

SSHRC Research Network
on the Changing Nature of
Work and Lifelong Learning



Working Paper No. 4, 2004

2004 R.W.B. Jackson Lecture

The Learning Society: Past, Present and Future Views

By David W. Livingstone

October 14, 2004



Centre for the Study of Education and Work
Department of Sociology and Equity Studies in Education



Ontario Institute for Studies in Education of the University of Toronto
252 Bloor St. West, Toronto, ON, M5S 1V6

WALL Working Paper No. 04. 2004

2004 R.W.B. Jackson Lecture. OISE/UT, October 14, 2004

The Learning Society: Past, Present and Future Views*

David W. Livingstone
Canada Research Chair in Lifelong Learning and Work
Head, Centre for the Study of Education and Work
Department of Sociology and Equity Studies
OISE/UT

Introduction

Thank you for the opportunity to deliver this lecture. Thank you to my family and many colleagues who make up my primary learning community and without whose support and guidance I would not be here today. I will try to outline briefly the development of learning activities through time in human societies. We will then consider what, if anything, is distinctive about the form and extent of these activities in the current market-driven societies, such as Canada, in which the notions of lifelong learning and learning society have become very widely promoted. Finally, I will suggest a few steps toward the fuller realization of these notions.

Continual acquisition and sharing of knowledge and skill to cope with our changing environment defines *Homo sapiens*. Learning to survive and gain partial control of our environment has involved the invention of powerful mediating tools and the social construction of complex systems of language and culture. Learning to use these tools and language systems has been intimately linked with the work of developing them throughout most of human history. The consequent edifices and institutions now dwarf the creations of any other species. Learning for less instrumental interests also became more common when and if our environmental adaptation became more secure. We have become more aware of the communicative and knowledge capacities among other animals, but the quest for knowledge has been our most distinctive intrinsic feature since the origin of our species. In this sense, human societies have always been learning societies.

It is deeply ironic that the same inventive capacities that have enabled our species to flourish in the natural environment which frequently threatened our very survival now threaten the very survival of the same natural environment. Along with our unprecedented civilizational achievements, we have created a potent mix of air, water and soil pollution, global warming, widespread conditions of impoverishment, war as well as the prospects of nuclear winter, and a massive collective institutional incapacity to comprehend the long-term consequences of our interventions in our global ecosystem. In this respect, we may be becoming increasingly willfully ignorant societies rather than learning ones.

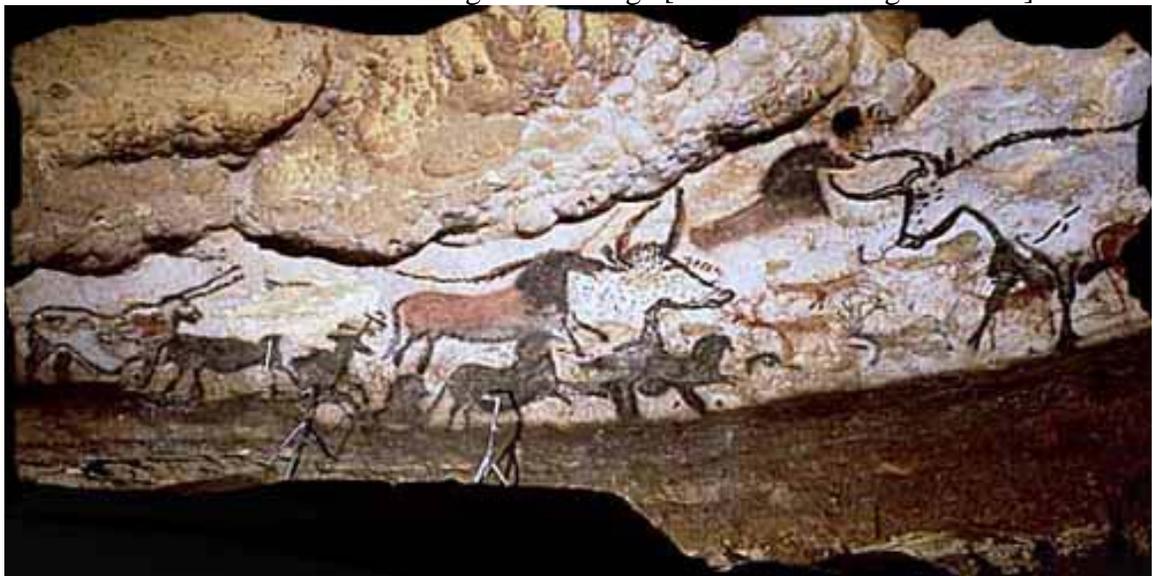
I will suggest that learning as a process needs to be understood at three different levels of abstraction: the intrinsic activities we all do in our lives; the institutionalized

practices of any given society; and the images and ideologies of “a good education” advocated in that society. A comparative historical perspective can aid in clarify these different views of learning and their relations.

Past Views of the Learning Society

Just this year, biologists have discovered in the DNA of chromosome 7 a genetic mutation that all homo sapiens share which is associated with our smaller, weaker jaws than other primates, and perhaps our bigger brains. This mutation is estimated to have occurred about 2.5 million years ago in the grasslands of east Africa, about the same time as tool-making seems to have begun (Verrengia, 2004). By that time, the hands of homo erectus had become free and had attained greater dexterity than any simian, hands that adapted to ever new, more complicated operations or labours. The capacity to deal proactively with the natural environment began with the development of handmade tools and associated labours of hunting and gathering which brought our ancestors closer together in joint activities. These activities required the development of speech. Harnessing of fire, domestication of animals, sedentary agriculture all massively enhanced our survival capacity. The Lascaux cave paintings in France, dating from 13,000 BC, have been widely regarded as evidence of the development of graphic representation leading to the symbolisms of writing and reckoning which are often taken as the basis of modern civilization and our capability to transcend local time and space. Recent archaeological research in the Loiyangalani river valley in Tanzania has found evidence, in the form of ostrich egg shell beads, pigment and ochre pencils, that our ancestors actually developed symbolic thinking over 40,000 years ago (Fox, 2004, p. K3) and there is some evidence emerging from over 90,000 years ago (Vianello, 2004).

Slide 1: Work and Learning in Stone Age [Hunter-Gathering Societies]



Source: Cave paintings from Lascaux. <http://www.culture.gouv.fr/culture/arcnat/lascaux>

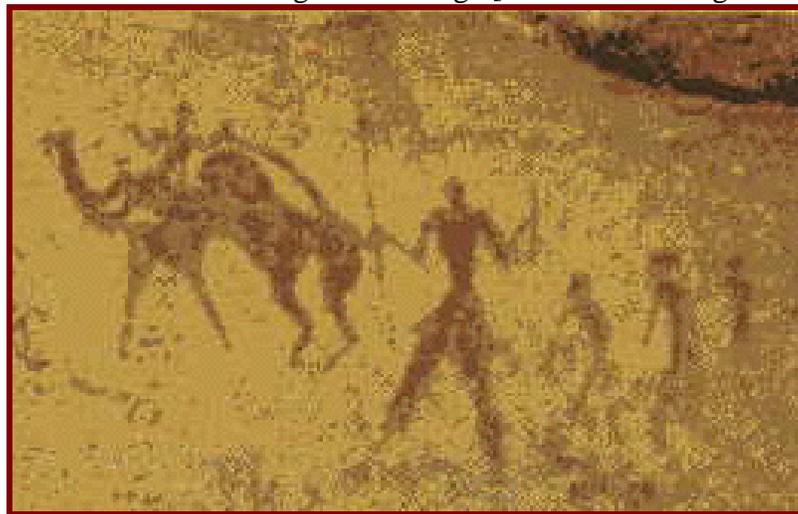
In any case, spinning, weaving, metalworking, pottery and navigation all developed many millennia ago, as well as the beginnings of trade, industry, art and

science. As tribes developed into hierarchically organized states, law, politics and religion, which were products of the minds of elite groups who gained control of surplus production, came to dominate human societies. As Frederick Engels (1876, p.7) observed in one of his later writings:

[T]he more modest productions of the working hand retreated into the background, the more so since the mind that planned the labour was able, at a very early stage in the development of society...to have the labour that had been planned carried out by other hands than its own. All merit for the swift advance of civilization was ascribed to the mind, to the development and activity of the brain. Men became accustomed to explain their actions as arising out of thought instead of their needs (which in any case are reflected and perceived in the mind); and so in the course of time there emerged that idealistic world outlook which, especially since the fall of the world of antiquity, has dominated men's (sic) minds.

