (ISQ, 2011, p. 235).

Among various types of jobs, in 2010, teaching ranked first, with 109 hours of unpaid overtime, followed by professional, scientific and technical services (which include the jobs in question here), with 69 hours a year (ISQ, 2011, p. 258). On the other hand, between 2000 and 2010, there was no general increase in working hours in professional, scientific and technical services: the regular workweek slipped from 36.5 hours to 36.2 (ISQ, 2011, p. 250).

This question is important because it is estimated that about 20% of jobs in Quebec, Ontario and Canada as a whole require a high degree of skill, and this proportion is increasing because half of new jobs are of that type (Chartrand-Beauregard & Gingras, 2005, pp. 5–6). This category covers industries that do a lot of R&D, use a large proportion of scientists and high-tech, typically have a preponderance of intangible assets, have jobs that demand a great deal of knowledge and use a workforce highly specialized in the production of one-of-a-kind or customized goods or services, with their added value being directly related to their innovativeness (Chartrand-Beauregard & Gingras, 2005, p. 2).

In 2009, Quebec accounted for 23% of all Canadian IT jobs, as opposed to 50% in Ontario and 12% in British Columbia (Corbeil, 2011, p. 17). In the rest of Canada, as in Quebec, specialized services of the type under discussion here generate the largest proportion of the IT industry's total earnings: 60% in Canada, 90% in Québec (as well as 68% of companies) (Corbeil, 2011, p. 8). All these specialized services account for 79% of IT jobs in Quebec. System consulting and design services, in particular, provide the most jobs: over 70,000 (47% of total) (Corbeil, 2011, p. 23). Only 10% of the value of the industry derives from the manufacture of hardware, equipment and accessories that do not involve knowledge work. In the international value chain, in fact, most manufacturing is now being done in the Asia-Pacific region, which takes in over 50% of revenue in the global IT hardware and equipment industry (Corbeil, 2011, p. 29).

Moreover, internationally, software and services are leading IT industry growth, which is expected to be about 8.5% annually between 2009 and 2014 in the Americas and Europe. Over 40% of revenue in the global software and services industry is in the Americas. Private research firms all predict a boom in the West in the prosperous gaming industry (Androvich, 2008), despite looming threats of outsourcing to countries with cheaper labour (Dyer-Witthford & DePeuter, 2009; Dyer-Witthford, 2005). Total revenue will exceed \$60 billion and is increasing faster than that of the film and music industry. It is thought that very soon, the VG industry will dominate all of the other entertainment industries in terms of sales (Fahey, 2005).

The same is true in Canada,² where studio revenue is outstripped only by that of the film and television industry and book publishing (Dyer-Witthford, 2005). The Canadian government heavily supports the industry, and the Quebec government even more, chiefly by means of tax breaks for companies that create a large number of jobs, as a result of which the government is thought to fund up to a quarter of game production costs. In the rest of Canada, studios may also enjoy federal tax breaks for R&D (Alliance NumériCQ, 2003, 2008). Some 16,000 people are employed by the Canadian industry, which now ranks third in the world in terms of jobs (after the United States and Japan), contributing \$1.7 billion in retail sales, and half of all those jobs are in Quebec (ESAC, 2011, pp. 6–12).

In short, by virtue of the IT industry's significance in terms of jobs and anticipated growth, the economic importance of the subsectors in the industry and government support for them, it is essential to keep track of how working hours in the industry are regulated, as the model could help explain not just the two subsectors studied, but also others in the knowledge economy.

². Like Dyer-Witthford (2005), quoted here, I define the Canadian VG industry as all studios operating in Canada, rather than just those that are Canadian-owned.

