Skills that are valued in the knowledge economy:
an examination of the experience of French workers in the 2000s

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ABSTRACT
An examination of the professional careers of French workers during the 2000s, shows that some workers gave themselves wholeheartedly to the knowledge economy, some attempted to withdraw from it and others were clearly excluded from it. The first group demonstrated an ability to handle complex employment relationships, to show substantial flexibility in their hours and place of work, and to maintain a professional network and up-to-the-minute personal communications technology, whereas the other two groups either did not possess these aptitudes or did not wish to acquire them. Those who decided to opt out of the knowledge economy mainly did so because they were disinclined or because they were reluctant to adapt to the requirements of a large organisation undergoing restructuring. A move towards the care sector via professional reconversion highlighted their awareness of interpersonal relations and human wellbeing. Those who found themselves frozen out of the knowledge economy were recognisable by their isolation, their inability to retain professional networks and the difficulties they encountered in envisaging the next step in their careers.

Introduction
‘We’re going to be a factory-less company pretty soon’, declared the CEO of Alcatel1 in 2001. This was a clear statement of the group’s intention to put intellect and services at the centre of its operations. By holding on to only those activities that had a direct link with the latest technology, Alcatel would be in a position to maximise added value. The company’s template for a professional worker was no longer the production line operator, but the engineer sitting in front of his or her computer, and to reach this goal would mean externalising all non-core business functions. Alcatel’s CEO had chosen to entrust the future of the group to the knowledge economy, aware that ‘the key component of a knowledge economy is a greater reliance on intellectual capabilities than on physical inputs or natural resources’ (Powell & Snellman, 2004).

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1 Alcatel was a French company which designed and manufactured telecoms equipment. It merged with Lucent Technologies in December 2006 to become Alcatel-Lucent.
What specific employee skills are valued within the knowledge economy? This paper adopts a novel approach to addressing this question. No analysis is undertaken of particular sectors of activity or of specific professional groups. The aim was to consider the skills that are valued in today’s knowledge economy by investigating the professional careers of workers, and especially what happens to these workers when they change jobs.

The findings derive from a sample of thirty French workers who were interviewed as part of a ‘post-qualitative survey’ (Post-enquête qualitative COI2006\(^2\)) carried out jointly by DARES and CNAM\(^3\) between the third quarter of 2008 and the first quarter of 2009. The selected group had voluntarily or involuntarily finished working for their respective companies in 2006 (either through resignation or redundancy). Included within the scope of this analysis were workers who until 2006 had been employed by French private companies of varying size, activity and region (Paris, Nord-Pas-de-Calais, Pays de la Loire and Provence-Alpes-Côte d’Azur (Berton, 2010). The aim of the semi-structured interviews was to situate the break in employment in the context of the person’s professional career. An analysis of this break made it possible to separate the workers into different sub-groups: those who chose to pursue and develop their involvement in the knowledge economy, those who withdrew from the knowledge economy and those who were effectively disqualified from entering the knowledge economy. The workers across the three groups displayed a number of common characteristics and it is on this feature that this paper focuses.

In the first part of this paper, I will begin with the notion that the knowledge economy has, to a greater or lesser extent, an impact on all production activities and on the organisation/work conditions for all workers. Then I will discuss the professional careers of six French workers during the 2000s. The workers are classified according to what their most recent change in employment reveals about the knowledge economy: their involvement, their withdrawal or their exclusion. The final part examines these careers with a view to discovering what skills are valued in the knowledge economy and to acknowledge the skills that the workers have used in their jobs, both throughout their careers and, more especially, during their most recent change in employment.

The economy and knowledge workers

There is now a substantial body of literature on the knowledge economy which straddles the fields of economics, business administration, social psychology and adult training (Houghton et al, 2000, Brinkley et al, 2009). Some authors have posited a very limited definition which refers to data handling and to those who are employed in this domain (mainly IT workers and IT consultants). Others have compared the newer knowledge economy with the older industrial economy and found the latter to

\(^{2}\) COI2006: Organisational Change and Information Technology. The survey can be found at: http://www.enquetecoi.net/. It is a combined company/employee survey whose aim was to record the organisational and technological changes implemented by French companies and their impact on the workplace.

\(^{3}\) DARES, Direction de l’Animation de la Recherche, des Études et des Statistiques du Ministère du Travail, de l’Emploi et de la Santé (Ministry of Labour, Employment and Health), CNAM, Conservatoire National des Arts et Métiers, a higher education and research institution to which the Laboratoire Interdisciplinaire de Sociologie Economique (Interdisciplinary Laboratory for Economic Sociology) is attached.
be a relic from the past. If, however, we accept that the knowledge economy is not only founded on telecommunications networks and the dematerialisation of transactions, but also on the full gamut of production and transformation processes that lead to the diffusion of information and knowledge, we can see that it covers an extremely broad range of current human activity. In particular, the knowledge economy contributes to an organisation’s flexibility and performance through the creation of a variety of management tools. These tools are associated with the high performance work organisation model (Osterman, 1994), a model which is noted for combining IT tools, organisational tools and human resource management tools.

