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NEW TYPES OF CAREERS IN THE KNOWLEDGE ECONOMY?

NETWORKS AND BOUNDARYLESS JOBS

وأىاع جذبة يٍ أنواع جديدة من الوظائف في اقتصاد المعرفة؟
شبكات ووظائف باعتبارها BOUNDARYLESS AS A
CAREER STRATEGY IN THE ICT AND MULTIMEDIA SECTOR
التوظيف الاستراتيجية في قطاع تكنولوجيا الاتصالات والإعلام

by

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Canada Research Chair on the Socio-organizational Challenges of the Knowledge Economy
كرسي أبحاث كندا على التحديات الاجتماعية والتنظيمية من الاقتصاد القائم على المعرفة

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March 2003

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New Types of Careers in the Knowledge Economy
أنواع جديدة من وظائف في مجال الاقتصاد القائم على المعرفة

Networks and
boundaryless jobs as an career strategy in the ICT and multimedia sector

لاكاستراتيجي الوظيفي في قطاع تكنولوجيا المعلومات والاتصالات الوسائط المتعددة

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Diane-Gabrielle Tremblay is the Canada Research Chair the Socio-Organizational Challenges of the Knowledge Economy. She is professor and director of research at the
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She is a member of the Committee on Sociology of Work of the International Sociological Association, the Executive Council of the Society for the Advancement of Socio-Economics, as well as co-chair of the "social times and working times" committee of the Association internationale des sociologues de langue française. She is also president of the .française française. Association d'économie politique and editor of the electronic journal Interventions économiques. Also Co-chair of the Bell Canada Research Chair on Technology and work organization, professeur associé with Ecole nationale d'administration publique and UQAM, she has published many articles and books on employment and types of employment, job training, innovation in the workplace and work organizational topics.
New Types of Careers in the Knowledge Economy?

boundaryless jobs as an career strategy in the ICT and multimedia sector

Over the last few decades, many countries have found themselves in a context characterized by the spread of the knowledge-based economy (OECD, 1996; Foray and 1996; Gayral and
Lundvall, 1995; Soete, 1996; Storper, 1995).

The Knowledge Economy implies a far-reaching transformation of the labour market, particularly in terms of job mobility and career development (Christensen, 1989). In this context, careers are increasingly fragmented, and people are more mobile in the labour market, with social networks playing an important role in this job mobility as well as in professional development. Although not everyone is concerned by these developments, and there are some resistances to this change in work organization and careers, it is clear that some sectors, particularly the New Economy creative sectors (multimedia, New media such as digital video, tv and the like, ITC), are very
The developments are much concerned by these developments. This constitutes a considerable challenge for occupational development, since it used to be provided by the firm within internal labour markets and this can no longer be the case when people are more mobile. Now, especially in sectors such as ICT (Information and Communication Technologies) and multimedia, characterized by extreme mobility between firms, but also by a need for permanent professional development, the challenge for firms to capture strategic advantages presents itself in a new perspective.

In our view, these new careers, described by some as "nomadic" (Cadin, 1998; Arthur, Claman and De Fillippi, 1995; De Fillippi and Arthur, 1998; Hendry and...
Claman, and by others as "discontinuous"
organizations and organization theory.
Let us add that in terms of Communications and Strategies, the sector and the questions it poses are surely important, since they call into question the impact of the Communications sector and its developments in multimedia and ICT, as well as management strategies that in the ICT and multimedia industry. Our paper will dwell on the new types of careers developing in these sectors, highlighting a new form of work organization, which is more informal and rests
The new economic sectors characterized by mobility and nomadic behaviour present insights that can be useful in modernizing Work Organization and Career theories, although the new theoretical vision should be.

Clearly, the new vision would need to take into account new forms of learning, new forms of employment, and new forms of work organization that are observed and conclude with some questions which need to be addressed in the context of the development of ICT and multimedia and particularly as concerns careers and work organization of the future.

 وهما يبرز شكل جديد من أشكال تنظيم العمل، والتي هي أكثر رسمية، وتقع على عاتق العاملون في هذه القطاعات. الإجتماعيات التي وضعها العاملون في هذه القطاعات. نحن سنركز على هذه الأسئلة التي يتبعن مع بعض معالجتها في سياق تطوير تكنولوجيا المعلومات والاتصالات الوسائط المتعددة وخاصة فيما يتعلق الوظيفية وتنظيم العمل في المستقبل.

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careers offered by firms, aspirations of young workers in these sectors, etc. It also should take into account the specificities of networks of workers in the ICT and multimedia sectors, as well as the construction of careers of professionals and technicians who are at the core of the competitive advantage of the ICT and multimedia firms.

**New Types of Careers in the Knowledge Economy?**

**Networks and boundaryless jobs as an career strategy in the ICT and multimedia sector**

**Introduction**

During recent decades, Canada, like many other countries, has been exposed to what is known as the "knowledge economy". This term refers to the increased emphasis on knowledge and innovation as key drivers of economic growth. The concept of the knowledge economy emphasizes the role of networks and boundaryless jobs in fostering innovation and productivity. As such, understanding the dynamics of these networks and boundaryless jobs is crucial for businesses and policymakers in the ICT and multimedia sectors.
widely labelled the knowledge-based economy. This implies a far-reaching transformation of the labour market, particularly in terms of occupational training, mobility and career development. Careers are increasingly fragmented, with people having to move through an ever greater number of jobs, projects and firms during their lifetime, especially in sectors such as ICT and multimedia. Although not everyone is concerned by these developments, and there are some resistances to this change in work organization and careers, it is clear that some sectors, particularly the New Economy creative sectors (multimedia, New media and telecommunications, and some digital industries like digital video/television and the like, ITC), are very much concerned by these changes.

And yet there is some resistance to this new order of things. There is a whole body of work that seeks to maintain the old order. This work is often funded by the same forces that have exploited the old order, and it seeks to maintain the status quo. But it is clear that the knowledge-based economy is here to stay, and that we must find ways to adapt to it.