THE EMERGING WORKPLACE REGULATION MODEL PROPOSED

High level of risk

B2BTS firms and VG design studios are emblematic of what is known as the post-Fordist work organization of the knowledge economy. These two types of firms make original, one-of-a-kind products, with rapidly changing technology and highly qualified employees, for a market constantly seeking something new. The design of each product (custom software or application, maintenance service, game) gives rise to a contract that becomes a *project*, managed according to PM body of knowledge (PMBok) principles, bringing together experts selected for the specific purposes of the object to be designed. At the end of each project, the team breaks up and the experts are free to work on other projects, either with the same employer or a competitor.

When the project contract is signed, it is just as hard to predict how long it will take, or the means and resources that will be needed, as it is to predict the product's commercial success, because it is one of a kind and completely original. The production process is hard to plan and the uncertainty common to all innovative projects is huge. Such is the financial risk as a consequence.

Budget conditions, deadlines and scope of the order are the key issues in risk, well-known as the *iron triangle* of PM: if the first two are too restrictive with regard to the third, they could lead to project failure. Among the main sources of uncertainty and risk is certainly the ghost of "failing to ship" or deliver (a game, a program, a website, a software package, etc.) on time and budget, whatever the constraints attached to the evolutionary scope of the order may be. In the many post-mortems of failed projects posted on the Web and devoured by industry players, the key to a project's failure is generally found to lie in some combination of these conditions (IGDA, 2004, p. 31).

Elles sont d'abord définies dans chacun des contrats, négociés dans des conditions de grande compétition. Les concepteurs n'interviennent pas à ce stade du processus, mais devront exécuter la commande en respectant les conditions prévues ou les nouvelles conditions renégociées, le cas échéant. En d'autres termes, les ressources qu'on peut allouer au projet sont préétablies sur la foi d'un processus estimé à l'avance; si la production réelle en exige de nouvelles, il faut les renégocier ou s'en passer.

Pire, ces trois conditions ne sont pas établies définitivement au démarrage, mais peuvent toujours être renégociées en cours de route.

In the B2BTS industry, client companies and consulting firms enter into a direct relationship on a very competitive market. As in the VG industry, the competition is international because it does not matter where the good or service is produced. As there are many bidders, competition forces them to trim their profit margins, and their positions on the market are insecure and changeable.

According to the Standish Chaos report (2009), in 2009, software projects still face uncertainty:

- 32% were successful (on Time, on Budget, fully functional);
- 44% are challenged (late, over budget, and/or less than promised functionality);
- and 24% failed (canceled or never used).

Reports 2006 and 2004 showed similar performances. When the true costs are added up, in as many as 80% of software projects, the costs are underestimated and the benefits are overestimated. Among the main IT projects failure factors identified by project managers, first two were missed deadlines (75% of failed projects) and exceeded budgets (55 %) (Dosani, 2001).

In the VG industry, the risk of commercial failure is very high; the publisher has no assurances that the game will be a hit with consumers (ESAC, 2011, p. 22). Failures are much more common:

Game budgets skyrocket, but fewer than 5% of development projects actually break even once they reach the marketplace. [...] If the game fails to sell at a healthy pace during the 4-6 weeks following its release, retailers will quickly pull it from the shelves and replace it with something new. For a developer who has spent years working long hours and investing a great deal of himself or herself in a game, seeing it vanish from the market with barely a whimper is a depressing experience to say the least. [...] For a game, purchase opportunities are much more modest [than they are for movies] (IGDA, 2004, p. 22).

It is a well-known fact that a very small proportion of games published become successful in the marketplace. In 1999, fewer than 3% of PC games available on the market, and about 12% of console titles, sold more than 100,000 copies – a figure that is itself often far below the breakeven point (IGDA, 2004, p. 42).

Traditionally sheltered under the relatively low cost of manufacturing and R&D in software (as compared to industries such as pharmaceuticals or oil and gas exploration), IT sector now faces a more challenging landscape, as technology advances ever faster, the risk of having your product illegally distributed increases, copycat competitors replicate functionality at a lower price, timelines are lightning fast and significantly more software companies are investing in risk analysis; indeed, the majority of commercial games do not produce profit (Bethke, 2003).