When investigating workers in the knowledge economy, a significant number of researchers have endeavoured to demonstrate that both working patterns and professional identities amongst IT consultants in IT services companies follow specific patterns. Other professions have likewise been put forward as especially representative of new professional identities: freelance journalists, electronic games designers, artists, etc. If we adopt the typology employed by Reich⁴ (1991), these professions could be characterised as those held by symbolic analysts. Their work is associated with the use of specialist knowledge and the development/maintenance of new markets and new activities. In 2001, Stone (quoted in Marsden, 2004:36) identified the emergence of a ‘new psychological contract’ in which the employment relationship can be characterised, amongst other things, by three features: employability rather than job security; job opportunities accessed via professional networks rather than via promotion; and pay based on the demands of the market rather than on seniority.

Although some workers specifically represent the knowledge economy, or could be considered to belong to its core, it seems likely that once information technology extends across all human activity, its workplace impact will also extend across the board. My premise is that the spread of information technology has created a situation whereby all companies, either as producers or users of the technology, are affected by the knowledge economy and that this has engendered flexible patterns of organisation. All workers are affected, either because they are fully engaged in knowledge economy activities or because their employer has embraced information technology and adapted its organisation accordingly. There currently exists no occupational category which has been spared the need to use a screen of some sort or, indeed, the access to networks that this screen provides.

The professional careers of the six workers
The approach adopted in this paper to the analysis of which knowledge economy skills are valued is novel in two respects: first, it does not start out from an *a priori* definition of sectors of activity or of workers included in or largely affected by the knowledge economy, such as symbolic analysts; and second, the goal is to examine particular instances in a person’s professional career i.e. changes in the person’s employment that can be set within the overall context and course of that person’s career. This focus on

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⁴ Reich distinguishes three categories of worker: routine workers, personal service workers and symbolic analysts (whose influence rises in tandem with the spread of information technology).
the course of a person’s career leads to an understanding of the choices made by that person and to a characterisation of the person in terms of this progression in relation to the knowledge economy – whether fully involved, looking to withdraw or excluded.

The professional careers of the six workers studied here have been selected on the basis that two workers fall into each of the three previously-defined categories (involvement, withdrawal and exclusion). This categorisation of the workers derives from the examination of their career trajectories, particularly the point of arrival i.e. the most recent job and the manner in which this situation was reached. The choice of this group of workers from the thirty interviewees can be justified by the fact that the career of each of these six people features the greatest number of elements relating to their particular category.

Jonathan and Armand are the two workers whose professional careers and employment demonstrate a successful integration into the knowledge economy. In contrast, Claire and Edouard both chose to withdraw from the knowledge economy, whereas Antonio and Catherine were unemployed after 2006 and hence excluded from the knowledge economy.

The two workers who were actively involved in the knowledge economy (Jonathan and Armand)

Jonathan, aged 32 in 2008, qualified as an engineer in 1999. He studied for an additional year in Silicon Valley, California and was awarded a Master’s degree. Afterwards he worked as firmware engineer in a US network processor company. In October 2001 he was made redundant after a crisis in the telecommunications market and returned to France. He was then hired as a firmware developer by an IT services company which quickly placed him with a client for 15 months. The rapidly-growing company purchased other businesses and opted to specialise in particular areas. Jonathan’s 15 months with the client were extended, even though he was of the opinion that his work was complete. He became bored. After a short spell between placements he began a new project with a new client.

In 2006 he travelled to the USA in connection with this project and had talks with a US telecommunications company who were keen for him to be their contact in Europe. He then sought advice from his former American employer. This job offer came at just the right time because Jonathan had begun to question the direction his career was taking and was considering resuming his studies (an MBA). He was fully aware that while he remained at the IT services company the technical side of his work would always be limited and that he was unlikely to see any progression in his career or salary. Once his mind was made up, he had to contend with the legal implications of changing to another employer: the non-competition clause in his current contract and the particularities of US employment contracts. He took advice from a legal advisor who also happened to be a family friend. He then chose to resign from his current post and signed the contract on offer.