This does not mean that we should give up on the old order. We must continue to work to make the new order work for everyone. But we must also recognize that the old order is no longer sustainable. We must work to create a new order that is more just and equitable. This will require hard work and dedication, but it is necessary if we are to create a better future for all.

In conclusion, the knowledge-based economy is here to stay. We must adapt to it, or we will be left behind. But we must also work to create a new order that is more just and equitable. This will require hard work and dedication, but it is necessary if we are to create a better future for all.
We examined the transformations that were generated by this context, in terms of individuals' careers and their methods of learning and training. Learning and training are crucial to the new economy or Knowledge economy sectors which must continuously innovate and this explains our interest in this dimension. The new knowledge-based economy --of which multimedia is a part-- has a strong impact on the way the development of an organization's skills or competencies is envisaged, especially in the highly project-based ICT and multimedia sector (De Fillippi and Arthur, 1998) which involves high worker mobility.

Indeed, in these project-based sectors, the firm's intelligence is based on the quality of the "networks of skills" which form it and not on the...
skills of each of the employees (Le Boterf, 1994, p. 140) (Boterf، 1994، p. 140)، In this context, both individuals، (Le Boterf، 1994) (Boterf، 1994)، and، it would appear، the industry، develop skills through mobility، للمهارات من خلال التنقل، ومع ذلك، However، it is often not، فإنه غالبًا ما لا، easy for firms to integrate and especially to retain، من السهل بالنسبة، للشركات لدمج وخصوصا الإبقاء على الكفاءات، وبالتالي النامية، organizational learning that is so essential for، التنظيمي الذي لا غنى عنه للابتكار (الغزو و، Lundvall، 1995؛ Feutrie و Verdier، 1993)، Suppliers and subcontractors are increasingly integrated into the، الموردين والمقاولين من الباطن بصورة متزايدة الاندماج في، organization's network of competencies، which， المنظمة، شبكة من الكفاءات، مما يثير تحديات هائلة تتعلق إلى confidenciality of some projects and developments، but also relating to individual and، الحفاظ على سرية بعض المشاريع والتطورات، وإنما أيضا فيما يتعلق الفردية و، تطوير الكفاءات، collective competency development، Therefore، “the qualification and collective، الجماعية، والمؤهلات والكفاءات الجماعية لل، efficiency of the
firm largely depends on its ability to pool together different kinds of know-how, to manage the complex and heterogeneous knowledge that is distributed therein” (Le Boterf, 1994, p. 140).

This study questions how firms' collective competencies and efficiency can be developed and how highly mobile employees can learn in a non-unionized workplace. It considers how firms can better manage the complexity and heterogeneity of knowledge that is necessary for multimedia production and how some firms succeed, despite high mobility in the sector, in creating a capital of skills for themselves and in being regularly, if not permanently, innovative. It questions patterns for
the development of skills portfolios the role in the
context of new nomadic careers and poses the question as to whether these new patterns will prevail over the labour market.

Since the multimedia sector is a very moving sector, transforming itself and its activity regularly, with new technologies, but also with changes in the economic environment (important difficulties and downturns in the last 2 years), it is difficult to study, but it does seem important to do so in order to try to understand the evolution of work organization and careers in new sectors, that may well be significant in the future developments elsewhere, even if they are not yet dominant.

Also, in terms of Communications and Strategies,
New Types of Careers in the Knowledge Economy?

boundaryless jobs as an career strategy in the ICT and multimedia sector

The Communications sector and its developments in multimedia and ICT, as well as the evolution of labor economics (De Fillippi and Arthur, 1998), are calling into question many prevailing principles and theories of management and labor economics (De Fillippi and Arthur, 1998), for example, in labor economics, the

Research Question 2. 2. 2. 2.

ICT and Multimedia firms, through their emphasis on projects (Leslé and Macarez, 1998), are calling into question many prevailing...
advantages of closed internal markets for the creation and exclusivity of competitive advantages (Tremblay and Rolland, 1998).

Also, the theories of strategic management are based on the idea that firms develop “key skills” or key resources over the years. However, how can these key skills be developed in a context of high staff mobility and extensive exchange of information between computer analysts and other multimedia workers? How can tacit, informal knowledge be transferred without a core of stable and experienced staff?

This question appears to be particularly important given that mutual assistance and co-operation at work are vital economic factors for ensuring productive efficiency in the current economic climate.
A second argument of the theories of the firm and strategic management maintains that firms create their competitive advantage by possessing exclusively and using resources that cannot be imitated and reproduced. How can a firm create a competitive advantage for itself when the knowledge-based resources are integrated into individuals who are highly mobile and who participate in a firm's projects and then leave it to move on to other projects led by those who have shared in its projects? A third argument of these theories suggests that skills are accumulated through competition between firms in recruiting and developing the human capital that is needed for
How can this human capital be brought together, and which social and market processes will make it possible to identify, evaluate, select and, especially, retain this capital in order to complete projects?

Lastly, in this type of sector, a large part of learning the “tricks of the trade” is through observation (Jones, 1993, 1996; Jones and De Fillippi, 1996). In strategic management theories, it is argued that this “unproductive or lost time” (apparently lost indeed!) will translate into a return on learning that benefits the employer. However, in the context of project-based firms, the benefits that are derived from learning will often benefit other
projects and other employers or firms. This, therefore, is another issue to be examined in this study.

These new nomadic careers go against the model of the upwardly mobile career that is found in the models of internal labour markets, more specifically, the model of closed internal markets (Tremblay, 1997; Vernières, 1982), which was tightly controlled by a single firm and, in most cases, a single union.

الأهداف Objectives and Research Methods

Based on the perspective stated above, we examined the individual career paths of ICT and multimedia workers in order to determine whether or not they are really as mobile as is the model of internal markets (Tremblay, 1997; Vernières, 1982), which was tightly controlled by a single firm and, in most cases, a single union.

