MANUAL TRAINING: FROM IDEALISM TO VOCATIONALISM

by

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We accept this thesis as conforming to the required standard

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Abstract

Manual Training had one of its intellectual origins in Switzerland in the work of Johann Pestalozzi, and was first introduced as a rational, educational programme in Germany by Friedrich Froebel. Pestalozzi and Froebel valued the practical manipulation of physical materials for cultural, educational and psychological reasons. John Dewey, American philosopher, psychologist and educator, believed in these principles and supported the establishment and growth of manual training in the United States. Progressive educators in Canada were important advocates for manual training.

A leading “new educator,” James Robertson, with the financial backing of William Macdonald, started manual training centres in Canadian schools in 1900. I argue that manual training became part of the Canadian school system for cultural, educational and psychological reasons grounded in the philosophies of Pestalozzi, Froebel and Dewey.

The search for social, industrial and educational efficiency, the growth of industrialism, new scientific research, and urban growth were among forces justifying the Royal Commission for Industrial Training and Technical Education in 1914. The Commission provided new reasons and new impetus for manual training in the public school curriculum. Manual Training became a pre-vocational course of study and an introduction to the purely vocational training in High Schools.

The vocational function of manual training was reinforced by the Putman-Weir survey of the British Columbia school system in 1925. I conclude with an illustrative
portrait of the start of manual training in a mining town, Cumberland, to show the change of purpose of manual training.

This investigation was mainly based in library research for historical information. The Robertson evidence was obtained from original documents, and the story of William Macdonald's contribution to manual training required research in McGill University and Macdonald College, Montreal.

Manual Training as a vocational course became part of the superstructure of capitalist society preparing students to fit into the established economic order. One influential administrator, John Kyle, conceived of manual training benefiting students from lower classes. Changes in the sixty-eight intervening years, resulting in Technology Education, invite further research.
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Preface

I begin this book with a brief excursion into my own biography, because I believe it will help to explain why I initially set out to explore the sociology of the school curriculum....(Whitty, 1985)

Geoff Whitty’s book about curriculum theory, research and politics may intersect with the topic of this thesis but his reasons for a biographical introduction reinforce my own reasons. I think that a brief auto-biography helps writer and reader to avoid confusing personal tastes with social value systems, or to see one’s personal attitudes, assumptions, conclusions and beliefs as widely accepted social norms.

My father was a state employee, a civil servant, in Liverpool, England from 1913 until his death in 1962. My mother was not in the paid labor force; she was a housewife or homemaker. Both had come from working class families but because of my father’s skill level and subsequent work trajectory the family had a class location, using the dimension of relationship to authority as a means to differentiate class locations, as “skilled supervisor.”¹ This location is further modified into a de-commodified state service sector indicating a state service middle class location. In popularly accepted terminology my family was lower middle class. My father did display a degree of class consciousness in that he held some degree of “pro-statist” and “anti-capitalist” attitudes.

My schooling began in 1948 in a preparatory school run by Catholic nuns in Birkenhead, and continued in an all-boys direct-grant grammar school owned and operated by a Catholic order of “brothers.” Both schools were acutely authoritarian and corporal punishment was widely used to ensure discipline was maintained. Although I did,

¹ It should be noted that the concepts of “class,” “class locations” and related topics will be defined and elaborated on at a later stage of this introduction.
on several occasions, have confrontations with teachers, usually concerning the well-defined regulations about appropriate behaviour, I never questioned the course content of the school curriculum. It never occurred to me that there might be other facts, other historical events or other perspectives from which to view the presented courses. Only after school and when I attended a provincial university in an industrial city did I develop a more systematic political outlook. This development was not due to the science courses I was enrolled in, as questioning of content was not encouraged, but due to fictional literature that I chose to read, and a social interest in performing folk music. During holidays I worked in a local soap-making factory organized in a patriarchal fashion with no worker's unions allowed. I think that the experience and social encounters in that particular work environment cemented class consciousness and awareness of class exploitation in me.