A project can take up to three years and employ anywhere from a few designers up to 200. Scale can vary almost infinitely: a project can cost between \$5 and \$20 million, or even up to

\$40 million, and at this level of investment, the pressure is enormous, because a million copies have to be sold just to break even (Dyer-Witheford, 2005; Shumacher, 2006, p. 147). The competition is fierce because along with big studios all over the world, there are also swarms of small, amazingly creative independent designers: 101 microstudios with up to 5 employees, and 149 with between 6 and 50 employees (ESAC, 2011, p. 9).

The high risks are assumed by the design studios and small independent designers because game publishers—the industry giants—are very averse to risk:

Publishers point out that they face the “90:10” dilemma of a hit driven business; 10% of the games make 90% of the money, and they must contract developers knowing most games sink without a trace. [...] But, as in other cultural sectors, while the number of ‘independent’ production companies grows, these “absorb high product risks and labour costs for the giants, which maintain their control over the critical areas of finance and distribution” (Dyer-Witheford, 2005).

The VG industry is multinational and dominated by a few big console manufacturers (Microsoft, Sony, Nintendo) and a handful of big game publishers [Electronic Arts (EA), Activision, Konami, Ubisoft, Take Two Interactive (T2I), Toy HeadQuarters (THQ)], which protect themselves against risk by exercising strong control over design studios. Like a book publisher, a game publisher acquires the intellectual property (IP) rights to games that it thinks are promising and pays for them based on a licensing system under which the designer (studio or freelance designer) is compensated chiefly by an advance against royalties, which depend on retail sales. The publisher retains exclusive intellectual property rights to distribute and market the game and its franchise. Publisher's company may also own the developer's company or it may have internal development studio(s), as is Ubisoft. Mainstream games are normally funded by a publisher and take several years to develop. First, in pre-production, pitches, prototypes, and game design documents are written. If the idea is approved, the developer receives funding and development begins. Because the publisher usually finances development, it usually tries to manage development risk with a staff of producers (project managers) to monitor the progress of the developer, critique ongoing development, assist as necessary and pay when the developer reaches certain stages of development, called milestones (Chandler, 2009; McGuire & Jenkins, 2009).

Funding of young IT industry comes from venture capitalists who typically select ventures with exceptionally high growth potential within a short timeframe (typically 3 to 7 years). In Quebec, IT is the R&D-driven industry that attracts the greatest share (46.2%) of venture capital, surpassing the health-care industry between 2008 and 2011 (Corbeil, 2011, p. 25).

Venture capital comes with a built-in shareholders approach, as equity owners very likely call for a business model that allows for such a growth (Donaldson & Preston, 1995; Freeman, 1984; Friedman & Miles, 2002). Any form of stakeholders' approach of management cannot figure on these firms' agenda. As labour is the utmost cost in knowledge work, the human

resources management (HRM) approach must align with the business model and contribute to contain risk rather than increasing its threat and pressure on return rate. At best, HRM approach should contribute to keep governmental bodies, political groups, trade associations and the public at bay and union avoidance strategies are commonplace in IT sector (Legault & Weststar, 201*). PM offers a fit HRM approach to meet these requirements.

How can social theory account for the contemporary trend of rising UWO in this highly risky venture sector? Without pretending to account for the whole issue, I however hold that two case studies among knowledge work in IT sector lead us to observe an emerging workplace regulation model among the highly qualified experts of IT, stemming from combined IT firms' risk management strategy and PM as an organisation mode, and closely tied to the high international mobility of both capital and workforce.