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said, since it is asserted by some that the mobility of workers in the new knowledge economy may simply be a myth. We thus considered the sources and methods of exchange of the activity, and then we considered the factors and the factors in the workplace and the factors that foster collaborative work, management, and the development of collective knowledge as well as the integration and creation of new techniques or innovative products.

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and learning, the current methods of collaborative work in workplaces and the factors that foster the current collaborative work, management, and the development of collective knowledge as well as the integration and creation of new techniques or innovative products.
Through a study of the work process, we also attempted to identify the sources of individual or collective learning in the organization and the way each employee's knowledge or the collective learning in the organization and the way each employee's knowledge is taken into account.

Lastly, we attempted to determine how, in the context of the new knowledge-based economy, the organization can develop individual and collective learning to the maximum in order to obtain innovations and a better performance or productive efficiency as well as the success of organizations.

We believe that the links between knowledge management and social networks largely determine productive efficiency or productive efficiency and therefore, the success of organizations.

Our research program thus involves analyzing these two dimensions and the factors mentioned above.
Our study is thus based on the following two fundamental dimensions: nomadic careers (Cadin et al. 2000) and the development of collective competencies (Le Boterf, 1994), but we will concentrate here on the first of these two dimensions. First, the concept of the nomadic career is introduced and situated in the theory of new careers. That can be made with the other dimension of the research will be set out. Second, the links that can be made with the other dimension of the research will be set out. For obvious reasons, the results observed will be presented, that is, the existence of nomadic careers in the multimedia sector, but also the evidence that other career models exist as well. We will explain how these new careers function, considering they are different from those of closed internal markets largely regulated by the unions.
However, let us begin by presenting the methodology of the study. Case studies were conducted in 18 firms where interviews were carried out with multimedia workers and also, as far as it was possible, with heads or managers of firms (it was possible in 12 cases). In the majority of firms, interviews were conducted with three or four employees, except in two cases where it was only possible to conduct one interview. In one case, this was due to the very small size of the firm (2 persons), and in the other case, it was due to problems within the organization which prevented us from pursuing the interviews. These interviews with individuals relate to their career path, their methods and sources of learning, their social
The interviews with the heads of organizations consisted in drawing up a profile of these organizations, finding out about the managers' career profiles, their method of managing knowledge and human resources and the results that they expect from their employees in terms of performance, learning and mobility.

On the second concept and its related analysis, refer to Tremblay (2002), Tremblay and Amherdt on the second concept and the analyses that accompany it; refer to Tremblay and Amherdt (2003).
We gratefully acknowledge the financial support for this study from Canada's Networks of Centres of Excellence (NCE) program (including SSHRC and NSERC), and especially to the Telelearning-NCE programme (1995-2002).

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In labour economics and management theory, careers have traditionally been analyzed from the perspective of the internal labour market or a large hierarchical firm that is most often unionized and in which blue- and white-collar workers climb up the hierarchical ladder.

الصفحة 7
النقبات التي زرقاء والعمال ذوي الياقات البيضاء الصعود في السلالم الهرمي لجعل مهنة. Horizontal and other types of mobility have not been addressed to the same extent because, among other reasons, they were traditionally viewed as lack of advancement and thus of career, and perhaps also because unions have strongly imposed the model of the ladder or closed internal market as a typical example of a career (Tremblay and Rolland, 1998). However, the concept of career has evolved in recent years (Amherdt, Amherdt, 1998; Cadin, 1998). Thus, a number of career theorists have begun to put forward a different vision of careers, and some of them have even referred to a new paradigm which challenges the prevailing paradigm of the upwardly mobile hierarchical career -- the “boundaryless careers” approach (Arthur and Rousseau, 1996), translated as
"nomadic" careers (Cadin et al. 1999) in French. It should be noted that the thinking about career transformation emerged out of the thinking about organizational transformation. In fact, scholars studied "boundaryless organizations" first (theme of the 1993 Academy of Management Conference, as noted by Cadin et al. 2000). Then, having observed the emergence of new organizational forms such as business networks and other forms of large hierarchical organizations, they began to look at the effects of these transformations on individuals and their careers. This follows the studies by Miles and Snow (1996), who were the among the main, if not the first authors to systematize thinking about the links between forms of organization and foramen.
Although other authors, in particular Chandler, have considered organizational forms, not many management scholars have examined the development of the organizational forms, and hence the relevance of Miles and Snow's studies (1996).

Economists and sociologists have certainly highlighted the rise in job precariousness associated with the new realities of the labour market, but there again, few authors have made the link between organizational form and career type, hence the relevance of Miles and Snow's studies (1996). As noted by Cadin et al. (2000: 77), Miles and Snow (1996) show that "for each organizational form, there is a corresponding set of particular career characteristics. To
overcome this determinism in which organizations
tempt on this choice, they envisage
in the organizations that they determine on employees, and they are tonotated
something quite different from the network or
or cellular form – in which it is the career which
mismatched completely on the network or cellular form or which
the organization or rather the
requirements to intensify learning that lead to an
reorganization.‖ (our translation of Miles
and Snow – original in English to be
the organizational redesign."
(our translation of Miles
and Snow – original in English to be
the organizational redesign."
..)
This seems to aptly apply to the
multimedia sector, as will be seen below.

In fact, while the traditional practices of
industrial relations
traditional practices of industrial relations
and personnel management were based on the
the notion of a specific job, which was in itself
and personnel management were based on the
the notion of a specific job, which was in itself
linked to a Taylorist vision of the organization, the notion of skill is essential as soon as it
pertains to the organization, even if it is not required. This involves models of flexible production or business
networks (Cadin et al. 2000). This vision is also part of the new visions of innovation.