There is now considerable evidence that in early human societies there was little direct teaching of youth by adults, rather children learned in a family setting by imitating adults with older playmates leading, and took important tasks such as childcare, household chores, minor hunting and foraging early on (Herzog, 1974). [SLIDE 2 ABOUT HERE]

Slide 2: Work and Learning in Stone Age [Hunter-Gathering Societies]



Source: Cave paintings from Tassili N'Ajjer, Algeria. Mitchell, 1977.

In later civilizations, while adult instruction of youths became more prominent, mainly oral and apprenticeship methods of education continued to predominate (Myers, 1960). However, at least in the major Western civilizations (e.g. Mesopotamia, Ancient Egypt, Greece, Rome) as a growing economic surplus developed, systems of writing and records were created in urban centres. A small part of the population released from primary production was trained in formal court and temple schools as professional scribes and other specialists to use these practical means to “administer” this surplus (Smith, 1955). This was the origin of formal schooling in the basic form we know it today. These

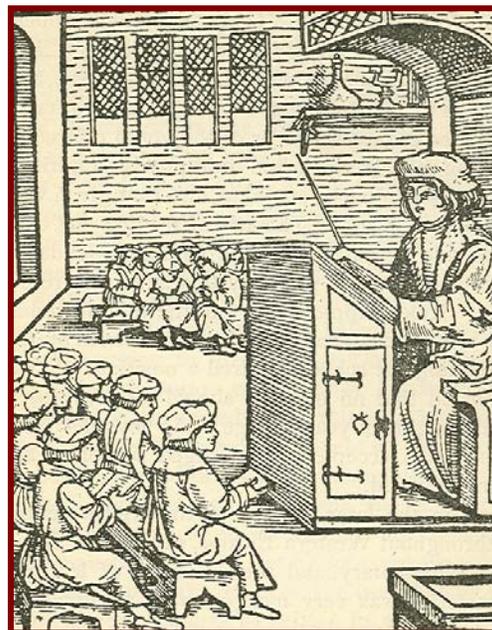
Slide 3: Education in Antic Greece



Source: The School of Athens (Raphael, 1483-1520)

schools were first to prepare the professional scribes for the ruling class and later became associated with centres of research and systemization of knowledge [SLIDE 3 ABOUT HERE]. But the vast majority continued to obtain their vocational training and any other knowledge through oral methods in family settings.

Slide 4: Monastic Education



Source: Monroe, 1905, p.260.

Throughout most of human history, most of our learning has occurred in intimate relation to our labours and the rest of our everyday lives; formal schools and abstract

ideologies of learning have been of little consequence for most people. I will not dwell here on the history of formal schooling, except to note that it remained essentially the preserve of kings, priests and their minions through the Middle Ages until the emergence of industrial capitalism a few centuries ago [SLIDE 4 ABOUT HERE].

As free wage labour replaced indentured serfdom and landless peasants roamed for work, traditional family apprenticeships broke down and mass compulsory public schooling emerged. Nineteenth century class struggles over control and content of schools were often intense (Simon, 1974) but they generally resulted in diluted and more coercive versions of pre-capitalist forms. The institutionalization of mass public schooling has proceeded apace until today it is generally regarded as the most common form of education, even thought of by some as identical with learning. Primary and secondary schooling have become nearly universal in advanced market societies and the little red school house has become the big centre of learning in most communities [SLIDE 5 ABOUT HERE] Majorities of graduates now pursue some form of tertiary level education, and most supporters of educational equity advocate the expansion of adult education courses and programs as the next logical step in lifelong education.

Slide 5: High School Education



Source: First Dr. Losier Middle School. Miramichi, New Brunswick
<http://schools.brunnet.net/drlosierms/school.gif>

The dominant ideologies of learning that emerged with hierarchically organized class societies appear to have stressed the intricacy or mystical nature of ruling specialist knowledge while subordinate group ideologies emphasized the benefits of their “really useful”, practical knowledge. Industrial capitalism rent the veil of secrecy of medieval craft guilds and promised democratic access to literacy and advanced working knowledge through mass schooling. This dominant ideology has now grown into calls of lifelong learning for all. But selection for higher levels of public schooling has always discriminated against lower classes and various ethnic minorities, while the numbers of more highly credentialed specialists who continue to claim exclusive knowledge has continued to increase.

So, with regard to the different levels of abstraction of learning, our actual learning activities have generally been fused with our labour and other practical

activities. Institutional learning has been the preserve of ruling elites until it became partially democratized with industrial capitalism. The dominant ideology of learning has shifted from celebrating rare brilliance and perseverance to promising something for everyone. With this brief tour of the past, we can more clearly make sense of the “learning society” claims about the present moment.

But first a word about labour per se. I have already alluded to the first major separation of learning and labour: the division of labour between direct producers and ruling “intellectual” elites which arose with sustained production of economic surpluses. From slave and feudal societies to capitalism, paid employment has become increasingly separated from household economies. Virtually every form of good or service has become vulnerable to conversion into wage labour that could produce vendible commodities for profit. Other household labours became increasingly devalued if not invisible.

Present Views

So an adequate understanding of contemporary relations between learning and labour requires careful consideration of the “underlayers” of both, that is , unpaid as well as paid forms of work, and informal as well as formal learning activities. In industrialized market societies, as this slide [SLIDE 6 ABOUT HERE] outlines, there are at least four

Slide 6: Forms of Activity and Learning

Forms of Activity		Forms of Learning
<ul style="list-style-type: none"> • Paid Employment • Unpaid Housework • Community Volunteer Work • Leisure Time (hygiene, hobbies, rest) 	<p>→ ←</p>	<ul style="list-style-type: none"> • Informal Education • Non-taught Learning • Formal Schooling • Further Education

distinguishable forms of materially-based activity (paid employment, housework, community volunteer work and leisure including hobbies, hygiene and rest) and four forms of learning (informal training, non-taught informal learning, initial formal schooling, and further or continuing adult education).

“Work” is now commonly regarded as synonymous with “earning a living” through *paid employment* in the production, distribution and exchange of goods and services commodities. But most of us still must also do some household work and many need to contribute to community labours in order to reproduce ourselves and society. Both housework and community volunteer work are typically unpaid and underappreciated, but they remain essential for our survival and quality of life (see Waring, 1988). *Housework*, including cooking, cleaning, childcare and other often complex household tasks, has been largely relegated to women and only gained some public recognition as women have gained power through increased participation in paid employment. As community life has become more fragmented with dual-earner commuter households, time devoted to *community work* to sustain and build social life

through local associations and helping neighbours has declined, and the productive importance of this work has been rediscovered as “social capital” (Putnam, 2000). All three forms of labour should be included in any careful accounting of contemporary work practices. Leisure refers to all those activities we do most immediately for ourselves, albeit often out of necessity, including personal hygiene, rest and sleep, and various hobbies.

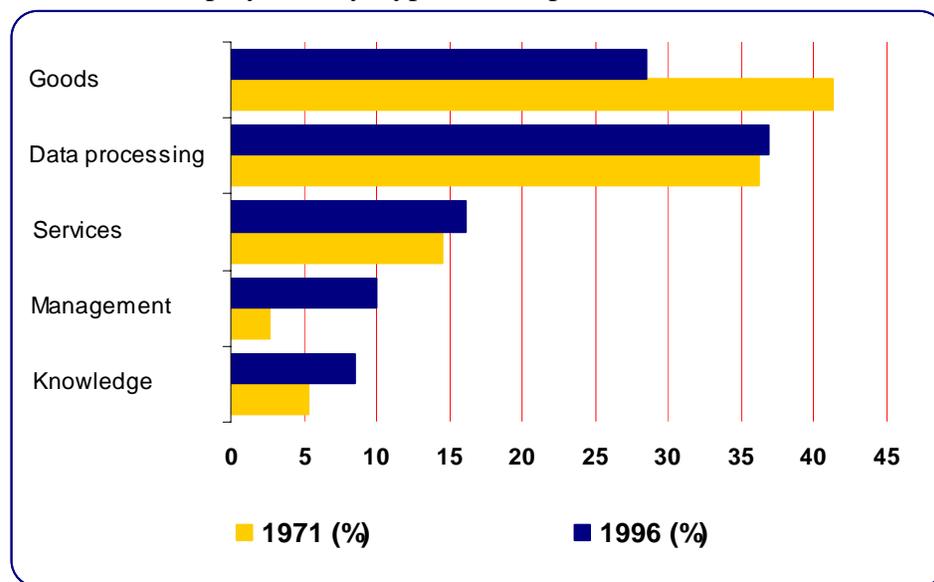
”Learning”, in the most generic sense, involves the gaining of knowledge or skill anytime and anywhere through individual and group processes. Learning occurs throughout our lives. The sites of learning make up a continuum ranging from spontaneous responses to everyday life to highly organized participation in formal education programs. The dominant tendency in contemporary thought has been to equate learning with the provision of learning opportunities in settings organized by institutional authorities and led by teachers approved by these authorities. *Formal schooling* has frequently been identified with continuous enrolment in age-graded, bureaucratically-structured institutions of formal schooling from early childhood to tertiary levels, ignoring other types of instruction in bodies of traditional knowledge in subordinate groups (see Illich, 1971). In addition, *further or continuing adult education* includes a diverse array of further education courses and workshops in many institutionally organized settings, from schools to workplaces and community centres. Such continuing education is the most evident site of lifelong learning for adults past the initial cycle of schooling. But we also continually engage, as we always have, in intrinsic informal learning activities to acquire knowledge or skill outside of the curricula of institutions providing educational programs, courses or workshops. *Informal education or training* occurs when mentors take responsibility for instructing others without sustained reference to a pre-established curriculum in more incidental or spontaneous situations, such as guiding them in learning job skills or in community development activities. Finally, all other forms of explicit or tacit learning in which we engage either individually or collectively without direct reliance on a teacher/mentor or an externally-organized curriculum can be termed *non-taught self-directed or collective informal learning*. As my colleague Allen Tough (1978) has observed, informal learning is the submerged part of the iceberg of adult learning activities. It is likely that, for most adults, informal learning (including both informal training and non-taught learning activities) continues to represent our most important learning for coping with our changing environment. No account of “lifelong learning” can be complete without considering peoples’ informal learning activities as well as their initial formal schooling and further adult education courses through the life course.