PM as a fit mode of organisation

A bureaucratic organization lends itself poorly to creativity and innovation. The creation and production of customized innovative services or products, the handling of constantly changing orders, the satisfaction of clients with fast-changing needs, and the supervision of a highly skilled workforce do not lend itself to detailed operational planning, require a different sort of management than the mass production of goods or provision of standardized services and a great deal of improvisation (Packendorff, 1995). However, though creators' autonomy is needed for innovation, it leads to tension with control over work, a control made even more necessary by the fact that the production of deliverables is often constrained by a limited budget and a tight timetable (Appay, 2005; Lapayre, 2009; Sydow, Lindkvist & DeFilippi, 2004, p. 1476). These organizations are characterized by great competition and short-time planning horizons due to a changing and mobile demand, an economic context conducive to rationalization: decentralization, delayering, accountability to shareholders and control of cost, the main one being labour. The challenge for managers is to abandon direct hierarchical control in order to preserve a climate of creativity and innovation, while at the same time satisfying volatile clients in a very competitive market (O'Dell and Grayson, 1998; Sewell, 1998, p. 408).

The mode of organization best suited to creativity and innovation allows experts a certain leeway, while maintaining enough control to reduce uncertainty (Fournier, 1999, p. 292). A *postbureaucratic* mode of organization is called for (Clegg & Courpasson, 2004; Fournier, 1999; Hodgson, 2004), and PM fits the bill. PM offers a range of means to organize and manage a discontinuous process, and flexible, fluid roles that can adapt quickly to changes in the planning without sacrificing control over the work, predictability, and experts' discipline (Hodgson, 2004, p. 86). PM, despite the claims of autonomy and self determination at work of creative experts, sets up fairly tight controls through Work breakdown structure (WBS),

management of the self and the importance of reputation (Legault & Chasserio, 2012).

Among other things, the PMBoK defines stages in a project and then characterizes the success factors of each. This calculability and predictability is made possible by the delineation of a generic model for the process of project work, which is commonly defined as the *Project Life Cycle* (PLC). The PLC is effectively the cornerstone of PM, representing a standardized model of the stages of a project said to represent the 'natural and pervasive order of thought and action.' (Cleland & King, 1975, p. 186). At the *design* stage, the client defines what he or she wants; at the next stage—*feasibility*—production of the good or service is broken down into operations, which are checked with the client. In the *development* stage, the required means, resources, and responsibilities are determined, and this leads to a work breakdown structure (WBS), which can be used for control in a variety of ways. Coordination of the project as a whole requires frequent adjustments to planning (Hodgson, 2002, pp. 810-1). All decision making in these stages leading up to *implementation* involves the client and management alone; the IT experts are consulted to varying degrees solely with respect to estimating prerequisites, needs, time, or the prices of various aspects of the order. By the end of negotiations, the price, deadline, and quality of deliverables—the key risk factors in every project—are set down in a contract. PM sets up a context where every production is governed by a contract that determines the conditions of the iron triangle. The PM form of organization does not just allow to controlling people, it gives the client that control, as well.

It is only later that IT experts enter the picture, tasked with filling the order. That is when worker discipline and control becomes very important, because the many microdecisions to be made as work progresses are so many opportunities to deviate from the overall plan (Hodgson, 2004, p. 87). PM thus claims to meet the challenge of managing attitudes and behaviours so that they are consistent with the goal, thus avoiding the risk that decisions made by independent people might compromise the overall result and promoting "The emergence of a utopian organizational form 'in which everyone takes responsibility for the success of the whole'" (Heckscher & Donnellon, 1994, p. 24).

For example, team members in both case studies often find themselves having to make decisions or choices for which the client must be consulted. Members of a team responsible for implementing software in three months had to resolve conflicts on a daily basis and make logistical decisions that invariably had a crucial impact on the project's success or failure and, ultimately, on risk. In one instance, they had to decide whether it was better to sacrifice a test phase in order to meet a deadline, and thus risk releasing a product with bugs, or to put quality first by taking their time and risk trying the client's patience by running late. The client has the upper hand in such negotiations, owing to the strong competition that pits B2BTS firms against others from all over the world (Alvesson, 2000; Anderson-Gough, Grey,

& Robson, 2000).