While the traditional visions emphasize the importance of the R&D department in a large organization for developing innovations, the new activity sectors which are based more on SMBs (such as biotechnology and multimedia) bring out the fact that other organizational forms can also lead to innovation (Tremblay and Rolland, 1998). Thus, new theories of innovation (Le Bas, 1995) stress that it is possible to innovate through what some people have called “cross-
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pollenization,” that is, the exchange of knowledge and experiences that lead to an innovative process. Therefore, “the circulation of ideas and people activates innovation like a bee that gathers pollen from flower to flower.” (translation of Cadin et al., 2000).

In the nomadic careers approach, skills are viewed from a singular perspective and have been extensively redefined. Thus, according to Cadin et al. (2000), three different components are used to account for career conditions in a knowledge-based economy. Like
the “Resource-Based Strategy” approach, which identifies three components of the firm (core competencies, networks of partnerships and organizational identity), the nomadic careers approach makes the distinction between three components of competency which are continuously interacting with each other: 

1. Knowing how refers to knowledge, abilities and even acquired routines; 

2. Knowing whom implies privileged relationships, social networks and contacts; 

3. Knowing why takes into account interests, passions, values and identity construction.

Another important aspect of this approach highlighted by Cadin et al. (2000) is that it considers careers on the basis of different social spaces, communities of practices (Sharp,
scholars have always tended to analyze careers on the basis of the organizations' interests and requirements. This is perhaps normal since “career” has usually been described as upwardly mobile in large hierarchies which were generally governed by a set of rules negotiated by unions and managers, who tended to confine their analysis to the organization.

The new vision goes beyond this focus on the organization, opening up the understanding of careers, learning and identity construction, to many other informal communities with which individuals are associated and in which information, ways of seeing and the terms of the local communities that are linked to them and the organizations, and the relations of the industrial and commercial.

٠ىْٛ ٘زا ٘ٛ اٌّؼزبد ِٕز “إٌّٙ١خ” ٚػبدح ِب رٛطف ثأٔٙب upwardly mobile in large hierarchies which were generally governed by a set of rules negotiated by unions and managers, who tended to confine their analysis to the organization.

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things, ways of thinking, tricks of the trade or job opportunities are transmitted (Cadin et al. 2000).

It is in studies on business networks, especially networks of SMBs that this type of exchange and transfer have been observed, in particular the case of the Silicon Valley (Saxenian, 1995; Cadin et al., 2000).

This presentation of the concept of nomadic careers ends with a diagram that sums up the theoretical core and its related key concepts, based once again on the studies of Cadin (1995; et al. 2000: 79) .
The notion of experience is considered here not only in terms of assets but also in terms of knowledge management as suggested by Nonaka and Takeuchi (1995). These authors show that creation of knowledge requires successive phases of integration of knowledge, clarification of tacit elements, then re-internalization of the explanation (Tebourbi, 2000; Tebourbi, 2000; Cadin et al., 2000). The authors agree that the individual is not always aware of the knowledge that he or she has acquired as part of past experiences.

Nomadic career theorists divide the various assets mentioned above into “knowing how, whom and why.” Career capital results from an accumulation of career competencies, as defined above. Economists are familiar with the concept of human capital (Tremblay,
Tremblay and Rolland, 1998), but nomadic career theorists view the concept in its broader
meaning. Many scholars use the metaphor of the competency portfolio to underline the
freedom of the actor, the fact that he or she is continuously making choices, whether or not
they are aware of it. These choices are then translated into “competency effects” that are
derived from real-life experiences (Cadin et al., 2000). It is thus a circular flow originating
from experience to form career competencies, which create career capital, and which will
only make sense in a given institutional context.

The above are the main theoretical elements of nomadic careers on which this study and
the accompanying discussions are based.
the results from the analysis of our interviews with workers in the multimedia sectors are based.

**Taxonomy and Results**

As noted by Cadin et al. (2000), the nomadic or boundaryless careers approach refers to a constructivist interactionist paradigm which was used to consider the two objective and subjective dimensions of career. Thus, since the emphasis was on the images, the construction of meaning, and people's motivations in their career paths, a qualitative method and semi-structured interviews were retained. On the basis of our research goal, we chose the following elements of the career inventory:

- **Competencies**
  - Career competencies (knowing how, whom, and why)

- **Career Capital**
  - Career capital (human capital, social, cultural)
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adopted a process of semi-structured interviews and our questionnaire was based on the one used by Cadin et al. (2000), after discussions with the latter about developing a Quebec-France comparative study of the ...
interests -- learning and skills development

were added to the initial questionnaire used
by Cadin et al. (2000).

With regard to careers, past studies by Cadin et al. (2000), which examined a broader population rather than focusing on a single sector, gave rise to a taxonomy that groups together five categories of careers, based on the stacking method (Dubar and Demazière, 1997, cited in Cadin et al. 2000).

We also drew on this method to analyze our own interviews, with some of our cases being used as "examplars" or ideal-types for a category.

Each of the categories identified are defined by objective factors (the number of changes of
jobs and firms, the nature of the changes, and so on) and by subjective factors (professional

identities, the relationship to the work and the the

hebats , والعلاقإة إلى العمل

Cadin et al. (2000).)

The different groups of this taxonomy are presented briefly here.

The results of our paperwork and professional identity.

The first group includes traditional organizational careers described as sedentary. 

The career of these people largely takes place within one organization, alternating between upward and horizontal mobility in similar fields, depending on the opportunities that come 

up. (It will be shown that some heads of multimedia SMBs first started out in this type of 

WSRON أظهرت أن بعض رؤساء الشركات الصغيرة والمتوسطة 

WSAN متعددة بدأت لأول مرة في هذا النوع من
career before quickly deciding to “go into
the occupational field to the detriment of the job”.

The second group includes *migrants* or those who
move from one place to another or those who
move within an organizational perimeter.

They have always worked for the same firm but have
experienced fairly radical changes of environment
or occupation.