5 This was an IT consulting company which places its employees (young IT professionals) in client companies. This creates a triangular employment relationship (employer-employee-client) and represents a form of externalisation of the workforce for the client company.
In his new job as a field application engineer, Jonathan had responsibility for pre- and after-sales support. His line manager in Boston was the sales director for Europe. The company structure was relatively flat and he appreciated being able to meet his director on a regular basis. After being supplied with specific communications equipment by the company, Jonathan was able to work from his Paris home. He travelled frequently to the USA and around Europe and his schedule was completely flexible. He averaged 50 hours per week, including weekends and evenings (necessary due to the time difference). His higher salary (€90,000 euros per annum) combined a fixed portion and a variable portion of 30%, based on the achievement of quarterly targets. Pressure of work arose from the need to meet client deadlines; any dissatisfaction stemmed from a lack of direct day-to-day contact with colleagues and from stress, especially on recruitment, when his desire to please his employers caused him to have high blood pressure.

Armand, aged 38 in 2008, obtained a Master’s degree in 1993. In 1994 he found his first job in a marketing agency engaged in setting up commercial networks and sales promotion activities. His initial task was to create a client base and organise a commercial strategy for the agency. At the end of the 1990s, together with an associate, he launched a start-up business specialising in online loyalty cards. The start-up was sold a year and a half later to a large French commercial group looking to develop this activity. Because Armand was an expert in building up customer loyalty, the group employed him to establish services in both the French and international markets. An internal service company was created by the group to meet this objective. Job pressure came from client expectations and deadlines; these required the sacrifice of an occasional weekend or evening. Armand benefitted from a number of perks: a good salary, a company car, a fuel card and stock options, but he began to grow weary of this overly secure environment. His dissatisfaction mounted, because, according to him, it was difficult to make a profit or to remain competitive when 70% of the added value was going to the sub-contractor (service company). As he pointed out: ‘We didn’t have the right business drivers.’ The problem arose from the fact that the company, rather than moving towards a client-based culture i.e. a Business to Business (B2B) approach, had preserved its credit-based culture.

In 2006, Armand was headhunted. He had been noticed by the managers of an SME6 whom he had met two years previously at a business fair. These managers were shareholders in a family business which employed 150 staff and which focused on customer loyalty services. He accepted the post of commercial development director for this SME, whose headquarters were near Bordeaux, in the south west of France. He also arranged to continue working at his home in the outskirts of Paris where he created a designated workspace with the appropriate communications equipment. He often travelled to canvas clients and visited the Bordeaux company once a month. Because the company was largely dependent on a single major client, his remit was strategic, consisting of building a client portfolio. He was directly responsible to general management and his working week was entirely flexible. He continued to work hard, but appreciated being able to help his children in the evening with their homework.

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6 Small or Medium sized Enterprise (in France these can have up to 499 employees).
before continuing his own work after 8.30 p.m. He described his situation as ‘life’s perfect harmony’.

**The two workers who withdrew from the knowledge economy (Claire and Edouard)**

Claire, aged 41 at the time of the interview, possessed a BTS* (Brevet de Technicien Supérieur) specialising in sales. She had been employed for 14 years by a US group whose core business was networks and in 2006 she had decided to voluntarily opt for the company’s offer of a redundancy package. She had initially been in charge of marketing support before taking on responsibility for internal corporate messaging throughout France, a post she held until her departure.

The sale of her company’s commercial networks branch to another US multinational encroached on her professional environment. Successive reorganisations created a tense atmosphere in the company. Claire’s responsibility was internal communication, but the content of this communication was becoming more and more at odds with the daily reality, making her position increasingly untenable. Although relatively untouched by the initial restructuring, her job changed during subsequent reorganisations. Without any formal notification as such, her annual targets were altered. She was now expected to spend 80% of her time on invoicing and 20% on communication, when previously her time had been organised so that 80% was allocated to communication and 20% to invoicing/accounts administration. This made it clear to her that she was being surreptitiously shifted towards another role, one which would be less satisfying than her previous work.

After both she and her husband had considered the options, she decided to take advantage of the company’s collective redundancy plan (*plan social*). She was pregnant with her third child at the time. Her redundancy package enabled her to complete her training in Feng Shui and geobiology*, confirming her reconversion to a totally different field of expertise. At the end of her maternity leave she planned to work independently as a space design consultant for businesses and private individuals rather than return to full-time work as a company employee.

Edouard, an IT engineer aged 34, had spent seven years in a large IT services company. This was his first full-time permanent post (*CDI*). Holding a Master’s degree in physics, he was recruited during the dotcom boom of 2000. He was given some basic training in Unix and placed with a client immediately afterwards. This first placement was at a large French car manufacturer and his work centred on

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* A two year course which is equivalent to a Higher National Diploma in the UK
* In French employment law a *plan social* is a negotiated settlement between trade unions and companies with over 50 employees which sets out the compensation for workers in the form of a collective redundancy plan (covering ten workers or more) and may include: job transfer, job reclassification, reconversion courses, individualised help with job hunting, etc.
* Feng Shui is a Chinese art form which aims to harmonise the energy of a place in such a way that it boosts the health, wellbeing and prosperity of its occupants. Geobiology is the study of environmental influences on a human being.
* In French employment law a *CDI* (Contrat de travail à Durée Indéterminée) or permanent contract is the ‘standard’ job contract. However the *CDD* (Contrat de travail à Durée Déterminée) or fixed period contract is now becoming the norm for new contracts, especially for young people.
computer-assisted design applications. He then completed two other placements in very different environments.