Having failed the second-year examinations of a three-year Honors B.Sc. in Chemistry, I found myself uncredentialled and unemployed with no direction to aim for. I took a job in the stock room of a major department store checking materials before they were transferred to the retail departments, and while there I became conscious of the "class" culture of my fellow workers, of their social expectations and expected life trajectories. As a mature student of twenty-one years, I decided to become a teacher, with

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2 It is an irony that the founder of this factory complex, a monument to the industrial revolution, modeled the whole area and his own social relationships according to a feudal social arrangement. He built, next to his factory, a model worker's village of houses tied to the factory corporation, a reproduction of a medieval village in the surrounding countryside and a private residence, on an enclosed estate, emulating the feudal manor house. When he was granted a peerage he had moved from a petty bourgeois grocer's family class location to a capitalist owner location with feudal overtones.
no political analysis of the role of the education system but a “class consciousness”
manifested in pro-statism and anti-authoritarianism. The latter was directed at the people
in the “capitalist class location” and also people with “delegated capitalist class powers”3
(Wright, 1997).

I enrolled in an all-male Catholic teacher training college. An upbringing in an
extremely doctrinaire Irish Catholic family and culture was still influential and I was still an
intense apologist for Catholicism. However, I was now better informed, freer from family
cultural influences and correspondingly more questioning. Unlike Geoff Whitty (1985) my
preoccupation was the existence of God and not the sociology of the curriculum, and my
primary intellectual and emotional development was the rejection of God and religion.

One year teaching mathematics to working class girls in a secondary modern
school made me dissatisfied with my teaching situation and, being a mathematics specialist
rather than a sociologist, I found reasons for my discontent in national party-political
analysis rather than in a closer investigation of education’s role in the reproduction and
production of social inequities. A move to Canada, two years teaching science in a rural
community Junior High School, two years as a professional musician followed by one
more year of teaching prefaced a major life change. I left teaching in 1972, started a
commune and eventually trained and gained credentials as a journeyman carpenter. As a
carpenter I experienced class mobility from a state service middle class to a private sector,
skilled working class location. This class trajectory brought with it a change in life
experiences and class specific experiences, such as union activity and picket line duty. I

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3 “delegated capitalist class powers” refers to the domination power of employees in high authority class
locations such as expert managers and supervisors and skilled managers.
was able, as a carpenter, to recognize different social reactions to me than I had been aware of as a teacher. Similarly I became aware of different language codes. The theme of Basil Bernstein’s work (Bernstein, 1977) is that language is the outward sign of a whole culture and that culture is transmitted through language. In my case, I became aware of the culture being transmitted through the restricted language codes I became associated with, and correspondingly more aware of class stratification. Before the culture took too firm a control of my life I decided to decline offers of Union administration employment and return to university. During my years as a carpenter I had developed an appreciation for and a liking for practical work so that I combined my mathematics teacher background with my carpentry skills and trained to be an industrial education teacher. When I did my training as an industrial education teacher there was no indication, as far as I knew, that the subject was anything other than a vocational course. The year induced high levels of insight and gave me a different perspective on education that will become apparent during this thesis.

A teaching position was available in the area of my home immediately after I had completed my training and I accepted the position, in a Junior High School, teaching all facets of industrial education to Grade 8 to 10 students. From the beginning I was

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4 Groups within society develop specific types of language communication which he calls “codes,” specifying two such codes, restricted and elaborated. The restricted code is of limited range, being practical and particularistic, whereas the elaborated code is more extensive, conceptual, theoretical and universalistic.

5 Rather than elaborate on the topic of “vocationalism” at this point, it should be known that the concept is an integral theme of this thesis.

6 The first observation that I made, after my appointment, was that the “shops” were only for boys, and that the girls had to take Home Economics, at least when the courses were mandatory in the first Junior High School level, Grade 8. The first condition that I requested was that all my courses should be co-educational.
conscious of the ability level and social class location of students designated to my courses. Neither opinion was based on empirical evidence, but the experience made me inquisitive about timetable distribution and its effects on student choices. I had at first understood politics from a grand theory and international perspective, but later became interested in a more specific aspect and active in the Teacher's Union, focusing on teacher's working conditions and salary negotiations.