The third group includes *itinerant workers* or those
who move around according to the logic of the craft which is also referred to as the craft employment systems by labour
economists (see Tremblay, 1997; Osterman, 1987).

The career of these individuals is centred on a specific craft or activity sector and they often change employer in order to gain
more responsibility.

This group includes mainly professionals, in particular computer

analysts, but may also include some blue-collar workers. The fourth group is made up of cross-boundary workers or those who move back and forth between the organization and the market, that is, they move between the status of employee and self-employed worker.

They have greater autonomy in relation to the employer than the previous categories of workers. These individuals rely on organizational resources (relations, clients, etc.) to build up their career. Cadin et al. (2000) also listed technical skills among organizational resources, but in the multimedia industry, given the method of skills development, it seemed preferable to consider them as personal resources. Therefore, people who use personal resources as technical skills in their career will be seen
as belonging to the group of nomads, insofar as they are not strongly attached to the
groups and move around in the labour market with their portfolio of professional skills.

Lastly, the fifth group is made up of nomads or those who cross organizational
boundaries. According to Cadin et al.'s study, this might mean people who have been
unemployed for long periods of time, who have worked for different organizations for a short
period of time, and who are often self-employed workers.

This aspect is briefly addressed in this paper and is developed further elsewhere; see Tremblay (2002)
and Tremblay and Amherdt (2003) referred to above.
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The multimedia workers in our study are mostly found in the last three categories. Thus, the category of nomads was broadened to take into account people who are in one organization at a given time but who are ready to move on rapidly if the current job is no longer challenging for them.

Nomadic or Cross-Boundary Careers

The interviews show that the majority of multimedia workers do indeed fit into the categories of nomads or cross-boundary workers. They are mostly people who are not
strongly attached to their organizations and even less interested in union representation, but the organizations, as we have already mentioned, may even be less interested in union representation, but who are more concerned about the challenges they face, which are more closely tied to the their work. Thus, projects and professional experiences serve to develop their career competencies and professional networks (knowing how, whom and why) which will give them career capital, making them largely “independent” in the labour market, or at least this is what they believe.

It should be noted that at the time of our interviews (end of 2000-beginning of 2001), the telecommunications and e-business (dot.com) industries had not yet hit the recent downturn, and the majority of workers were quite optimistic about their future.
context, we met few self-employed workers but their number might increase as a result of hard times in these industries. Although few of those we met were self-employed workers because we had chosen to conduct case studies on SMBs and VSBs, a predominant type of business in the sector (Leslé and Macarez, 1998; Price Waterhouse Coopers, 1998), they nevertheless had a profile resembling that of self-some of employed workers. Moreover, some of them have already been or plan to become self-employed workers if their jobs no longer provide them with the challenges sought … or if they lose their jobs.

As was shown above, we consider the people who use personal resources as technical skills in their career as belonging to the groups of nomads insofar as they are not strongly attached to their organizations and move around in the labour market with their portfolio of personal skills.

Apart from classifying individuals into one group or another and in order to allow for a better understanding of this classification, it is useful to examine a number of elements on which our interviews were based. This will also which our interviews us an interesting vision of the new give careers which are emerging in the new economic sectors. Moreover, it should noted that a
number of unions are interested in unionizing these groups, which are related to the film and industry that includes self-employed workers video who have recently been unionized or grouped into associations in Québec. Our study ‘sheds light on these workers' interests and consequently, on the goals that firms must focus on if they want to retain them (and unions must focus on if they want to unionize them) -- goals that are often quite different from the traditional goals of workers and their organizations .((classifications, wages, and so on

It should be specified that we chose to “let the actors talk,” with the view that it is better their to tell interviewees the for to give more room the up all sum stories than to own and information a set of into heard elements been entirely arguments that would have .(reconstructed (Hill and Meagher, 1999

This is a methodological choice which appeared

New surveys might be done later on and it will be interesting to compare the situation. We do not believe that there will be a major change in perspective because a number of workers in the sector have already
experienced job difficulties in the past, and everything will depend on how the particular sector and the economy in general evolve. Which is difficult, if not impossible to predict at the moment.

In fact, the qualitative material can be processed in two ways. The researchers can sum up the elements heard into a set of arguments or they can keep the interviewees' words to tell their stories. We have used both methods here but have left considerable room for the interviewees. This helps to have a more realistic view of the situation.
Nomads and their Contact Networks

Like many young people who entered the workforce during the 1980s and 1990s, those working in the multimedia industry often held several precarious jobs, sometimes in various sectors, before turning to employment in the multimedia sector (Price Waterhouse Coopers and deciding to build their careers in this industry.

Thus, A, a young, 23 year-old woman, underwent a radical career change, fitting the profile of a nomad. First, I did some training in the food service industry, after getting my secondary school diploma, and I worked for two years in this sector. In 1999, I decided to do a practical training session with the federal government—it was for people who want to change careers and who don't have any specific training. I heard of the program through a friend of mine. It was mostly small office jobs, but I worked a lot with computers. Before that program, I didn't even know how to turn a computer on and off. In 2000, I got my job here—and I have no intention of leaving!

Another young man, T, aged 32, said, "I started out in construction, through personal contacts, but I left construction because I didn't like it at all. After that, I went into music and..."
then I changed again because it was too hard to break into the arts community. I had responsibilities (a wife and child), so, for their sake, I needed more security and stability. My wife encouraged me as I took steps to change careers. I took some time to think about what I liked and what I wanted to do, and then I took the leap into the computer field. I first got in here through a practical training session at the firm. Several people, in fact, made detours through other made fact in people Several international mechanic) fields cooperation, teaching) or held various odd jobs. This before getting into the computer field career change usually required additional training and then a practical training session, or work-term, in a firm. Often, it was this work-term that opened the door into the computer field. Personal contacts often played a role as well, as did, somewhat less often, strictly work-related contacts. A limited number of workers entered the workforce by creating their own jobs through self-employment, and two individuals have maintained their self-employed status, working they are where the firm in basis a contract on while nonetheless currently employed be “employees.” considering themselves to kind of combination--self this However
employment, while being considered an employee of the firm—is quite rare (2 cases). Some workers, however, have kept up small contracts with other clients, especially in the case where the present firm does not provide them with full-time work. Experiencing a period of self-employment, especially after to the common not while unemployment, majority of workers, is nonetheless relatively frequent for workers in this field. preserve a form of methodological transparency between the various levels of what is put forth, that is the story told by the researchers” and “that of “(interviewees.” (Hill and Meagher, 1999)

We have occasionally, as in this case, carried out small changes to the text without, however, changing the meaning or the general tone of the interviewee's words.