All of these forms of human activity are relational processes rather than categorical ones. But the dominant focus on relations between paid employment and organized education ignores significant interactions between these and other forms of work and learning. Valuable transfers of knowledge and skill between these four basic forms of learning and among the other forms of our activities may be unrecognized or discouraged by current workplace design, for example (see Livingstone, 1999).

Many recent observers have celebrated the arrival of a fundamentally new “post-industrial” or “knowledge-based economy” (KBE). Advocates of KBE generally assume the centrality of occupations requiring advanced cognitive skills in management and technical design work as well as a general imperative upgrading of the skills needed for

all types of employment (Bell, 1973; Reich, 1991). The direct evidence presented to demonstrate the KBE typically has been limited to showing the increasing prevalence of service sectors over primary extractive and secondary manufacturing industries, and allusions to rapid growth of specific occupations such as computer analysts. KBE advocates have not identified specific thresholds for its realization but there is usually a strong implication of the prevalence of knowledge workers engaged in complex planning and design work. A census-based analysis of occupational distributions over the 1971-96 period (Lavoie and Roy, 1998) provides one of the most extensive estimates to date of the actual extent of movement toward KBE. Slide 5 summarizes, the changes [SLIDE 7 ABOUT HERE]. There were significant changes over this period in the redistribution of

Slide 7: Employment by Type of Occupation [Canada, 1971-1996]



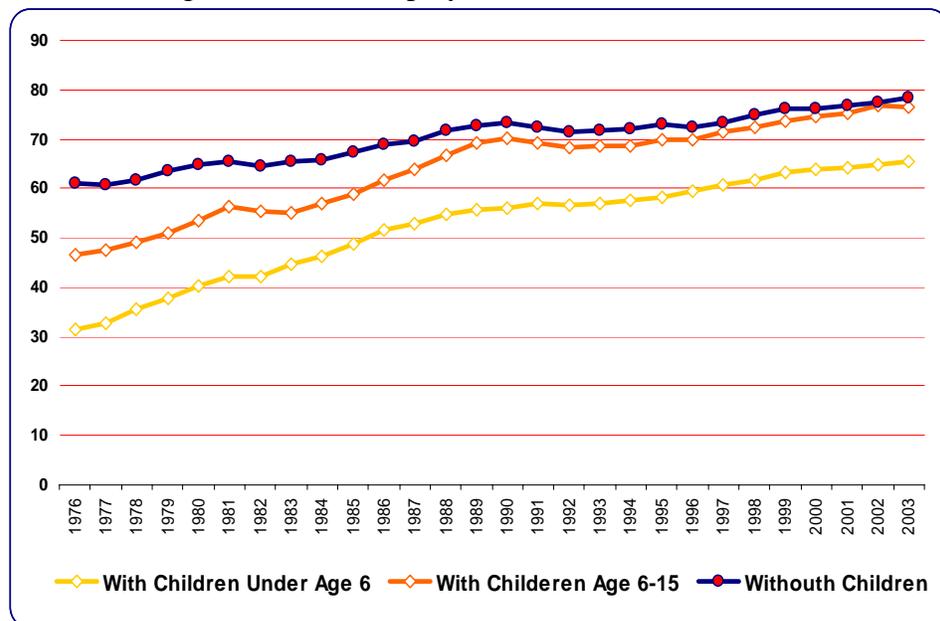
Source: Lavoie and Roy, 1998, p. 16.

jobs from goods production to services, data processing and especially management and knowledge work. The proportion of people in management occupations nearly quadrupled to 10 percent of the labour force. But, those in knowledge-based occupations involving mainly the generation of ideas or provision of expert opinion-- such as scientists, engineers, and artists-- remained a very small proportion of the entire employment picture. In spite of fairly rapid growth over this period, knowledge workers still made up less than 10 percent of the labour force in 1996. While details of this occupational classification may be disputed, it is clear that the vast majority of the Canadian labour force continued to be employed in jobs that require fairly routinized transmission of data, processing of goods or provision of personal services. As the authors of this report themselves concluded (Lavoie and Roy, 1998, p. 15): “Based on this one-time snapshot of employment it is rather difficult to make the case that Canada has become a knowledge-based economy.”

The rate of change in the general skill requirements of the Canadian job structure during most of this period has also been estimated based on census data on occupational composition for the 1971-91 period (Leckie, 1996). There was a gradual skill upgrading trend. On measures of the general educational development (GED) required for jobs, the

length of specific vocational preparation (SVP) needed to perform the job adequately, and the levels of cognitive complexity, task diversity and responsibility in job descriptions, this analysis consistently found gradually declining proportions of the lowest skilled jobs and comparable increases in the highest skilled jobs, resulting in net skill increases of around 10 percent over this entire 20 year period. Other Canadian and international analyses based on large-scale surveys for the post-WWII era (see Livingstone, 1999 for detailed reviews) generally confirm this pattern of gradual skill upgrading. The most recent thorough empirical assessments of skill changes in the U.S.-- which was the original source of claims about the shift to a knowledge-based economy-- have also found little evidence for more than a gradual increase in job skill requirements either in the entire post WWII period or in very recent trends (Barton, 2000; Handel, 2000). U.S. Bureau of Labor Statistics' estimates project that only about 20 percent of job openings will require a university degree in the early part of this century, compared with over a third of new entrants who have one, while the vast majority of new jobs will require only short-term training (Hecker, 2001). The weight of empirical evidence clearly indicates substantially less skill upgrading of jobs than the heralds of the knowledge-based economy typically assume. Future discussions of increasing demand for more highly skilled knowledge workers should pay at least as much attention to the slower growing forest of routine data transmitting, service providing and goods processing jobs as to the faster growing knowledge work trees.

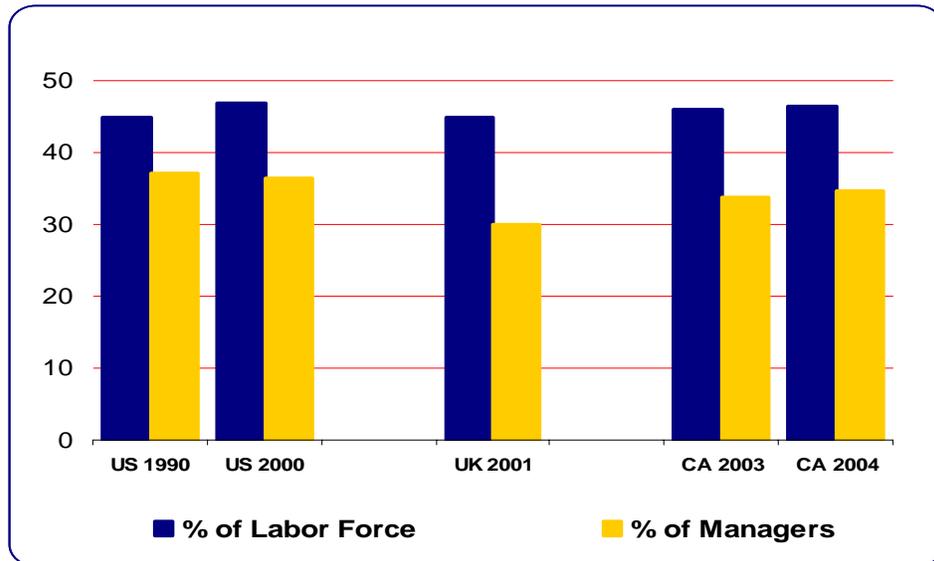
Slide 8: Percentage of Women Employed, with and without Children, 1976-2003



Source: Statistics Canada, 2004.