Workers interviewed in both case studies were assigned to the production of services, but never involved in negotiating contracts in which budgets and deadlines are set. They have to comply with these conditions as far as possible, however. SDs have a certain degree of autonomy, not merely by virtue of their specialized, hermetic knowledge, but by virtue of the fact that they deal with the client as if they were independent contractors. Their autonomy is first and foremost operational, that is, it is limited to deciding how to achieve a very precise short-term goal, within the stringent constraints of the contract. Like that of contractors, their autonomy is actually relative and limited much more by the client than by superiors.

Planned to avoid the flaws of bureaucracy, the project team is the basic unit where all of the usual managerial functions (production, research and development, marketing, human resources, finance, etc.) are coordinated, whereas the same functions are separated and specialized in a bureaucratic context. Project managers control all of these aspects, including HRM where project managers really have a free hand on politics and practices in general and on asking people to work overtime in particular (Chasserio & Legault, 2005). But this must not mistake the observer: In this organisation mode, the power of the client is overwhelming and so much project managers' as team members' assessment rests on his satisfaction. In B2BTS, its representatives do not limit their impact to occasional requests but actually establish the organization's framework for in-house production and wield numerous decision-making powers that in other settings are normally within the purview of the HR department: hiring, discipline, vacations, holidays, schedules, even firing. Project manager is essentially relieving the demands of the client. B2BTS firms may have a few HR policies, but the HR department plays a very unobtrusive role, does not intervene in the relationships between project managers and employees, and gives the former a great deal of latitude in applying HR policies (Anderson-Gough, Grey & Robson, 2000; Chasserio & Legault, 2005; Legault & Chasserio, 2009; Legault & Bellemare, 2008).

As much VGDs as SDs must often adjust the order when they encounter unanticipated problems along the way, because the order itself evolves constantly over time and with the opportunities that arise as the product takes shape. To reduce this uncertainty, they are always checking and frequently fine-tuning planning and WBS targets, which serve as regular reminders that their decision-making latitude begins where that of the client and project manager ends (Hodgson, 2004, p. 87).

In fact, if the client refuses to extend the project and the deadline, but makes extra demands, he is actually requiring extended working hours. As projects frequently overlap, employees juggle heavy parallel demands and set priorities themselves in the case of conflicting tasks, while possibly facing reprimands for the decisions they make. Instructions such as "Do

whatever it takes to meet this deadline" or "Here's the objective, make sure you meet it" are inputs into *autonomous* decision making. The respondents' expressions on this last point are eloquent: "a customer-centered approach," "having the creativity to stay competitive on the market," "always say yes, take everything on," and "honour your commitments." In fact, like European project team workers, VGDs and SDs use the language of entrepreneurs (Lindgren and Packendorff, 2006, p. 859). They are encouraged to devote the "time it takes," rather than a fixed number of hours to their work, more like entrepreneurs than wage earners. They are left to judge what that meant, but the project manager, the client, and their colleagues monitor and evaluate their performance.

When costs are being cut, the workload can exceed what workers can do within the allocated time if organizations do not hire enough people (Aronsson, 1999).

In the face of such sizeable risks, the optimal solution is often to attempt to do it all, which results in unlimited overtime (Chasserio & Legault, 2005, 2009; Legault, 2005; Legault & Bellemare, 2008; Watts, 2009). To stick to the agreed-upon price, production costs, the main component of which is labour, must be lowered. Thus UUO is a major asset, commonly throughout PM environments (Lindgren & Packendorff, 2006, p. 858-9).

Since timetables and budgets are always narrowly defined, total commitment is often required from all project participants, implying long hours and a willingness to work even weekends on short notice (as also shown by Watts, 2009). PM often means improvising in order to deliver the project as planned, and in core PM theory and practice, employees are the ones to improvise, because each project, by design, is a temporary exception, a state of emergency where normal rules do not apply. Total commitment is rationalized by the fact that it is only for a short period, but team members work on one project after another all the time. In the experience of employees, the requirement to do overtime is so clear that it helps decide who is laid off.