His employer, the IT services company, was constantly restructuring – buying, selling and writing off other businesses. This instability led to a high level of internal staff movement. Edouard’s line manager changed on at least five occasions without Edouard necessarily being informed. He finally found himself out of synch with the company, even though the aim of the reorganisation process had been to match the skills of the engineers to their particular departments. The company stopped offering him either placements or training that would enable him to meet the needs of client companies. Dissatisfied with the conditions and the nature of his job (8 months before leaving his job in May 2006), Edouard now began to think seriously about a professional reconversion. He chose to turn his back on IT and move into the care sector.

Terminating his employment took a considerable amount of time and involved two lengthy steps. At the beginning the company wanted him to resign. Then they attempted to release him, using as official justification the fact that he did not have a placement with a client. With the backing of family and friends, and information obtained from online forums, he was able to negotiate a settlement with higher severance pay than the minimum that would have been provided by the law. He was also entitled to unemployment benefit. During his period of unemployment he sat the yearly entrance exam for a school of speech therapy and was awarded a place at his second attempt. In September 2007 he began a four-year unpaid hospital-based ‘certificate of competency in speech therapy’, a decision which could not have been achieved without the support and sacrifice of his immediate family.

The two workers who were excluded from the knowledge economy (Antonio and Catherine)

Antonio, aged 34 in 2008, with a Master’s graduate in organic chemistry, had been hired by a small IT services company in anticipation of the dotcom boom of 2000, a company set up in the 1980s by two associates. This was Antonio’s first job and the company spent several months training him in Cobol. He was then quickly placed with France’s large railway operator as an analyst programmer in Cobol. He was part of a small team of about fifteen people in the tax division who worked well together. Unfortunately he fell ill and was forced to absent himself from work for a period of two years. His illness left him incapacitated and, on his return to the company, he had to reduce his working week to a maximum of 80%. He was, however, still capable of fulfilling his tasks as before and his employers were loath to part with him. They trained him in Java and placed him part-time in another client company.

During this period the IT services company was taken over by a Belgian group. Then in 2006 the CEO/company founder retired and the company was bought by a group from the USA. There were two immediate consequences of this purchase: the sidelining of the older members of the work team and a more aggressive pursuit of profitability. Antonio felt under pressure in this environment because of the new demands. He was no longer being offered any placements, he was ‘between contracts',
and, along with others like him who were being nudged towards the exit sign, every
day he was obliged to make an appearance in a conference room at head office. The
company wanted him to resign, but Antonio finally managed to negotiate a 'dismissal
for personal reasons'\textsuperscript{11} that enabled him to receive unemployment benefit. The official
reason for the dismissal, 'professional shortcomings,' affected him considerably because
he had never been incapable of carrying out his professional duties.

The dismissal represented the beginning of a difficult time for Antonio. Not only
was he unable to find another job (for the purposes of recruitment, his disability would
become an important non-selection factor\textsuperscript{12}); he also had to contend with family
problems that had a bearing on his self-confidence (his father had just died). In 2008
his right to unemployment benefit came to an end and his career plans lacked any
substance.

Catherine, aged 48, attended a secretarial school and obtained a professional
diploma in 1979. Until the end of 1983 she took on short-term secretarial contracts\textsuperscript{13}
in various companies. After the birth of her third child she gave up paid work until
1995. At that time one of her friends became seriously ill and had to stop her work
as a home-based dressmaker. Catherine decided to pick up where her friend had left
off and was hired by the company to make flags. This company was a small family-
owned subcontractor which put together lorry covers and banners for French vehicle
manufacturing companies\textsuperscript{14}. Catherine had to buy her own equipment and supplies: an
industrial sewing machine, a vehicle to transport the boxes of flags, etc. She also had to
organise her home working environment by herself. Her working week was completely
flexible (this suited her because she now had four children), but her hours ebbed and
flowed with the level of demand, at times becoming very intensive and forcing her to
work nights, weekends and public holidays. Her husband and children helped her fold
the flags (up to five metres in width) which literally invaded their home. One advantage
was that she received a fixed national minimum wage no matter how many hours she
worked per week.