A more substantial change in the composition of the paid labour force in the past few generations has been the growing participation of women and especially married women with children. While male participation rates have been fairly stable, women's have doubled since the mid-1960s, as slide 8 suggests [SLIDE 8 ABOUT HERE].

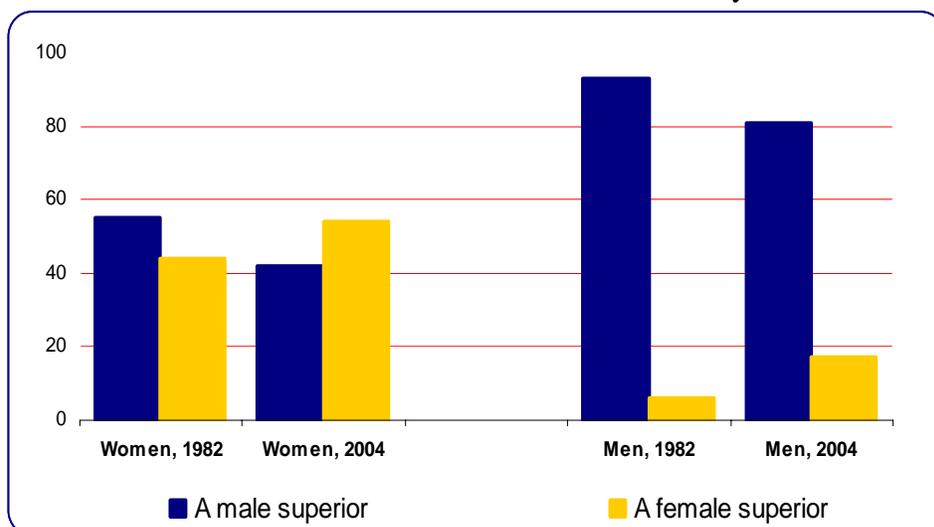
Slide 9: Women in Managerial Positions [US, UK, and Canada]



Source: Livingstone and Pollock, 2004

Working for pay is now a pervasive activity. Our own recent WALL national survey estimates that 95 percent of the entire 18+ population have now worked for pay in their lives, 85 percent in the past decade, and half of all of those not currently in the labour force indicate they expect to look for a job in the next year. In spite of formal educational qualifications that may now exceed men's, women still face formidable barriers to job mobility. The majority of married women still do most of the housework, are much more likely to be employed part-time and, although women are now approaching half of the labour force in Canada as well as the US and UK, they make up only about a third of those in managerial posts [SLIDE 9 ABOUT HERE]. What's more,

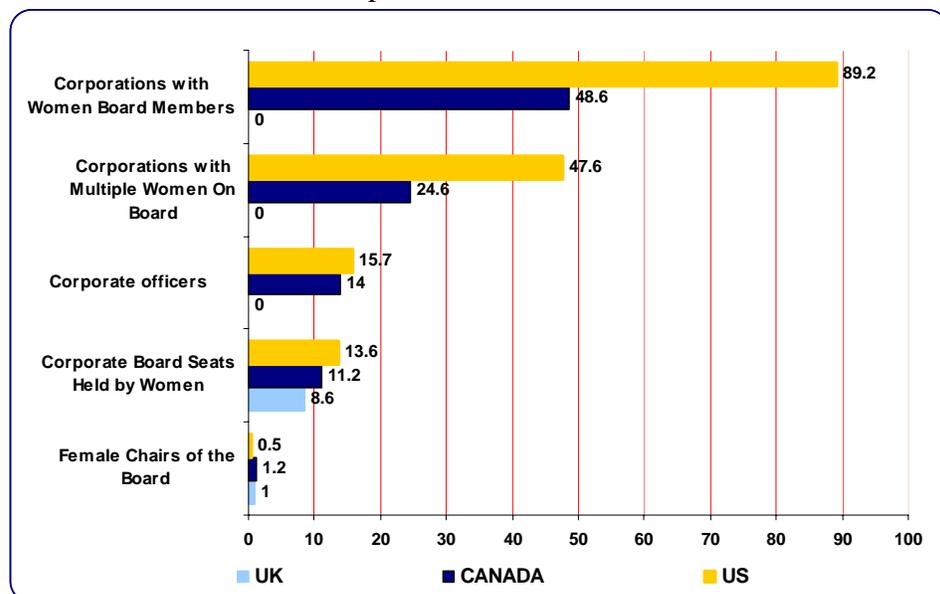
Slide 10: Gendered Structure of Authority



Sources: 1982: Clement & Myles (1994, p. 134); 2004: WALL survey

they rarely manage men. As the next slide shows, around 15 percent of men are now managed by women, up from only 5 percent a generation ago. But the vast majority of women managers manage only women, typically in lower paid jobs [SLIDE 10 ABOUT HERE]. The “glass ceiling” for women is most evident at top management levels. While women may have greater token representation on corporate boards, they still only make up around 10 percent of board members and 1 percent of CEOs and the inside directors from whom CEOs are typically selected [SLIDE 11 ABOUT HERE]. As long as women are delegated most of the housework, vital as this is, their relative chances of reaching employment levels consistent with their talents and formal qualifications will continue to be jeopardized by lack of time and energy to engage effectively in social and political networks of power.

Slide 11: Women on Corporate Boards [UK, Canada and US, 2003]



Sources: UK: Singh & Vinnicombe, 2003. [*2004], "0" =data unavailable; US and Canada: Catalyst, 2003

Researchers increasingly recognize that continued informal training and untaught learning are important for success of both men and women in the context of paid workplaces (e.g. Betcherman, Leckie, McMullen, 1997; Center for Workforce Development, 1998; Matthews & Candy, 1999). By all direct accounts, through a combination of initial schooling, further adult education, informal training and non-taught learning, the vast majority of workers manage to become at least adequately qualified for their current jobs. The finding that highly qualified women are highly underrepresented in top management is probably an indicator of persistent sexism especially in informal learning networks.

Yet the dominant discourse about the rapid emergence of a “knowledge-based economy” and the pressing call for creation of "learning organizations" largely ignores or depreciates these realities of interaction between organized education, informal training and untaught learning and job performance, and presumes that the central challenge for

improved enterprise performance is for workers to become more active and motivated individual learners.

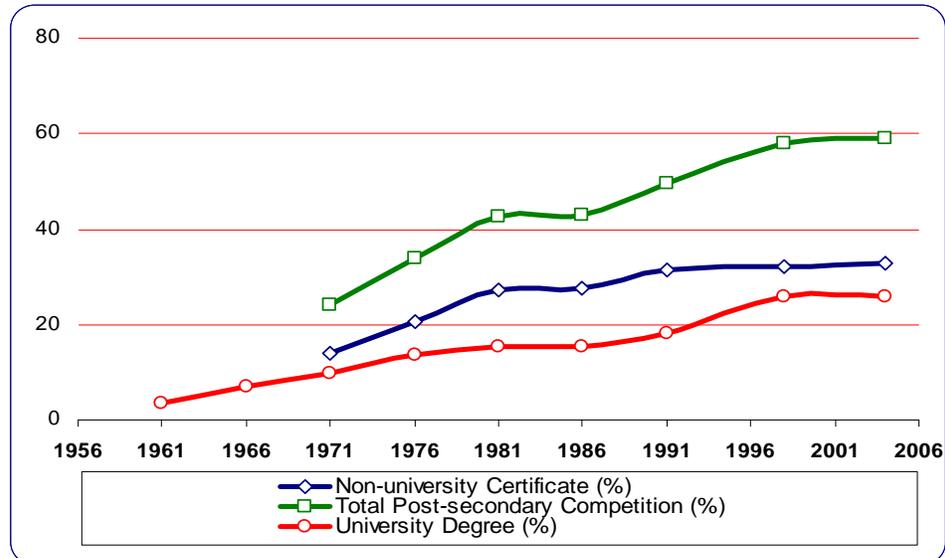
This is not a new story. Throughout the history of industrial capitalist societies, formal education has been looked to as the solution to economic problems and crises (see Curti, 1935). In this sense, current appeals for people to become greater lifelong learners continues a familiar mantra that more and better education will provide economic salvation. Of course, nobody would argue against more and better education. But to insist that more education and training are the only solution to economic problems, to the exclusion of any serious address to economic reforms themselves—as many current politicians do—is merely to divert attention from the central problem, lack of decent jobs.