My early attempts at breaking down the authoritarianism of the teacher's role was undermined by the coercive nature of the school structure. I had never conceived of education as part of the cultural superstructure of capitalist society in that it tends to produce and reproduce ideological structures and concepts supporting the economic base and the dominant economic class (Lewis, 1965, p. 80). A return to university and an exposure to the sociology of education gave me my current interests in the curriculum and in particular the role of Technology Education as part of the school structure. It is the combination of my biography and current interest in Technology Education that I hope will give a particular perspective to the arguments of the thesis.
Acknowledgements

I had been teaching “shop” for about fourteen years and decided I needed an intellectual “jolt”, some intellectual stimulation. Luckily I found Educational Studies at U.B.C. The first sociology course I enrolled in was “The Sociology of the Curriculum” given by Lynn Chisholm, a visiting professor from Germany. She introduced herself as from the working class of northern England, and informed us that she was not interested in the curriculum as such but in the “hidden curriculum.” I would like to thank her for crystalizing a new perspective on education for me, and starting me off on a new exploration. Her influence was reinforced by the work I completed with Don Fisher, subsequently a member of my committee, and I thank Don for the discussions, support and friendship during the Master’s programme and during the writing of the thesis.

More relevant to the actual thesis was the incredible help and direction I received from my advisor, Bill Bruneau. Bill has an intensely busy schedule and yet edited and directed my writing and research very thoroughly. Despite my anger, loss of temper and aggravation with my thesis on several occasions Bill never lost his equitable demeanour. Thank you for the direction and help, Bill. Bill replies to e-mail more promptly than anyone I have encountered and that connection kept me in contact with the university and Vancouver in general.

The third member of my committee read and commented on my writing, offering positive suggestions. Steve Petrina made me think more about the whole concept of idealism, vocationalism and politics for which I thank him. Steve, Don and Bill showed me that the dominant paradigm of the “new right” has not influenced them.

I wish to thank my daughter, Siobhan, for her help and support during the writing process. She has just finished a doctoral thesis in London, England and knew many of the trials through which I went. It is very satisfying to be able to learn from one’s daughter.

Lastly I thank my partner of twenty-six years, Evelyn, who has given me enormous feedback and input about my writing, computer work and ideas concerning the thesis topic. She has had to put up with my frustrations and irritability but has always been there to offer help and suggestions. I doubt if I could have finished this project after two bicycle crashes and resulting head injuries if it wasn’t for Evelyn’s love and care.
CHAPTER 1

Introduction

Canada and most other advanced industrial societies have been in an acute state of change for the last two decades. The re-organizing and re-location of many major corporations have altered communities and the expectations of the population affected by the actions of these industries (Marchak, 1991). A measured unemployment figure of 9 to 10% has become the norm in Canada while “the food bank,” once thought of as a temporary relief charity, has been institutionalized. Other social indicators, such as the growth of alternative “populist” political parties, the lessening of support for some traditional political parties, and increases in property crime, are further signs of social instability. An integral part of the social system, and the brunt of constant criticism, is the education system. High unemployment of young people who have advanced levels of education and, often, more than acceptable credentials, creates skepticism about the value of education and, at the same time, demands for new schools, new universities, new courses, new curricula and new technology.

Each of these large-scale developments has had a demonstrable effect on the curriculum of public education. In particular, changes in the title and curriculum of Technology Education indicate a continued movement away from the idealized educational values of manual training\(^1\) to a curriculum intended to train workers for technology-based businesses. This thesis examines the idealistic, cultural and educational

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\(^1\) “manual training” is used here in the Froebelian sense of “handwork” or practical manipulation of concrete objects rather than the early American curriculum term which denoted a vocational intent to the subject. The phrase was also used to describe the 1900 curriculum addition to Canadian education (in selected centers) which, it has been argued, was also a vocational course (Dunn, 1978)
origins of manual training and traces the changes to the vocational function of industrial arts. I begin with idealistic educational theories of European writers such as Pestalozzi and Froebel, and the American educator, social reformer and philosopher, John Dewey. Throughout the thesis I emphasize ironies and contradictions in the provision of the subject which arose from the conflicting motives for the existence of Manual Training. Thus, in summary, the point of this thesis is to show how Manual Training, originating in educational ideology, became a vocational course, a means to produce trained and trainable workers required in Canadian society.