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Most of the workers that we interviewed fit into the nomad category, based on the fact
that they have held various odd jobs, gone through radical career changes or spent some are that they workers, and time as self-employed and autonomy seeking more often work. However, a certain number their in challenge be of those interviewed should considered as itinerant workers, as their logic of action has mainly been based on the logic .of the craft

Thus, a 36 year-old woman, whose job changes have been based on the logic of the craft, would come under the category of itinerant worker. She held four jobs in the computer field before finding her present position, which she found through her professional network while her previous job was found through a personal contact Through a contact, in the other firm where I used “to work, I worked with B, the founding president of the firm. When he bought this company, he came to see me about working with ”…him in his firm and I accepted right away into fit also would ‘C ‘thirties his in man young A ‘worker category of itinerant the :following the logic of the craft I finished my initial training in 1991, and got a job “ in research and analysis in software ergonomics from 1993 to 1999, and then I got this ”.job in 1999
Two other men, S and R, aged 36 and 37, also fit into the itinerant worker category. They have moved around within the computer sector, mainly through personal contacts and based on the logic of the craft. What they seek is greater responsibility, new projects to work on and team work. S was self-employed for a time, following a period of unemployment, and could therefore be put into the nomad category. However, his logic of action has been highly coloured by professional goals.

**Desired Mobility in the Search for Challenge**

Workers in the multimedia and computer industries seek challenge and stimulating projects to work on. This is not to say that wages are totally unimportant to them but it is true that this is not, for the moment at least, the main preoccupation for these (in majority young, under 27) workers. While a majority young, under following a computers into workers got period of unemployment or due to difficulties breaking into other areas, such as music or film, or, still, in order to achieve greater financial and professional stability (more rare), a right in this sector work to majority chose small the outset, having pursued from the appropriate studies from the start. Subsequent moves within the sector have been motivated
challenge, for part by the search very large the for professional, autonomy, freedom recognition, flexibility and initiative, all words that were frequently used by the people we interviewed.

As C, a man in his thirties, put it, “I need intellectual challenge, and I have to enjoy my work. For me to stay in a job, these two conditions have to be met, otherwise, I'm outta there”!

B, a 36 year-old woman, told us, “For now I'm fulfilling my professional looking more to goals than at the strictly financial aspect of the job.”

There is some divergence, but very rare, with this view. As we have seen in a few cases some workers in the multimedia industry have experienced a period of unemployment or had trouble breaking into a sector such as music or film and are therefore looking for greater financial stability. There is therefore some resistance to the accent placed by most people in the sector, employers as well as employees, on the creative, stimulating sector of activity as a way to attract and retain workers. However, these individuals make up a minority
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workforce the entered workers we interviewed the of a period experiencing without unemployment or any great difficulty, even if this sometimes meant holding a series of odd jobs and, in some cases, undergoing a radical career change.

Some workers talked about having sought teamwork, a more collective style of work, a less hierarchical organization. This is also the dominant view, although a few persons may prefer to work alone, at times. For the majority however, they wanted to “free themselves from the large firm,” to use K and L's words. And G, besides seeking challenge, also wanted to escape from the hierarchy of the traditional firm.

“I left my job because it was boring at the firm. There was a very strong hierarchy communication was little room for There between the members of the organization (the employees) and the employer. Each person individually. It was ‘his or her little job worked on firm I'm the opposite from the exactly working for now. Now, I feel that I am recognized as a real professional in my area. Knowing that I have influence within the firm and that my ideas and suggestions count. I feel that I'm
participating in the professional development of other people at the firm.

Most of the individuals that we interviewed are young and started their careers directly in a SMB, but some, such as K, had left large firms.

“The most important step in my career was when I decided to leave firm X. There was this mentality there...I think they hadn't necessarily understood that people no longer join the firm, and then spend the rest of their lives there, as was the case in the past. But since it's a prestigious firm, the bosses still have that mentality. When I was working for X, I had a few talks with my boss. I told him, 'Listen, what I don't want for my career is to go that way, I want to go the other way.' He answered that I had to conform to the way things were done at X... One thing I know is that as soon as someone finds a more interesting job, especially in someone’s field, they can't be held back anymore. They just put their job résumé on the Internet and two weeks later, they have a job somewhere else.

L is also critical of the large, hierarchical firm. “They are big machines, out of date. I was sent interfaces in mainframe and I had to convert them into Windows. It was incredible, but I didn't have any say in it. When I did a job, I had to convince my boss of the way I wanted to
go to had convince his. We had to he then and it do before levels countless through the at each step along and ‘client final the reaching was a chance that the there ‘way product would be sent back to me to be reworked. I ‘didn't like that, having no contacts being so far-removed from my client like that. I أنا I ! was too young to put up with that… Oh ”…definitely prefer small firms to large ones While those we interviewed were not necessarily seeking self-employment, most were trying to remain independent of organizational boundaries or hierarchies, finding challenge important in their work. As most of the firms we studied were SMBs where collective work is valued and hierarchy more or less absent, the reasons workers change jobs—the reasons which led them to these organizations and keep them there--have to do with the presence of interesting projects and challenges, as well as flexibility within the organization and in terms .of work schedules

Making Use of Social Networks (Knowing (Knowing (Whom

It has been our observation that professional mobility is usually sought when individuals feel that their personal and technical development is being hindered, that the projects they desire their that lack challenge or being given are في هذا In this .being stifled is autonomy for
context, individuals look to their social networks in order to find projects which correspond to their expectations.