As a result, PM is popular well beyond the bounds of IT sector (Ekstedt, Lundin, Söderholm, & Wirdenius, 1999), and some feel we are attending a "projectification" of society (Cicmil and Hodgson, 2006; Maylor, Brady, Cooke-Davies & Hodgson, 2006). PM offers creative industries resources that seem all the more promising because they are developing as both practices and an academic body of knowledge (PMBok) (Hodgson, 2002; 2004; Hobday, 2000, p. 871). With such appealing promise, there has been a staggering increase in the number of members of the PM profession (Hodgson, 2004, p. 85-6). For instance, the Project Management Institute (PMI) now counts more than one million members and points out that "as the number of projects swell, the pool of credentialed talent is not keeping pace. In the Persian Gulf and China Sea regions alone [...] a shortage of 6 million skilled project professionals is expected by 2013" (PMI, 2011). So PM is very likely here to stay.

Is UWO inherent in PM? First, overtime per se must be distinguished from unpaid overtime. While the uncertainty of the development process may explain why overtime is required, to a varying and always debatable degree, not paying for it is a managerial decision. The three sides of the iron triangle are inescapable, as is the imperative to produce a hit game. If resources are limited, the only option is overtime. Any flexibility in the schedule, unlike the idealized image, depends on people's willingness to work longer hours when the iron triangle becomes too tight:

The discourse of flexibility appeared not to capture well the experiences of most portfolio workers trying to build a career in new media – it is, as Diane Perrons (1999) has noted, a flexible discourse of flexibility. For example, the notion of 'flexible hours' suggests that the individual is able to exercise some control over when and how long she works; in fact the needs of the project were always paramount, and 'flexibility' was determined by these, rather than by the needs of the worker. Many projects had extremely tight deadlines (which workers had to agree to meet in order to get the contract) and these necessitated intense round-the-clock working for a short period, which might then be followed by several weeks with no (new media) work at all (Gill, 2002, p. 83-4).

Some studios avoid overtime or pay workers for it though, although at straight-time rates. It is also possible to develop policies that penalize clients for changes requested once a project is under way, but only 16% of respondents to the IGDA survey reported working for a studio that did so. Teams have to accept new requests. But, with or without new requests, teams are rarely big enough, deadlines are rarely reasonable and budgets stay pretty much the same (IGDA, 2004, pp. 19–20).

But we previously left pending an important question: While overtime is not wholly compensated, in violation of the applicable statutory framework, how do employers get these (in some respects) unhappy workers to work so many hours of unpaid overtime? The great willingness of aware and sought-after experts to work overtime for free seems paradoxical, so how is it fostered? Here follows a sketch of the model developed for VGDs but relevant to SDs as well (Legault & Ouellet, 2012).

How workers are induced to work unpaid overtime

VGDs and SDs are not part of a large pool of replaceable labour; on the contrary, they are a strategic factor in their employer's success in a volatile, competitive market for innovative customized products. To employers, their skills are of even greater strategic importance because the demand exceeds supply, resulting in a shortage of skilled labour in these two IT subsectors, as is the case in Quebec (Corbeil, 2011, pp. 8 and 44–45). Their in-demand skills are of even greater strategic importance to employees, indeed are their primary asset in the endless search for work, because the job market is shaped by just a handful of organizations.

As industry employers invest a great deal in recruiting experts who are in such short supply,

the trend toward more unpaid overtime cannot be explained by the pressure of unemployed workers triggering competition on the job market, as some analysts maintain occurs in other fields of employment (Aronsson, 1999). Hence the question: If designers are not paid for working overtime, why are they so willing to do it?