In all capitalist societies, inter-firm competition, technological innovation, and conflicts between employers and employees over working conditions, benefits and knowledge requirements all lead to incessant shifts in the numbers and types of jobs available. Population growth cycles, modified household needs and new legislative regulations also frequently serve to alter the supply of labour. At the same time, popular demand for general education and specialized training increases cumulatively as people generally seek more knowledge, different skills and added credentials in order to live and work in such a changing society.

There are always some "mismatches" between employers' aggregate demand and requirements for employees on the one hand, and the aggregate supply and qualifications of job seekers on the other. The accelerating productivity of capitalist enterprises regularly throws workers into unemployment, reproducing the most evident part of a reserve army of labour. In societies like Canada with liberal democratic state regimes that acclaim the right to equal educational opportunity, and with labour markets in which both employers and job seekers make mainly individual employment choices, the *dominant* historical tendency has been for the supply of educationally qualified job seekers to exceed the demand for any given type of job. These same dynamics also generate some formal underqualification of some workers, particularly older employees who are experienced and competent in their jobs but have had few incentives to upgrade their credentialed skills.

But, while there has only been very gradual net upgrading of the actual skill requirements of jobs in general over the past few generations, formal educational attainments have seen explosive growth. Canadian participation in post-secondary education grew about sixfold between the early 1960s and the late 1990s to world-leading levels, with nearly half of the 20-64 population having attained a post-secondary credential by 1996 and over 60 percent of the current 25 to 29 age cohort getting one [SLIDE 12 ABOUT HERE]. Adult course participation expanded even more rapidly, from 4 percent in 1960 to 35 percent in the early 1990s. While the adult course participation rate declined a bit in Canada in the mid-1990, it has more recently rebounded. Over 40 percent of adults have participated in some type of formal education

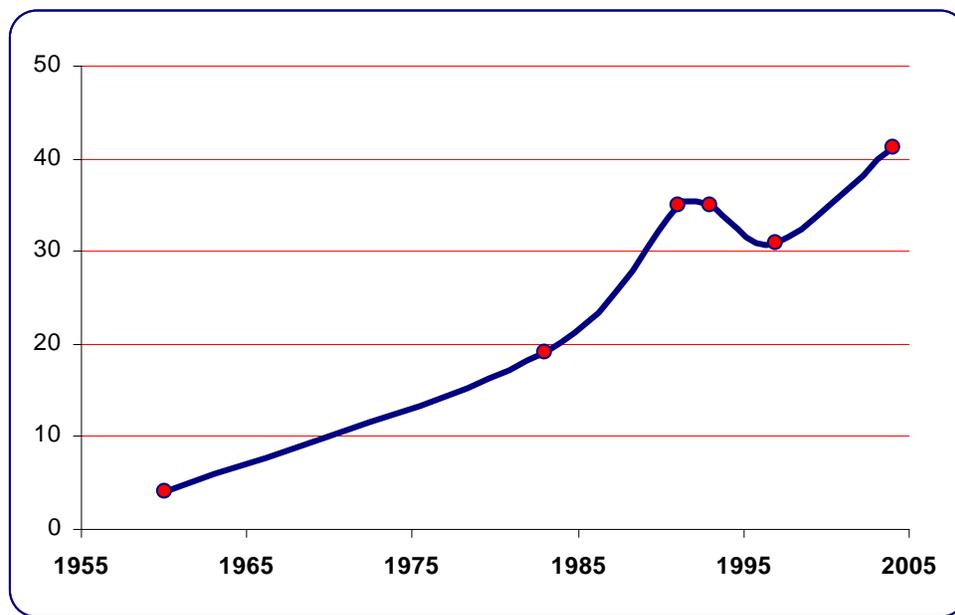
Slide 12: Post-secondary Education Completion (%)
25-29 Age Group, Canada 1961-2004



Sources: Livingstone, 2002; WALL 2004; Special tabulations.

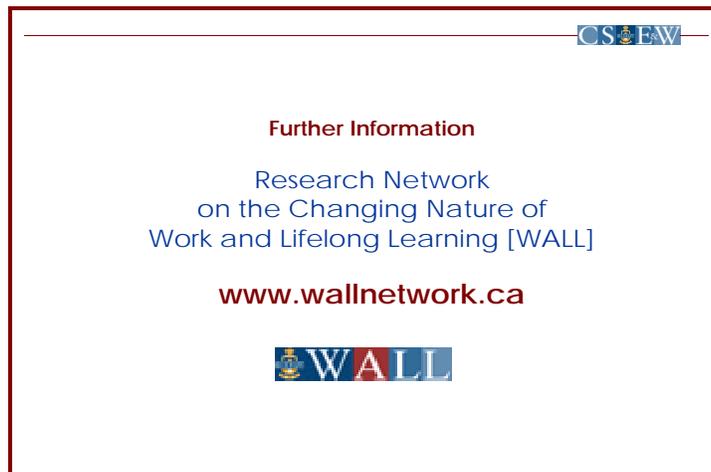
in the past year [SLIDE 13 ABOUT HERE]. This puts Canada “in the ballpark” with various other advanced capitalist societies but trailing Scandinavia. In aggregate terms, formal educational qualifications now clearly exceed formal job entry requirements in Canada and many other advanced industrial countries (see Livingstone, 2003).

Slide 13: Participation in Adult Education [Canadians Over 17, 1960-2004 (%)]



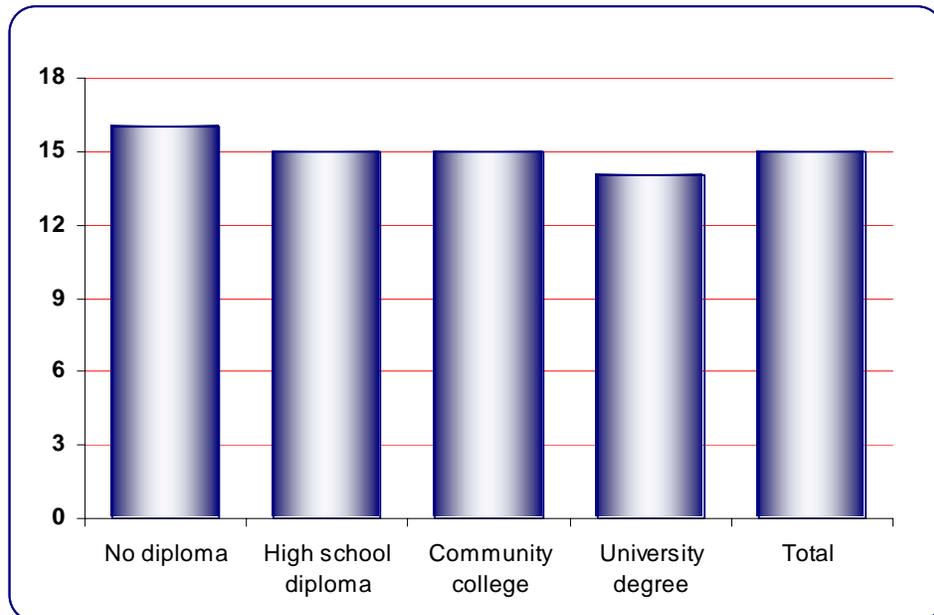
Sources: Livingstone, 2002; WALL, 2004

Before we look more closely at this formal education-jobs gap, we should recall that informal education and non-taught learning have remained foundational in all modern societies. Some new insights in this area have been generated by the research networks on New Approaches to Lifelong Learning (NALL) and the Changing Nature of Work and Lifelong Learning (WALL) funded by the Social Sciences and Humanities Research Council. The NALL and WALL networks have conducted the first inclusive Canadian surveys of work and learning in 1998 and 2004 with representative national samples of adults. Respondents were asked about their paid employment, housework, community volunteer work, as well as their schooling, further education and informal learning related to each sphere of work and other general interests. The survey design and basic findings are available at the research network website [SLIDE 14 WITH WEBADDRESS ABOUT HERE]. Further analyses based on the 2004 WALL survey and a dozen related case studies, as well as the basic survey data, will be available later for all interested people at the WALL website (www.wallnetwork.ca).