Outline

The thesis shows how Manual Training moved away from its original conception in the earlier days of mass education. It shows how the epistemology and philosophy of Pestalozzi, Froebel, and Dewey have been displaced by "vocationalism." I provide an historical and philosophical base on which to compare and contrast future developments in the discipline, then examine the European origins of handwork, the physical manipulation of concrete materials to create objects useful to others and eventually objects of use and of interest to oneself, using the works of Pestalozzi and Froebel. I also consider the American basis for the idealistic, cultural purposes of manual training in the works of John Dewey.

Chapter Two is a study of the support found in Ontario at the end of the 19th century for the inclusion of manual training in the school system. One of the main advocates for the Froebellian idealistic concept of manual training in Canada was James Hughes; I examine his contribution, and review the vocational intentions of several early
advocates for manual training showing the contradictory motives for its inclusion in the curriculum. Chapter Three describes the beginning and spread of Manual Training in Canada influenced by William Macdonald and J.W. Robertson, then assesses the changing role of manual training in the school curriculum. J.W. Robertson, as chairman of the Royal Commission for Industrial Training and Technical Education was a key player in the change of manual training from an idealistic educational course to a vocational course for training manual workers.

Chapter Four explains the origins and organization of manual training in British Columbia and the work of the first Manual Training Inspector, Harry Dunnell. I show that Dunnell had an idealistic conception of manual training similar to, and influenced by, the European idea of the subject originating in Froebel. When Dunnell resigned in 1914 he was followed by John Kyle. Kyle had a different title, Organizer of Technical Education, and a different motive for the inclusion of manual training in the curriculum. His role in the change of manual training from its idealistic origins to a vocational course for manual workers is a feature of Chapter Four.

Chapter Five examines the crystalization of the vocational purposes of manual training in British Columbia in the survey conducted by Putman and Weir and their subsequent recommendations. I end with a description of a “shop,” a teacher of manual training, and the social and industrial environment of the community in which the “shop” operated in order to illustrate the transformation of the discipline from “idealism” to “vocationalism.”
Technology Education has a history as a vocational course. Technology Education, the latest metamorphosis of Manual Training, is taught in the United States of America as part of the general education curriculum. It is beyond the scope of this thesis to examine the relationship of Technology Education to post-Taylorist industrial organization although such a study would be natural continuation of the transition studied in this thesis.

I here define some terms used commonly in the thesis.

Idealism

"Idealism" has two main meanings, one philosophical and another, maybe in more common use, relating to an understanding of perfection or excellence. An "ideal" is a state corresponding to one's highest conceptions. It is a position or manifestation of excellence or perfection. Idealism is the pursuit of an "ideal" state or the representation or things in an ideal or idealized form. In the context of this common or general usage, to be "idealistic" implies that one is a believer or follower of the highest level of a conception. When any of the terms "idealism," "idealistic," "ideal," or any related terms, are used in the body of this thesis, it will be assumed that the above meaning is intended.

Idealism has at least three philosophical forms but all are based on the definition that idealism is any doctrine that believes reality is essentially mental in nature. As there are no firm boundaries to the concept of idealism there are many forms of "philosophical idealism." Plato thought that the only way to arrive at true knowledge was to ignore sensory experience and consider only the contents of one's mind. He was an "idealist" because he believed that the ultimate reality consisted of ideas. (Hergenhahn, 1992, p. 40)
Kant divided “thought” into “categories” that he considered to be innate. Some truths were certain and not based on sensory perceptions but other ideas relied on sensory experience and were modified by some thought categories. What we experience consciously is determined by the combined influences of sensory information and the innate categories of thought. I argue that Kant was a rational idealist with empiricist tendencies (Hergenhahn, 1992, p. 184; Russell, 1961).