After 2000, the orders started to dry up. In 2004, the company tried to increase
productivity by stepping up the output from one flag every seven minutes to one every
five minutes, but this target was unrealistic, so much so that offshore outsourcing
became unavoidable. In 2006, production moved to China and the immediate
repercussion for Catherine was that she no longer had any work. Rather than terminate
her contract, the company wanted her to be available for periods of increased activity,
but she would only be paid as and when required. She therefore requested redundancy

\textsuperscript{11} In 2006 French employment law provided for two types of dismissal: dismissal for personal reasons
at the company's initiative (employee-related reasons) and dismissal on economic grounds at the company's
initiative for an individual worker or group of workers (company-related reasons).

\textsuperscript{12} We can assume that Antonio's disability acts in the same way as age for employees aged 50 and
over i.e. as long as they are maintained in a particular job and they remain in a particular company they will not
fall victim to discrimination. Once they move outside of these boundaries however, age (and hence disability)
become a reason for non-selection during the recruitment process (Berton, 2007).

\textsuperscript{13} Temporary work places the employee in a triangular employment relationship (employer-employee-
client company) and represents a type of externalisation of the workforce for the client company.

\textsuperscript{14} In order to fully grasp the context, it is important to note that Catherine lives in the north of France, a
region where the mining and textile industries have suffered from successive economic crises since the 1970s.
and, in a bid to ensure that her overtime was recognised and that the redundancy package would allow her to claim unemployment benefit, she was supported by a member of the CGT\textsuperscript{15} trade union at a meeting with her employers.

Catherine signed on at her local Job Centre with the intention of finding an identical arrangement with another company, but the company concerned was located too far away from her home. She began a probationary period (which did not lead to anything) as a production line worker in a tent-making factory. At the end of 2008 she was no longer entitled to unemployment benefit and regretted having aggravated her former employers by calling in a union representative from the CGT\textsuperscript{16}. She was unsuccessful both in her attempts to have her overtime recognised and in her application for a job in the company’s tarpaulin workshop via the Job Centre.

### The characteristics of professional careers and the resulting skills

Tables 1-3 shows an analysis grid to highlight the skills acquired for these workers’ particular jobs. This professional careers grid includes information on the following five areas: the overall context and course of the person’s career; the main resources deployed by the worker, especially during a period of transition; the status of the employment relationship; the pay arrangements; and the working conditions. These criteria replace the classic criteria used when examining the course of a career as part of an employment relationships analysis (job status, salary level and working conditions).

My starting point is the notion that workers’ skills represent individual and collective resources that are drawn on during the course of their careers\textsuperscript{17}. These skills, as inferred from the analysis of the respective careers, are not only limited to the technical side of the job. The technical side relates to a specific profession and comprises the tools and techniques that are applied and the rules and procedures that are followed. It is an expert domain. However two other aspects of skill are also important for our understanding of the resources that a worker draws on: the organisational dimension and the relationship dimension.

These dimensions go beyond technical expertise and learning: they have an impact on a person’s actual position in the organisation and his or her ability to perform. The organisational dimension equates to the material and human means necessary to undertake a job and is over and above the worker’s own organisational capacity. The relationship dimension equates to methods of cooperation with the company’s internal and external participants. What skills were crucial to a continued involvement in the knowledge economy? What skills (or lack of skills) led to a withdrawal? Finally, what skills (or lack of skills) led to exclusion?

\textsuperscript{15} CGT (Confédération Générale du Travail) is the French general workers’ trade union, which has traditionally represented the interests of the industrial working class.

\textsuperscript{16} From the perspective of social relations in France, the CGT is regarded as a union which advocates class struggle by employers in traditional sectors.

\textsuperscript{17} The majority of authors (Le Boterf, 1994; Ropé & Tanguy, 1994; Scallon, 2004) agree that individuals’ skills reflect their ability to deploy a range of resources, attitudes, knowledge and know-how as effectively and efficiently as possible when dealing with complex situations.
The workers actively involved in the knowledge economy: complex employment relationships, flexibility, ongoing professional network