A common explanation in the VGD milieu is that designers just love games, and are often big fans, members of associations, former testers, gamers or modders. Even if many designers do love games, that cannot explain all the voluntary UWO in the industry and among our respondents, since many of them decry the practice (IGDA, 2004, pp. 16–18). In an IGDA survey of its members, 61.5% of respondents felt it would be hard to keep up the same pace of work because the long hours could have repercussions on their lives outside work, mainly with friends and family (IGDA, 2004, p. 18). Many designers are contesting this practice by taking a two-pronged approach of, on the one hand, class actions (mostly in the United States), and, on the other, monitoring overtime management in studios around the world, compiled on the Gamewatch Web site, with data supplied by the simple but constant vigilance of designers in the industry (Legault & Weststar, 201*). At the same time, love of games is a powerful force that employers can use as part of a more complex system of punishments and rewards to induce people to work unpaid overtime voluntarily. Moreover, that cannot and is not either said of SDs.

I have offered an analysis (Legault & Ouellet, 2012) based on the importance of reputation for the mobility so essential in this industry of boundaryless careers (Arthur & Rousseau, 1996). The resulting model applies to SDs although, in their case, the importance of their direct relationship with the customer must be emphasized, but does not alter the operational logic.

To understand work in the IT industry, we must look closely at PM as the key factor because mobility is inherent in this mode of organization, with the end of every project setting off a new round of job seeking and recruiting. The premise of the model is the great mobility typical of the PM mode of organization, in which the workforce is hired for short periods, often on term contracts. As a result, a constant placement process goes on, in which reputation and portfolio play a decisive role because every placement involves a performance appraisal, and the next contract depends on the applicant's value on the market at a specific moment in time.

According to Reed (1996), for instance, IT experts are part of the "new professionals" in the knowledge work that is "entrepreneurial professions", without any State regulation or buffer against market movements, regulated by the social network and drawing individual bargaining power from a competitive edge.

In this context, workers try to put together impressive portfolios. Workers act as though they have fee-for-services contracts, based on deliverables, although they are actually paid on an hourly basis. In fact, they are rated according to results, but paid by the hour for an artificially fixed regular workweek:

The study raises the question of whether the amount of unpaid overtime worked, also indicated deeper changes in the nature of work. An increasing group of white-collar workers are working as if they were on result-based contracts, while in fact they are both employed and remunerated on the basis of time worked. (Aronsson,1999)

PM fosters confusion between the two types of contracts; although project team members are often hourly paid employees, in the world of projects, designers' merit is deduced from bare results.

Essentially, the system works like this. Aside from partial compensation in the form of bonuses and time off in lieu, willingness to work overtime brings with it many considerable benefits in the industry: inclusion in the informal peer network, which is very important for mobility; a good performance appraisal, which may itself lead to a pay increase, as well as a good reputation; in turn, a good reputation facilitates promotion, assignment to the most prestigious projects and mobility, which is coveted in the industry because it provides opportunities to learn about advanced technologies. Above all, a good reputation is an individual designer's trump card in negotiating a pay raise. Mobility thus enhances reputation, and with both driving a system that has an implacable internal logic and a powerful ripple effect.

The system is just as effective in punishing those designers unwilling to work overtime: they will not be rewarded, even if the game is a success and they have contributed to it; they are denied the main benefits of the informal peer network, which will not recommend them for prestigious projects, and thus they will not be exposed to the most advanced technology; they will not be as well rated nor as well paid as their peers; their portfolios will suffer because they do not enjoy the kind of reputation that facilitates mobility. In essence, they are pretty well stuck where they are.

Mobility is a crucial factor in people's willingness to do overtime because the greater their desire for vertical mobility (line management positions, prestigious projects) or horizontal mobility (other studios, other countries), the more vulnerable they are to the system of rewards and punishments. Conversely, designers who place great importance on family life, or who have been sick, often revise their priorities and aim for less strategic positions in the industry, less out on the leading edge, but that allow them to reconcile professional and personal goals.