According to these surveys, over 80 percent of Canadian adults report devoting some time to intentional informal learning activities related to their paid employment, household duties, community volunteer work and/or other general interests, an average of over 12 hours a week. So intentional informal learning is much more extensive than adult education courses in which only a minority of all adults currently spend an average of only a few hours per week. This, of course, is only the tip of the iceberg of informal learning, most of which is tacit learning. In addition, the distribution of the basic incidence of intentional informal learning is quite equitable regardless of prior schooling and most other social background factors [SLIDE 15 ABOUT HERE]. According to the 1998 NALL survey, school dropouts and university graduates both spent an average of about 15 hours a week in informal learning. The gap in advanced formal educational participation between corporate executives, professionals and managers on the one hand

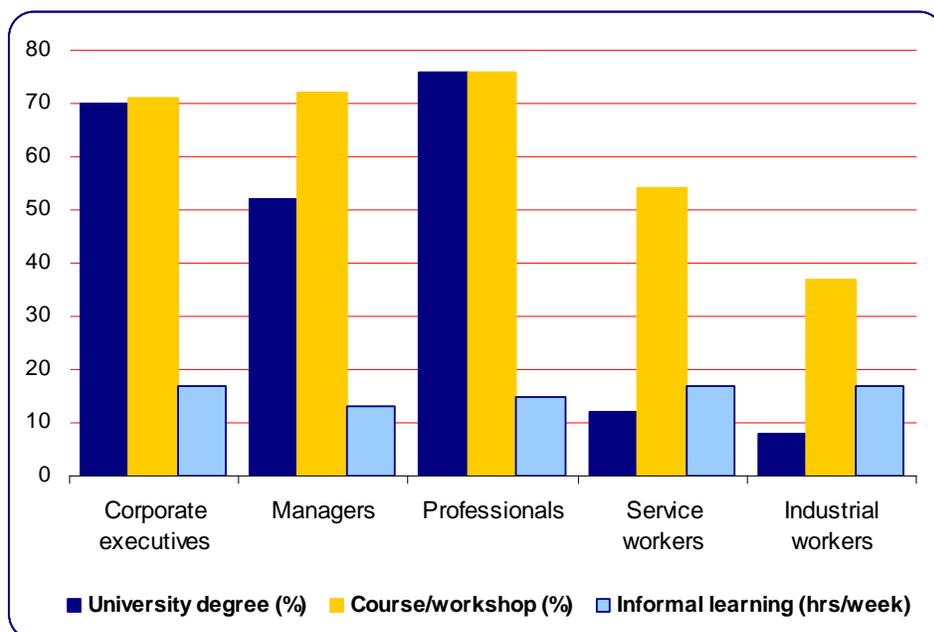
Slide 15: Informal Learning by Level of Schooling, Avg. hours per week, Canada, 1998



Source: NALL, 1999.

and industrial and service workers on the other was very stark [SLIDE 16 ABOUT HERE]. The majority of the former have obtained degrees while only a small –but growing-- proportion of workers have. However, there appears to be little difference in

Slide 16: Schooling, Further Education and Informal Learning by Occupational Class, Canadian Labour Force

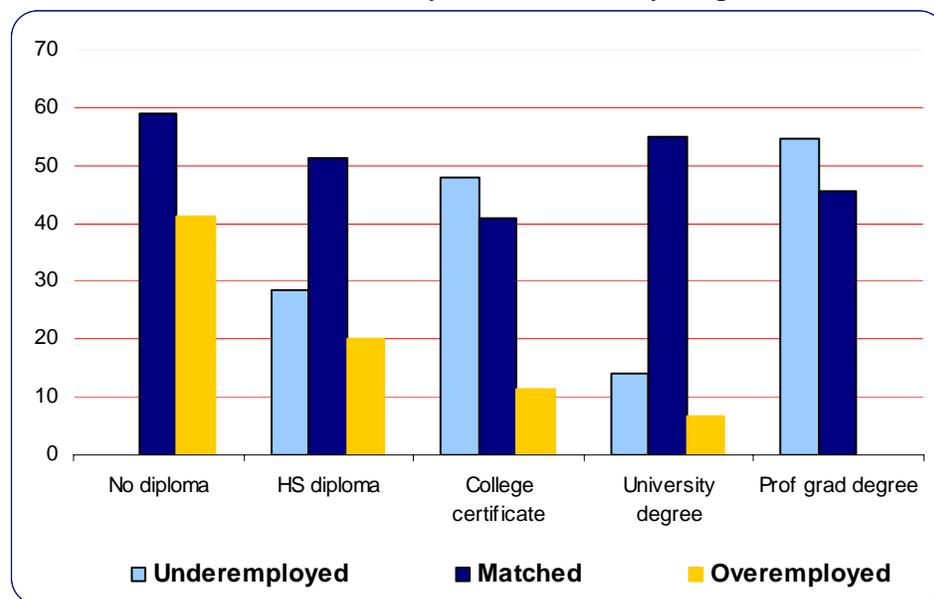


Source: NALL, 1999.

the amount of time those in all of these occupational classes devote to informal learning. The vast majority of workers continue to be actively involved in quite extensive employment-related informal learning activities. Indeed, industrial workers are found to spend more time in employment-related informal learning than occupational classes with higher formal educational participation rates, perhaps partly to compensate for limited access to organized courses. Much of this learning is quite creative and generates competent skills, often beyond those skills actually needed to do their jobs, as our case studies with workers in several union locals document (see Livingstone and Sawchuk, 2004). “Discouraged workers” and others outside the current “active” labour force also continue to be quite active informal learners in other spheres. Neither chronic unemployment nor other forms of underemployment have discouraged the pursuit of lifelong learning.

But even limiting the focus to formal education, since attainments have increased rapidly while changes in skill requirements of the job structure have been more gradual, many people now find themselves *underemployed* in the sense that they are unable to use many of their employment-related qualifications in current jobs. As I have documented in detail in The Education-Jobs Gap book (Livingstone, 2003), there are at least six dimensions of underemployment. The book addresses two time-based measures (general unemployment and involuntary reduced employment) and three skill-based measures (talent use gap, credential gap and performance gap), as well as subjective underemployment--which could reference either time or skill-based criteria or both.

Slide 17: Educational Attainment by Credential-Entry Requirement Match (%)



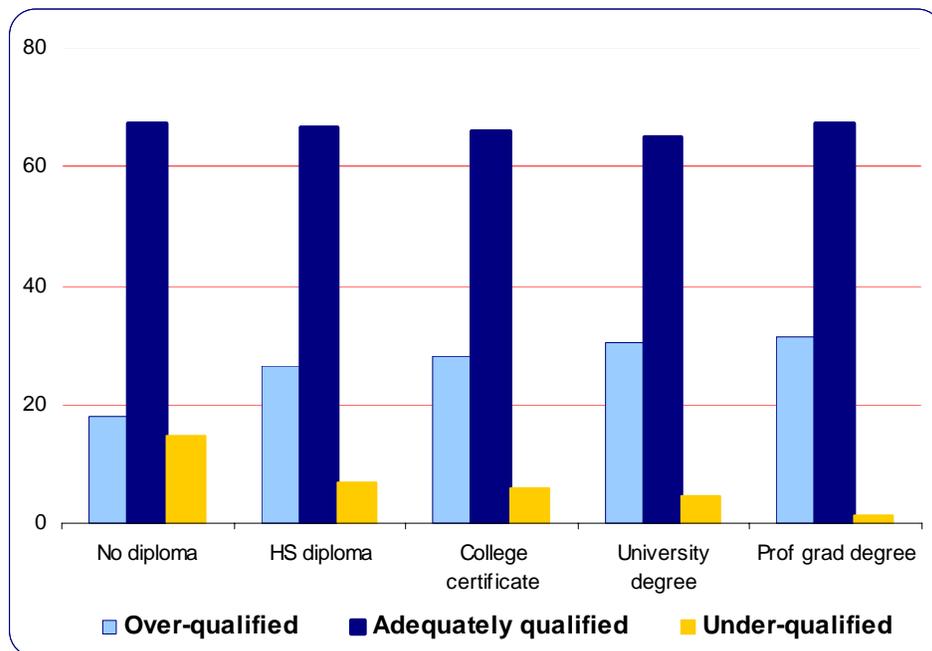
Source: WALL, 2004.

Recent estimates of the underemployment of job holders have generally found self-ratings around 20 percent who see themselves as overqualified for their jobs, around 30 percent who have greater credentials than required for entry to their jobs and higher proportions who may have more knowledge and skill, as indicated by formal education, than is needed to actually perform their jobs. The 2004 WALL survey of Canadians finds

that over a third are overqualified for their current jobs in terms of credentials [SLIDE 17 ABOUT HERE]. A slightly lower proportion, around one-quarter, believe that they are actually overqualified for their jobs. [SLIDE 18 ABOUT HERE] On all measures, the extent of underemployment is generally greater than the extent of underqualification by a ratio of 2:1 or more. Of course, these estimates should be taken with a grain of salt, in light of many other factors. More accurate measures of people’s employment-related skills and knowledge and the extent of correspondence with available jobs are certainly needed, as well as longitudinal cohort studies. But the weight of empirical evidence continues to strongly suggest that the actual skill development of the currently employed workforce generally exceeds the gradually increasing job requirements.