Table 1: The careers of those workers actively involved in the knowledge economy

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Jonathan</th>
<th>Armand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context and course of the person's career</td>
<td>Progression, no break, no period of unemployment, widening remit and increased responsibility</td>
<td>Progression, no break, no period of unemployment, widening remit and increased responsibility</td>
</tr>
<tr>
<td>Resources</td>
<td>Professional network, Former US employers, Legal advisor</td>
<td>Professional network, Headhunter</td>
</tr>
<tr>
<td>Pay arrangements</td>
<td>Job 1: fixed and variable component, Annual assessment interview, Job 2: fixed and variable component, Quarterly targets, direct link between salary and the achievement of objectives</td>
<td>Job 1: fixed and variable component, Job 2: fixed and variable component (based on targets), direct link between his salary and the company's turnover</td>
</tr>
<tr>
<td>Working conditions</td>
<td>Job 1: project based, team work, placements, informally supervised by less experienced colleague, no contact with management hierarchy, no contact with union, no possibility of career advancement, pressure from client demands and deadlines, Job 2: at home, personal communications equipment, freedom to organise working week, direct responsibility to the commercial director in Boston, heavy workload, pressure from client demands and deadlines</td>
<td>Job 1: project-based, flat structure, work teams, objectives unclear, pressure from client demands and deadlines, office in the centre of Paris, transport problems, Job 2: at home, personal communications equipment, freedom to organise working week, direct responsibility to the management group in Bordeaux, pressure from client demands and deadlines</td>
</tr>
<tr>
<td>Summary</td>
<td>His career and his passion for his job (telecommunications) were the driving forces behind his mobility.</td>
<td>His career and his passion for his job (loyalty programmes) were the driving force behind his mobility.</td>
</tr>
</tbody>
</table>
Both these workers involved in the knowledge economy can be characterised by their desire to have a career. They were not prepared to accept their paths being blocked. They were able to take initiatives to further their careers and to negotiate employment contracts that allowed a more egalitarian contractual relationship as opposed to a subordinate relationship. These two workers also demonstrated their passion for their particular domain: telecommunications in the case of one, loyalty programmes in the case of the other. They topped up their high-level technical capabilities via training courses (VoIP, Linux and Wi-Fi for Jonathan; negotiation and management for Armand). They showed a strong commitment to their jobs (they did not keep a note of the number of hours they worked per week); their motivation stemmed from an enjoyment of the work and from the fact that pay was performance related. They were also capable of responding to market constraints (they were motivated by financial performance indicators).

At an organisational level, both worked in the provision of services. They could manage their employment relationships within a complex environment (triangular for Jonathan; overlapping roles in a group and subcontracting relationships for Armand). Their skills were matched to specific results-based projects (their work was assessed according to results), the implication being that they could withstand client/deadline pressures (as opposed to hierarchical pressures). In this respect, they illustrated complete autonomy in how their work was organised and how they managed their time. Their most recent jobs showed that they could also work at home, relying on personal communications equipment to maintain a permanent connection with the outside world. They spoke (and were capable of speaking) English at work and had to undertake (or be capable of undertaking) a large number of national and international/intercontinental trips.

At a relationship level, each retained their professional contacts in a way that was perfectly natural and even expected in their sphere of activity. This ability to assimilate into a professional network of varying size was one part of their professional identity. It helped them build a reputation in the professional milieu and played a vital role when they were searching for a new job. Both workers effectively belong to a professional market (Eyraud et al., 1990; Marsden, 1999) where a person’s skills influence his or her mobility and represent his or her worth on the job market. In the workplace they were capable of participating in temporary, multi-sourced, multi-professional teams that did not observe any hierarchical structure. On this point both insisted on their desire to have a direct contact with the management of their company, on the one hand underlining their rejection of a hierarchical structure deemed cumbersome and demotivating and, on the other, their intention of staying abreast of the company’s strategic decisions. They did, however, hold trade unions in low esteem and considered them to be of absolutely no value as a potential resource.

Numerous workers in France, especially those who are highly qualified, perceive union action as being about the defence of the working class. The findings from the REPONSE (Relations Professionnelles et Négociations d’Entreprise) survey 2004-2005 (Amossé, 2006) show that French employees have kept a distance from institutional dialogue and that staff representatives do not appear to meet their expectations.
**The workers who withdrew from the knowledge economy: no particular propensity for strategic development, awareness of interpersonal relations and human wellbeing**

Table 2: The careers of those workers who withdrew from the knowledge economy

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Claire</th>
<th>Edouard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context and course of the person's career</td>
<td>A break in employment arising from voluntary redundancy and leading to a professional reconversion – care sector (space design management)</td>
<td>A break in employment arising from voluntary redundancy and leading to a professional reconversion – care sector (speech therapy)</td>
</tr>
<tr>
<td>Resources</td>
<td>Family members, Legal advisor, Trade union</td>
<td>Friends, Family members, Forums and websites, Staff representatives</td>
</tr>
<tr>
<td>Status of employment relationship</td>
<td>Permanent contract, Plan to become independent</td>
<td>Permanent contract, triangular employment relationship, Plan to become independent</td>
</tr>
<tr>
<td>Pay arrangements</td>
<td>Fixed salary, 35 hours, Annual appraisal interview</td>
<td>Fixed salary + variable component, 35 hours, Annual appraisal interview</td>
</tr>
<tr>
<td>Working conditions</td>
<td>Under a line manager, Very rigid work structure, Decreasing autonomy, Low levels of stress, except during certain periods</td>
<td>Organised into project teams, managed by a commercial representative, Rotating teams: people rotation within the teams, Teams composed of company employees and outside specialists – flat structure, Vertical relationship with suppliers and service users, Adherence to client deadlines, Autonomy at work, No stress, Flexitime, Placements located far from home</td>
</tr>
<tr>
<td>Summary</td>
<td>The feeling that she was only a pawn in a large organisation motivated her reconversion</td>
<td>The feeling that he was only a pawn in a large organisation motivated his reconversion</td>
</tr>
</tbody>
</table>
Both the workers who extracted themselves from the knowledge economy were united by their refusal to accept the working conditions of large, financially-driven, target-driven, companies, which were in a semi-permanent state of restructuring. The inherent instability caused by this repeated reorganisation did not provide either of them with suitable working conditions. The buffeting they experienced seemed to loosen their hold on the job they had originally chosen to do and was a prime motivator in their reconversion towards a job without hierarchies where face-to-face contact and caring for others were of paramount concern.