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Workers often achieve mobility through recourse to personal or social networks, which tend to come into play slightly more often than professional networks, although the lines between these two different networks become somewhat blurred at times. Thus, P said, “I mostly had a personal--more than professional--network, but many of my personal contacts dating back to that job are now here at this firm. Over time, studies and work ended up blending together, and so did my personal and professional networks.”

A young, 28 year-old woman highlighted the importance of her social-personal networks a professional into integrated despite having things, her other through, among network computer studies, a necessary step for all workers in the field. “I wanted to do something as a and accounting working in else, after studies in doing some and receptionist
decided to go into computers. I sociology…and I
my boyfriend about it with talked a lot
before taking the plunge and he always encouraged
me to go on. I chose the computer field
out of personal interest. Later, I got a job as a
programmer in this firm through a personal
”.contact

A young man in his thirties, C, pointed out that
head-hunters can act as a substitute for
knowing whom” in the multimedia industry. “I “
left my last job because I was bored, there
was no more challenge for me and I wanted a
change. I went through a head-hunting firm
what me be giving to seems job this new ‘So far
interesting ‘that is ‘for looking I’m ”...challenges

F, a 30 year-old woman, recently graduated from
(the Montreal Business School (HEC
entered the workforce by creating her own job
through self-employment
∧ 8
and then obtained ‘
contact. She a personal through position salaried a
way the and market job said the
information circulates in social networks encourage
mobility: “Everyone knows each other in
this activity sector. Staff move around a lot, many
.people change jobs, moving to other firms
So it's important to keep these contacts. One day
هناك There .you might want to change jobs too
are more offers than there is demand of another source to be seem sites Web Personal people several mobility and maintained that they would use the Internet if they had to change jobs again. Thus, rather than looking for the ideal firm, G created his own Web site and the firm came to him the firm that found me through my personal Web site. They had me come for an interview. It was was still working at another firm at the time. Most workers in the ICT and multimedia industry that we interviewed are young, and so have not yet necessarily experienced many fear is present in the minds of all, and is the first reason given for past or possible future job changes. Most feel that mobility is easy after a few years in the field, since everyone knows each other, everyone knows the firms, and information gets around quickly (among other ways, through the Internet). In short, the “knowing whom” component of competency is quite well developed in the field. However, this stumbling blocks along the way.

Conclusion: Careers and Social Networks
One thing that came out in our interviews was that workers in the ICT and multimedia industry are essentially nomads, but there are also some itinerant workers. As we carried
self- not among and SMBs interviews in out figure do not workers, the latter employed interviewees. However prominently among our is apparent that the this fact, it despite reality of self-employment is present in the sector.
As has been pointed out, many workers

(On this, see Tremblay and Chevrier (2002)}

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have gone through a period as self-employed workers and some combine this status with a main contract within the firm they are presently working for, in the case where this contract does not provide full-time work. Sometimes this is the case when someone is just entering if the firm. Still for hard times during or sector the study all our to include in we were of cross-boundary number the workers multimedia forth and move back who workers between the status of employee and self-employed worker, would be higher. This must be kept in mind when sketching an overall picture of the industry
have that many people observation our been has It -many other in had experience varied activity sectors, such as working as a mechanic, or in music, film, the food service industry, accounting or teaching. These workers underwent a major career shift, ultimately leading them into the computer field. It must be said that job opportunities in this growing unemployment with generally high field combined certainly Quebec during the in made the computer sector, and more specifically the multimedia sector, “attractive” sectors على السوق. Given the fact that many workers in this field held various odd jobs, especially those who have worked in other sectors, the major career shift that some of them have made, and the presence of self-employment along the way, it can be considered, despite their relatively young average age, that most of them fit into the nomad category. The few itinerant workers among them, on the other hand, got into the computer industry and have not moved away from it. They have followed the logic of the craft, that is, seeking out the best work conditions, greater responsibility, more autonomy and greater challenge. Although we cannot affirm that this is the case for all workers, it is clearly the dominant view
in the sector. We must also indicate that workers are very young in multimedia firms and management and informal the they appreciate their firm. They build the relations within career strategy on this informality and on their networks, this strategy being a new form of sectors of all of typical development not career growing surely a but ‘economic activity strategy in the sectors of the New Economy, such as multimedia, ICT and creative numeric .arts for example mobility in the professional The motives behind ‘industry are or computer multimedia all workers in for moreover, essentially the same this field. These include the search for challenge, autonomy, freedom and recognition, as shown by studies on other project-based sectors (De Fillippi and Arthur, 1998; Jones and De Fillippi, 1996; Hendry, Arthur and Jones 1995). In our view, it is probably the .(1997). project-based dimension and the importance of the specific projects one participates in to develop a career that explain that workers adhere to this vision, which is miles from the traditional vision of climbing the career ladder in one firm .(Tremblay, 1997) individuals, some attractive for is Entrepreneurship with only dealt here as we but have we who ‘firms heads of not and) employees we cannot ‘(elsewhere interviewed
should at length. It dimension this upon elaborate however, that ‘be mentioned several for some appeal entrepreneurship does hold ‘in this sector working those of especially those who have had some experience in large firms and who were disappointed the large to by this experience. Their resistance a hierarchic organization translates into desire for freedom and some of these persons create a startup business in the multimedia .or ICT field

We have touched on the fact that unemployment .was high in Quebec during the 1990s of existence economic recovery and the the Before job at supporting programs aimed creation within the Cité Multimedia, the climate was rather uncertain, even for workers in the