The extent of correspondence between knowledge attainments and work requirements differs markedly by social position, with the greatest discrepancies experienced by those with the least economic or political power to define the appropriate requirements for their work. We have found the highest levels of underutilization of working knowledge in the jobs held by those in lower occupational class positions, as well as among those job holders whose general subordination in society has put them at a disadvantage in negotiations over working conditions, especially women, younger people, ethnic and racial minorities, recent immigrants and those labelled as “disabled”. We find greater levels of correspondence between unpaid work and informal learning because of less pronounced power hierarchies in these spheres of activity. But time

Slide 18: Educational Attainment and Subjective Underemployment (%)



Source: WALL, 2004.

devoted to unpaid domestic labour tends to be inversely related to economic and political power, with women who lack or have relatively little employment-based bargaining power still doing most of it with little recognition. My colleague, Margrit Eichler, is currently conducting the first substantial study of housework and learning as part of the WALL research network.

The relative correspondence between different types of work and relevant informal learning activities also varies according to how much discretionary control people can exercise over the work. Since people are not generally compelled to do community volunteer work, relevant informal learning activities appear to be more closely associated with involvement in this sort of work than either hierarchically structured employment or necessary domestic labour. This suggests that the most effective way to increase the correspondence between jobs and employment-related learning may be to increase job autonomy through workplace democratization. In any case, further empirical studies of the full range of learning and work relations are likely to provide a more effective guide to social policy making in the “new economy” of today than the simple assumptions of human capital theory or a knowledge-based economy perspective.

In summary, there appear to have been only gradual changes in skill upgrading of the general job structure and incremental gains in the proportion of jobs predominantly involving the knowledge work of planning and design during the post-WWII period, while rates of completion of post-compulsory schooling and participation in further education courses have grown exponentially. Employment-related informal learning remains even more extensive. Rates of underemployment—in terms of general unemployment, involuntary reduced employment and educational attainments exceeding job requirements—have also grown significantly during this period (Livingstone, 2003). Such evidence suggests that we already live in a learning society in both formal and informal educational terms, but not yet in a knowledge-based economy.

Future Views

Conversion of more aspects of everyday production and consumption into saleable commodities continues, along with commercialization of further aspects of both domestic labour and previously voluntary community labours. But *limits to indefinite further capitalist expansion are becoming evident* in terms of environmental degradation and various forms of global underemployment. Emergent alternative forms of productive labour are discernible both inside and on the margins of major employing organizations. In addition, many people are recognizing the social utility of their own housework and child care work and are beginning to renegotiate and effectively juggle domestic divisions of paid and unpaid labour rather than conceding the conversion of more intimate aspects of housework in to a profit-seeking activity. Similarly, volunteer community work is frequently valued precisely because it is freely chosen in relation to our strongest interests and people are generally loathe to pay others to perform their most fulfilling activities. As environmental and social limits to expansion of capitalist production and associated wage labours become more apparent, we need to look more closely at the changing nature of paid and unpaid work in capitalist societies, their associations with different types of learning activities, and the significance of these learning and work relations for continuity and change in global capitalism.

The oversupply of qualified people for existing jobs continues to encourage employers to inflate required entry credentials as a means of selection. Indeed, credential underemployment may serve to stimulate still greater individual efforts to obtain further educational credentials and related skills to enhance relative chances in competitive job markets—a sort of educational arms race. The pursuit of knowledge is never a bad thing

per se. It continues to be an intrinsic feature of our species. But the underemployment of acquired knowledge and skills in current paid workplaces is becoming a very serious social problem. The reasonable solution to this problem is not to restrict access to educational institutions through higher fees or other means. This merely increases social inequities between those from affluent family origins and the rest of society (see Livingstone and Stowe, 2003). Besides, as the analysis of underemployment and learning activities shows, those who are underemployed would continue to seek further knowledge through informal means and their actual underemployment would persist. The only effective solutions to current underemployment problems are likely to be found in economic reforms that encourage an increasingly highly educated labour force to make fuller use of their skills and knowledge in their workplaces.

The three basic economic alternatives currently available to us are: *shareholder capitalism; stakeholder capitalism and economic democracy*. [SLIDE 19 ABOUT HERE] I have examined these economic alternatives and their basic learning and work links more fully elsewhere (see Livingstone 2003). Here I can only note that unless we have clear visions of the work alternatives that actually exist, that are preferable and that are feasible, we are unlikely to contribute to sustainable, progressive workplace change. The basic thesis is that greater genuine democratic participation will be associated with lower levels of underemployment, as well as enhanced creative capacity to cope with our increasingly threatened and threatening environment.

Slide 19: Economic Alternatives

	Shareholder Capitalism	Stakeholder Capitalism	Economic Democracy
Ownership	People's Capitalism	Profit sharing	Socialized Market
Labour Process	Re-engineering	Co-determination	Self-Management
Work Redistribution	Flexible labour force	Reduced Workweek	Full Employment
New Forms of work	Workfare	Guaranteed Income	Green work

Source: Livingstone, 1999.

The most feasible immediate work reforms include *work redistribution* and *workplace democratization*. In light of the increasing polarization of paid employment between those who feel compelled to work over 50 hours per week and those involuntarily working under 30 hours or unemployed, an obvious response is to redistribute employment hours among them, where general skills are compatible.

But even with significant paid work-time reduction measures, credential and performance-based conditions of underemployment are likely to persist among the employed labour force. If the measures of mismatch cited above are even remotely accurate, democratic workplace reorganization is greatly needed to allow many workers

to use their skills and knowledge more fully in their jobs. There are multitudes of specific innovations (including work teams, job rotation, job enrichment, incentive pay, flexible scheduling, etc.) that have sometimes been successful in enhancing both the quality of working conditions and productivity per worker—but to be sustained they need to be based on decent living standards, safe tasks in safe environments and open democratic decision-making.

In conclusion, both survey data and more ethnographic studies (see Livingstone and Sawchuk, 2004) confirm that we are now living in an “information age” in terms of the accessibility of employment-related knowledge from multiple sources, and in a “learning society” in terms of the continuing learning efforts of most workers. Although extensive underemployment contradicts the frequent claims that we are also living in a “knowledge-based economy”, the lack of immediate opportunities to use their knowledge in available jobs has not dissuaded most workers from continuing to seek ever more of it. We now have a lifelong learning culture in the labour force but one which is insufficiently recognized in the design of many paid workplaces. Educational reforms should always be encouraged for human enrichment. We will surely continue to strive to do this. But only economic reforms that address basic dimensions of work reform, including the *redistribution of paid work time* to reduce current polarization and the *democratization of paid work* to give more workers’ greater opportunities to apply their extensive acquired knowledge, can substantially enhance the quality of employment. Without such major paid work reforms, the underemployment of most working people and their latent power to flourish in more democratic workplaces may continue to grow.

In this context, the profuse rhetoric about a learning society and a knowledge-based economy that engulfs current public discourse can offer some ingredients for a useful way forward. With all due respect to materialist wisdom, all historical societies have been guided in significant ways by dominant ideologies and normative images of the “good society” and “good citizen”; the prevalence of cynical and negative imagery has often been associated with the decline of earlier civilizations (Polak, 1973).

Transformative images of a learning society in which all citizens have enhanced opportunities to combine learning with their everyday lives and more democratized work, as promoted by social activists such as Paolo Freire, Clodomir Santos de Moraes, and UNESCO now contend with instrumental vocationalist views advocated by heralds of the knowledge-based economy such as the OECD, myriads of human capital theorists and many elected politicians, for the hearts and minds of concerned citizens (see Wain, 2004). These normative images may be seen as expressions of a fundamental contradiction of education and learning in advanced capitalist societies. The increasing socialization of the forces of knowledge production (especially through the availability of free voluntary forms such as public libraries, trade union schools, and now electronic information networks) continue to provide major sources of independent knowledge for ordinary people. The ready availability of such information and knowledge presents a continual challenge to private capitalist efforts to shape and privatize the social relations of knowledge production (e.g. via conglomerate ownership of mass media, commodified information packages) for narrower economic purposes. The debate between transformative and narrower vocationalist versions of lifelong learning could be very consequential not only for educational policy and program, but our very survival.

The credibility of those incessantly advocating more instrumental formal education as economic salvation is wearing thin in the wake of mounting underemployment of a more and more highly educated labour force coupled with other persistent ecological, economic and political challenges.