These two workers were each competent in their respective area of expertise: communication in Claire’s case and CAD for Edouard, and were capable of maintaining their skills through further training. They worked in different organisational contexts. Edouard was employed by a services provider, requiring him to be self-reliant in terms of organisation and time management (the ability to cope with a triangular employment relationship, varied project-oriented tasks, results-based accountability and pressure from deadlines and clients). Claire worked in a classic employment relationship which she described as becoming increasingly controlled by edicts from her company’s US headquarters. Both struggled to find their place after reorganisation. They did not resort to skills that would help them navigate through their changing environment. They were of the opinion that their respective companies had not treated them correctly. Edouard, unable to adapt to the changing demands of his workplace, considered that his employers had failed in their duty to retrain him. Claire, confronted by a modified job description, felt that she had been deceived by her employers.

These criticisms of the world of work reinforced their desire to regain the initiative in their professional lives and make what they termed ‘a life choice’ i.e. a move towards the care sector and face-to-face contact with people. Their decision, which would necessitate sacrifices in terms of earnings, was made in consultation with family members and, over and beyond the urge to help others, was in keeping with their aspiration for richer personal development. Their willingness to give up a relatively well-paid job (a success criterion for social recognition) in the pursuit of one’s own development and the wellbeing of others is a specific skill that relates to this category of workers.

The workers excluded from the knowledge economy: isolation and lack of professional network

Both the workers excluded from the knowledge economy share the fact that their job prospects evaporated after a break in employment in 2006. Why was this case?

The two workers had not lost any of their skills. On a technical level, both had proven their ability to acquire new techniques: new languages and IT systems for Antonio, industrial sewing learned on the job for Catherine. On an organisational level, they had also acquired the ability to adapt to new environments: a range of assignments for Antonio; time and organisational management at home for Catherine. They could adjust to the external constraints and deadlines imposed by a project (Antonio) or by the need to fulfil an order (Catherine). Both had demonstrated their organisational autonomy and both had the capacity to work as a service provider. It is interesting to note that Catherine’s working conditions were similar in many respects to those of...
Jonathan and Armand (working at home; pressure of orders) and yet the production environment in which she conducted her activity was very different.

**Table 3: The careers of the workers excluded from the knowledge economy**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Antonio</th>
<th>Catherine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context and course of the person's career</td>
<td>Break in employment which led to incapacitation between 2002 and 2004</td>
<td>Break in employment related to children's education between 1983 and 1995</td>
</tr>
<tr>
<td></td>
<td>Break from employment related to job loss in 2006</td>
<td>Break from employment related to job loss in 2006</td>
</tr>
<tr>
<td>Resources</td>
<td>Family members</td>
<td>Family members</td>
</tr>
<tr>
<td></td>
<td>Legal advisor</td>
<td>Trade union</td>
</tr>
<tr>
<td>Status of the employment relationship</td>
<td>Permanent contract, triangular employment relationship</td>
<td>Temporary work, triangular employment relationship, Task-based permanent contract</td>
</tr>
<tr>
<td>Pay arrangements</td>
<td>Fixed salary + variable component</td>
<td>Fixed salary</td>
</tr>
<tr>
<td></td>
<td>Minimum wage</td>
<td>Minimum wage</td>
</tr>
<tr>
<td>Working conditions</td>
<td>Assignment based</td>
<td>At home</td>
</tr>
<tr>
<td></td>
<td>Long term placements with company's clients</td>
<td>Isolated, relationship with work limited to one person in the factory</td>
</tr>
<tr>
<td></td>
<td>Participation in client company's teams</td>
<td>Responsible for her own equipment and supplies</td>
</tr>
<tr>
<td></td>
<td>No stress</td>
<td>Free to organise her working week</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure related to meeting orders on time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deadlines absolute and variable</td>
</tr>
<tr>
<td>Summary</td>
<td>Break in employment (2006) was serious because it has led to no job openings</td>
<td>Break in employment (2006) was serious because it has led to no job openings</td>
</tr>
</tbody>
</table>