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ICT and MM industry, although this sector was among those which suffered least from the years of recession and unemployment. It should be noted, moreover, that aside from the several success stories within the multimedia and computer fields, these sectors of the new
the dependence of sectors and volatile economy are firms on the stock market is sometimes translated into financing, employment or redundancy problems. In this uncertain economic climate, then, networks seem important to people working in the multimedia field, as for those who work in film. (Jones 1996; De Fillipi and Arthur, 1996)

Networks of social contacts are called upon extensively to provide information on available employment, and it is often through these networks that jobs are found, not so much through and job applications as ways such traditional more much so even not ads newspaper internet sites, contrarily to what might have been expected. Furthermore, the presence of a family-related even personal immediate more to came when it network was observed offering the support needed for the major career shift into the computer field that was made by some of the individuals we interviewed. Knowing competency of component the As for one's work making sense of or why experiences, it can be said that most workers in the sector focus on the challenges offered by their job. Their career strategy is very much oriented towards the projects and the sense these projects make for the individuals. We observed a strong desire for autonomy and for
gaining responsibility at work, a desire for the possibility to express creativity and a spirit of initiative among workers in the multimedia field; again, if this strategy is not dominant in the labour market in general, and this is clearly not the case, it seems to be a growing trend with the younger cohorts and all the more so in the New Economy sectors. The core identity is thus largely focused on autonomy and professional challenge, even though many workers when asked to say what was most important to them in life, underscored the importance of their personal and family lives. Their self-image, nonetheless, rests to a great extent on the opportunities for self-fulfilment and development at work.

Furthermore, it was our observation that social and professional networks have an important impact on skills development, which is, without a doubt, closely tied to career development. The diversity of the experiences of nomad workers in the multimedia sector fosters the acquisition of multiple career competencies, which, in turn, translate into career capital (human, social and cultural) that these individuals can exploit in the workforce and in their professional networks, just as was observed by Cadin et al. (2000) for French nomad...
In terms of the management and labour economics theories referred to at the beginning of the paper, we would like to give a few indications from the research. Concerning the issue of how tacit or informal knowledge can be transferred taking into account the mobility in the sector, it seems this knowledge moves through what can be considered a “community of practice” of computer specialists; the barriers between firms seem to be almost inexistent except when some material or issue is clearly considered confidential or identified as so by competitive a the creation of firm. As for the specialised by retaining advantage the offer be to only way seems to competencies, the stimulating and inventive type of of the workers that attracts nomadic environment وآخيرا ، فانه Finally, it .sector and ICT multimedia seems clear that not only do individuals stand to gain from the mobility between firms, but firms can also gain from the larger experience and knowledge or mobile workers, although some losses of and case this is not always the extremely costly and be personnel can these to keep way firm. The the inefficient for only be essential resources appears to
which refers more. *Knowing how* The component fully to the acquisition of professional competencies, is further developed in another article on this study. (Tremblay, 2002

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resources right human the designing through work right the and package management organisation to attract and retain these otherwise mobile workers. To conclude, let us repeat in the strategy is surely not dominant that this this *this day; however to market labour represents a trend in the new sectors of activity related to the New Economy in particular and seems to be a growing trend with the younger cohorts more specifically


c REFERENCES


Brown, JS and Duguid, P. (1991). Organizational Learning and Communities of Practice learning and towards a unified view of working. e Organizational Science organization 1/2


Besson, P. "Dedans-Dehors frontières?" in (eds). Paris, Vuibert)
technologie- la de et science la de Conseil) CST exploration une L'innovation. (1998 Québec: Conseil de la science et de la sectorielle. technologie, Government of Québec

la technologie- CST (Conseil de la science et de Les emplois dans l'économie de. (1998 Québec: Conseil de la science et de la l'innovation technologie, Government of Québec

Action document from the Summit on the ) Economy and Employment- drawn from the .(CST Web site

CST (Conseil de la science et de la technologie- Des formations pour une société de. (1998
Québec: Conseil de la science et de la l'innovation
technologie, Government of Québec and Arthur (1996) "Boundaryless DeFillippi
Contexts and Careers: a Competency-Based New Career: A The Boundaryless Perspective" in
Principle for a New Organizational Arthur, MB and Rousseau, DM (eds), New Era
York, Oxford University Press Project- Paradox in" (1998) and Arthur DeFillippi
-Film The Case of :Based Enterprise Vol. California Management Review "Making
pp. 125-139, 40
Les réseaux .(1994) M, Forsé A. and , Degenne en analyse structurale sociaux; une
باريس : أرماند كولن. Paris: Armand Colin. . sociologie
.Collection U

New Types of Careers in the Knowledge Economy ? Networks and boundaryless jobs as an career strategy in the ICT and multimedia sector

L'économie sociale. Formes .(Audier (1999 ص. pp. 26-49. d'organisations et institutions


New Types of Careers in the Knowledge Economy? Networks and boundaryless jobs as an career strategy in the ICT and multimedia sector


Careers. Jones and Lichtenstein Peiperl, M. 1998. as Strategy in Professional Services


*Communities of Practice: A*. (Shart, J. (1997 .March 12, 1997 *Review of the literature*

Page 21

New Types of Careers in the Knowledge Economy ? Networks and boundaryless jobs as an career strategy in the ICT and multimedia sector


Innovation, technologie et qualification et complexité du processus multidimension
Québec: Presses de l'innovation l'Université du Québec. Collection Études en économie politique. 286 p


Les motifs .(Tremblay, D.-G. et C. Chevrier (2002 de recours au travail autonome par les et inconvénients qu'y avantages les et entreprises .autonomes travailleurs les voient

Note de .Montréal : Direction de la recherche recherche de la Chaire de recherche du .Canada en économie du savoir. 26 pages .••••• Amherdt CH Tremblay, D.-G. et des et développement en réseau Travail
New Types of Careers in the Knowledge Economy? Networks and boundaryless jobs as an career strategy in the ICT and multimedia sector


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