Arnold Toynbee (1960, p. 278), distinguished historian of the challenges and responses of earlier civilizations, concluded that:

Every man, woman and child that is alive today is living in a world in which mankind is now faced with the extreme choice between learning to live together as one family and committing genocide on a planetary scale. Neither the human race nor any living member of it can afford to ignore the present human situation. We must cope with it if we are not to destroy ourselves; in order to cope with it we must understand it [through the pursuit of knowledge].

Lester Milbraith (1989, p. 379-80), director of the environment and society program at SUNY Buffalo, concluded a wide-ranging general assessment of prospects for more democratic governance and a sustainable relationship with the ecosystem by noting:

We do not need to sit idly by. [We should] do everything we can to promote *social learning*. We can try to reorient or redesign our institutions so they learn more readily. [for example, development of highly consultative and informed councils for long-range societal guidance] We can study and do research. We can speak up against injury, foolishness, selfishness, injustice, waste and tyranny. We can try to help our friends and neighbours think anew about things...learning to be in the world with an open mind and a quiet heart.

Such exhortations might be misinterpreted as yet more of a liberal version of the “formal education for secular salvation” mantra. But both authors are at great pains to point to informal leaning activities deeply integrated with and responsive to their environmental contexts — and this surely must include our paid and unpaid work — as our only real hope. It is now time for local, national and international level forums which bring together major interest groups and social networks in open, informed debate about the most preferable, feasible economic alternatives to address underemployment, nurture development of a genuine knowledge-based economy and fulfilling individual and collective lifelong learning, and to provide sustainable living conditions for all citizens. Our times require no less. Thank you very much.

* The Social Sciences and Humanities Research Council of Canada (SSHRC) provided funding to establish the research network on the Changing Nature of Work and Lifelong Learning in the New Economy: National and Case Study Perspectives (WALL). Further information on this survey and other research activities of WALL may be found at the website: www.wallnetwork.ca.

References

- Barton, P.E. (2000). *What jobs require: Literacy, education and training, 1940-2006*. Princeton, NJ: Educational Testing Service.
- Bell, D. (1973). *The coming of post-industrial society*. New York: Basic Books.
- Betcherman, G., Leckie, N. & McMullen, K. (1997). *Developing skills for the Canadian workplace: The results of the EKOS workplace training survey*. Ottawa: Canadian Policy Research Networks.
- Catalyst. (2003). *Catalyst census of women board directors of Canada. Executive summary*. Retrieved July 25, 2004, from www.catalystwomen.org
- Center for Workforce Development. (1998). *The teaching firm: Where productive work and learning converge*. Newton, MA: Education Development Center.
- Clement, W. & Myles, J. (1994) *Relations of ruling*. Montreal: McGill-Queen's University Press.
- Curti, M. (1935). *The social ideas of American educators*. Paterson, N.J.: Littlefield, Adams and Co.
- Engels, F. (1876). The part played by labor in the transition from ape to man. Works of Frederick Engels 1876. Retrieved September 17, 2004 from <http://www.marxists.org/archive/marx/works/1876/part-played-labour/>
- Fox, M. (2004, April 10). Stone Age ancestors may have had flair. *Toronto Star*. p. K3.
- Handel, M. (2000). *Trends in direct measures of job skill requirements*. Working Paper No. 301, Jerome Levy Economics Institute. Retrieved October 2, 2004 from <http://www.levy.org/pubs/wp/301.pdf>
- Hecker, D. (2001). Occupational employment projections to 2010. *Monthly Labor Review*, 124(11), 57-84.
- Herzog, J. (1974). The socialization of juveniles in primate and foraging societies: Implications for contemporary education. *Council on Anthropology and Education Quarterly*, 5, 170-177.
- Illich, I. (1971). *Deschooling society*. New York: Harper and Row.
- Lavoie, M. & Roy, R. (1998). *Employment in the knowledge-based economy: A growth accounting exercise for Canada*. Ottawa: Applied Research Branch, Human Resources Development Canada.
- Leckie, N. (1996). *On skill requirements trends in Canada, 1971-1991*. Ottawa: Canadian Policy Research Networks.
- Livingstone, D. W. (1999). *The education-jobs gap: Underemployment or economic democracy*. Boulder: Westview Press, Toronto: Garamond Press.

- Livingstone, D. W. (2002). *Working and learning in the information age: A profile of Canadians*. Ottawa: Canadian Policy Research Networks.
- Livingstone, D.W. (2003). Introduction: Mapping the forest of underemployment. In *The education-jobs gap: Underemployment or economic democracy*. (2nd revised edition). Toronto, ON: Garamond Press & Clinton Corners, NY: Percheron Press.
- Livingstone, D.W. (2003). Hidden dimensions of work and learning: The significance of unpaid work and informal learning in global capitalism. *Journal of Workplace Learning*, 15(7/8), 359-367.
- Livingstone, D.W. & Stowe, S. (2003). Class and university education: Inter-generational patterns. In A. Scott & J. Freeman-Moir (Eds.). *Yesterday's dreams: International and critical perspectives on education and social class*. (pp. 40-59). Auckland: Canterbury University Press.
- Livingstone, D.W. & Sawchuk, P. (2004). *Hidden knowledge: Organized labour in the information age*. Toronto: Garamond Press & Lanham, MA: Rowman & Littlefield.
- Livingstone, D.W. & Pollock, K. (2004). No room at the top. Paper presented at conference on "Maximizing Existing Talent", Task Force on The Hidden Brain Drain: Women and Minorities as Unrealized Assets, Center for Work-Life Policy, New York, September 8-9, 2004.
- Matthews, J. & Candy, P. (1999). New dimensions in the dynamics of learning and knowledge. In D. Boud & J. Garrick (Eds.). *Understanding learning at work*. London: Routledge.
- Milbraith, L. W. (1989). *Envisioning a sustainable society: Learning our way out*. Albany: State University of New York Press.
- Mitchell, J. (Ed.). (1977). *History and culture*. London: Mitchell Beazley.
- Monroe, P. (1905). *History of education*. New York: The Macmillan Company.
- Myers, E. D. (1960). *Education in the perspective of history*. (1st ed.). New York: Harper.
- Polak, F. (1973). *The image of the future*. San Francisco: Jossey-Bass.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- Reich, R.B. (1991). *The work of nations: Preparing ourselves for 21st capitalism*. New York: Vintage.
- Simon, B. (1974). *Studies in the history of education*. London: Lawrence & Wishart.
- Singh, V., & Vinnicombe, S. (2003). Women pass a milestone: 101 directorship on the FTST 100 boards. Bedford, UK: Cranfield Centre for Developing Women Business Leaders, Cranfield School of Management.
- Smith, W.A. (1955). *Ancient education*. New York, Greenwood Press.

- Statistics Canada. (2004). *Women in Canada: Work chapter updates 2003*. Catalogue no. 89F0133XIE. Ottawa: Ministry of Industry. Retrieved September 12, 2004 from <http://www.statcan.gc.ca/english/freepub/89F0133XIE/89F0133XIE2003000.pdf>
- The school of Athens. (n.d.). Retrieved September 20, 2004 from www.newbanner.com/AboutPic/SOA.html
- Tough, A. (1978). Major learning efforts: Recent research and future directions. *Adult Education*, 28, 250-263.
- Toynbee, A.J. (1960). *Concluding chapter: Education in the perspective of history*. In E. D. Myers, (1960). *Education in the perspective of history*. (1st ed.). New York: Harper & Brothers.
- Verrengia, J. (2004, March 25). Genetic mutation may have separated man, apelike kin. *Toronto Star*. p. A12.
- Vianello, A. (2004). Stone Age symbolic behaviours: Questions and prospects. Paper at Graduate School of Archaeology, University of Sheffield. Retrieved October 12, 2004, from <http://www.semioticon.com/virtuals/symbolicity/behaviours.html>.
- Wain, K. (2004). *The learning society in a postmodern world*. New York: Peter Lang.
- WALL. (2004). Basic findings of the 2004 WALL survey of learning and work in Canada. Retrieved October 5, 2004 from <http://www.wallnetwork.ca>
- Waring, M. (1988). *If women counted: A new feminist economics*. San Francisco: Harper & Row.

The Research Network on The Changing Nature of Work
and Lifelong Learning [WALL]

Centre for the Study of Education and Work
Ontario Institute for Studies in Education of the University of Toronto (OISE/UT)
252 Bloor Street W, #12-256, Toronto, ON, M5S 1V6, Canada
Tel: (416) 923-6641 ext. 2392, Fax: (416) 926-4751
Website: www.wallnetwork.ca
E-mail: wallnetwork@oise.utoronto.ca