We have to look elsewhere to understand the reasons for their disqualification. Both were isolated; this was self-evident for Catherine, who worked on her own (no work colleagues) and had very limited contact with the company, which prevented her from understanding how it was organised. If she had been more involved in the company she probably could have been better advised and supported when she arranged the meeting with her employers. Her company was far from being defunct, even if it appeared to be trapped in the older manufacturing economy. It had constructed its identity from a hundred years of know-how and had diversified its activity by exploiting the benefits of
the knowledge economy. Globalised trade and information technology had allowed it to relocate the simplest elements of its production processes to China. An explanation for Antonio’s isolation is more difficult to pinpoint. It stems, perhaps, from two causes. First, his disability set him apart from other workers, because, although he was as technically competent as ever, he could no longer work full-time (far from the norm for an IT consultant). Furthermore, his company changed hands, bringing with it a new management team who laid down stricter objectives and reorganised the work teams. Antonio did not talk about his professional relationships, either when he was seconded to different businesses to work alongside workers from other companies or when he was back at his own company. He mentioned other consultants, who like him, were pushed out by the new management team, but he does not appear to have retained any contact with them and was not part of an ex-employees’ network.

It seems that the main problem for both of these workers lay in the fact that they were not part of one or more professional networks. Now that professional networks are no longer readymade, it is up to the individual worker to develop a network and keep it up to date. The creation and maintenance of one or more professional networks has become standard practice in professional life. Professional networks represent resources which workers can call upon at any given moment. The characteristics of professional networks vary and depend on the individual’s social status and personal situation. The role of working relationships or former working relationships in finding a job illustrates the strength of weak links (Granovetter, 1995)19. In addition to the ability to create and maintain a professional network, it is important to know the purpose of this network. Antonio and Catherine’s career paths also highlight the difficulty they had in seeing their work in terms of professional development, yet an employee’s ability to self-manage has become an important trait in working relationships.

From the moment Antonio and Catherine became unemployed, they could no longer develop their skills in a work environment. This was despite the fact that their respective Job Centre s funded additional training: Antonio completed a course in Java and Catherine followed a course in office tools. In the absence of any professional environment, these achievements had no noticeable impact on their hunt for a job (by the end of the interview period).

There is a divergence between the proven skills held by the workers in each of the three categories. They all had different levels of technical skills and they maintained these skills via training, therefore it is not the technical dimension which distinguishes each group. What is specific to the workers who withdrew from the knowledge economy relates to the organisational level: they did not show an inclination to play along with their organisation’s strategic games. The workers who were excluded from the knowledge economy can be characterised at the relationship level: not being members of a professional network revealed the lack of planning evident in their professional lives.

19 According to Granovetter, in the process that matches workers to jobs, the proportion of people that find a job without actively searching for one varies between 30 and 60% depending on the place and the period of time. In cases where workers are not actively seeking work, the great majority nevertheless find a job via personal contacts (Granovetter, 1995:140-146).
Conclusion

This paper has analysed the professional careers of French workers in the 2000s to identify the skills applied by these workers and hence to reflect upon the skills which are valued by the knowledge economy.

The diffusion of information technology has led to all companies being affected by the knowledge economy, in their capacity as producers or as users. Being part of the knowledge economy affords access to flexible methods of organisation. All workers are also affected, either because they are fully engaged in knowledge economy activities or because their company has embraced information technology and adapted its organisation accordingly.

On examining the professional careers of French workers during the 2000s, it is apparent that some have invested themselves wholeheartedly in the knowledge economy, some have attempted to withdraw from it and others have clearly been excluded from it. The first group demonstrated an ability to handle complex employment relationships, to show substantial flexibility in their hours and place of work, and to maintain a professional network and up-to-the-minute personal communications technology, whereas the other two groups neither possessed these abilities nor wished to acquire them. Those who decided to opt out of the knowledge economy mainly did so because they were disinclined or because they were reluctant to adapt to a large organisation undergoing restructuring. A move towards the care sector via professional reconversion highlighted their awareness of interpersonal relations and human wellbeing. Those who found themselves frozen out of the knowledge economy were recognisable by their isolation, their inability to retain a professional network and the difficulties they encountered in envisaging the next step in their careers.

This article, which has avoided focusing on either a particular sector of activity or a particular professional group, based its methodology on the analysis of progression in professional careers, exploring, in particular, what this tells us about the effectiveness of this progression when a person changes jobs. It has not only shed light on the skills that are valued in the knowledge economy through the examination of the skills of those workers who withdrew or were excluded from this economy; it has also shown that nothing is set in stone e.g. the fact that both Edouard and Antonio worked as IT consultants in IT services companies did not bring about a successful integration into the knowledge economy.

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REFERENCES


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