Designers are induced by this kind of system to work a great deal of overtime, since most agree to do it despite the disadvantages and their dissatisfaction. On the one hand, the

industry has its own star system, a worldwide meritocracy, which cranks up the pressure to earn a reputation. On the other, collective action could offer protection against this requirement, but experts' mobility sets up a significant hurdle in the North American enterprise-based certification process (Legault & Weststar, 201*).

Neither purely voluntary and freely agreed to, nor required and forced, overtime comes under the broad category of "voluntary but expected" working hours (Campbell, 2002:141).

Alternatives to overtime are not up for discussion, and a number of conditions reduce the range of foreseeable scenarios for designers who, like many creative workers, would like to move around in the industry (Florida, 2005) and hope to work on prestigious games. There is still a demand to respect their personal lives and allow them time for personal development, but it runs up against those constraints.

As an end result, the drive towards getting a reputation overrides the employer's direct control and insures workers' collaboration. Project managers generally succeed in getting SDs and VGDs to work in UUO in spite of legal constraints, dissatisfaction of workers and a high level of awareness of this problem.

CONCLUSION

IT sector in general, and videogames and B2BTS in particular, are experiencing a high level of risk on an international competitive product market wherein constant innovation is strategically important. To deal with such an uncertainty level, venture capital involved lies on important conditions: easy international mobility and plans of risk transfer down the value chain. Immediately lower down the chain, studios in VG sector or consulting firms in SDS are conveyed this risk to deal with. The three components of the iron triangle are three strikes against planning as well as risky issues for this intermediate actor: neither the scope of the unique product or time required can be foreseen, however they both will affect the amount of labour required, which is the utmost cost. Employers then manage this risk in sharing it with experts they hire, as the main source of cost. PM is a performing device to do so.

The risk inherent to IT venture, that could be a paramount concern for shareholders, is first transferred on studios or B2BTS firms' managers, who must assume the risk inherent to R-D and manage the creation process. They in turn transfer it to workers who are the ones to bear this risk in working UUO. As labour is the utmost cost, by doing so they avoid too big fluctuations and UUO thus acts as a buffer against financial risk. In the process, workers suffer related health problems and people who enjoy or need private time, particularly mothers of young, desert these two fields (Chasserio & Legault, 2005, 2010; Legault &

Chasserio, 2012). Up until now, collective action and labour market institutions show poor regulating power to act as a buffer, partly due to high mobility, national as well as international, at odds with North American enterprise-based certification process. SDs are not organised at all, while VGDs set forward original means of informal collective action 2.0 (Legault & Weststar, 201*).

Assuming that overtime is necessary, the fact that it is unpaid is a great boon to shareholders. In the industry, the risk of missing a project deadline (for example, the September deadline for selling the game for Christmas) is the main risk—and the main source of uncertainty. Unpaid overtime keeps labour costs down to what was planned at the outset, and because labour represents by far the biggest cost, the project can be kept within budget. The cost of the risk is passed on to the designers, who assume it, paying with lost leisure time, health problems and lack of earnings (Burke & Fiksenbaum, 2009; Legault & Belarbi-Basbous, 2006). If the game is a hit, they will get to share in it through bonuses and time off in lieu. But if it is a flop, they are the ones who bear all the costs of the risk through foregone earnings and the adverse effects of overwork.

Project-based organization, in an economical context of high competition over an international product market, has many consequences, including: high management expectations of employee flexibility to meet unanticipated client demands, long working hours with fierce resistance to any reduction and UUO as an end result.

As the job market is based on reputation, experts don't develop commitment to any employer but rather commit to the trade and are highly mobile, either world-wide, as among VGDs, or nation-wide, as seen most often in SDs.

As an end-result, there's an emerging workplace regulation model among the highly qualified workers of IT, stemming from combined IT firms' risk management strategy and PM as an organisation mode, closely tied to the high international mobility of venture capital, upstream, and to the high international mobility of workforce, downstream.

Bien qu'ancienne, la gestion par projets connaît un essor qui explique la profondeur des changements qui surviennent dans l'organisation du travail qualifié dans la période contemporaine.

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