Hegel considered that sensory perceptions interfered with pure truth, which he termed “the Absolute.” The “Absolute” for Hegel was God. He used dialectic rationale to attempt to reach the “Absolute.” Dielectic argument brought one closer to the truth (Russell, 1961). Hegelian idealism offered a philosophical basis for the work of several intellectuals who influenced the rise of manual training.

When “idealism” is used in the body of this thesis I refer mainly to the meaning relating to “excellence” or “perfection.” It is understood that when the concept is used without a qualifying name of a philosopher the meaning relating to “excellence” is intended. When “idealism” has a philosophical implication I refer to the philosopher whose ideas suit the context, for example, “Hegelian idealism.”

The following section serves a number of purposes. I use the term “social class” frequently in the body of the thesis and a definition is necessary to avoid confusion. The basis of the “social class” definition is found in the works of Marx, and a brief examination of Marxist social theory at this point will provide an elucidation of the “class” concept.

Manual Training, I argue, changed from an idealistic educational pursuit to a vocational preparation. This change transformed its function into an integral part of the
superstructure of industrial capitalism, and an introductory explanation of Marxism and "social class" theory help position the thesis argument in a theoretical context.

Social Class

The term "class," referring to the stratification of society according to defined groups, irrespective of definitions, is a contentious issue. There are people who don't accept the existence of the concept "class" especially in a western Canadian social environment. They point to a stratified society like England and note its feudal history as the possible origins of its social arrangements. North America, it is argued, being geographically and socially separated from "class" historical roots in feudalism, is not affected by class stratification but rather by other selection processes such as racial and gender differences. It is not the intention, in this thesis, to minimise the effect of racial or gender inequities, but it can be argued that "class" is a more fundamental cause of inequities than either race or gender. This not being the place to indulge in such a debate I merely note "social class" as a primary manifestation of social stratification, and analysis will proceed from that initial premise.

As I use the term frequently it is nonetheless helpful to examine and define my concepts of "social class." The fact of "class" is noticeable, I suggest, in schools, housing designs and choices, personal tastes, recreational activities, language usage, social unrest and community violence. Certain activities may be designated as "class specific" pursuits, such as labor union participation or stock-market investment.

class happens when some men, as a result of common experience (inherited or shared), feel and articulate the identity of their interests as between themselves and as against those whose interests are different from (and usually opposed to) theirs. (E. P. Thompson, 1968, p.9)
Thompson's definition is grounded in the idea that each individual experiences life subjectively. When a large number of people, a significant proportion of a society, share common experiences and attitudes a class "happens." On this account, individuals with common life experiences constitute "class" groupings. Because class experiences, attitudes and requirements differ, the classes are often in opposition to each other.

Although this perception of the concept is applicable to many of the items in the list of evidence noted above, it misses the underlying causes of the individual differences which distinguish a class. I require a more causal explanation and look initially to the production of wealth, with the understanding that wealth is unevenly distributed.

In the earliest epochs of history we find almost everywhere a complicated arrangement of society into various orders, a manifold gradation of social rank. In ancient Rome we have patricians, knights, plebians, slaves; in the Middle Ages, feudal lords, vassals, guild masters, journeymen, apprentices, serfs; in almost all of these classes, again, subordinate gradations.

The modern bourgeois society that has sprouted from the ruins of feudal society has not done away with class antagonisms. It has but established new classes, new conditions of oppression, new forms of struggle in place of the old ones.

Our epoch, the epoch of the bourgeoisie, possesses, however, this distinctive feature: it has simplified the class antagonisms. Society as a whole is more and more splitting up into two great hostile camps, into two great classes directly facing each other; bourgeoisie and proletariat (Marx & Engels, 1888, p. 7).

In the simplest terms there are the workers, the producers of wealth, and the bourgeoisie, the owners of wealth and the means of production of wealth. This perspective uses the classes, the relationships to the means of production, as a structure of empty spaces or locations with respective class names into which individuals are fitted or placed. The locations are fixed, relative to each other, but the individuals may move location within the structure.
A simple gradational perspective leads to an analysis that views class as groups distinguished by differences in their material conditions. This perspective is the popularly accepted understanding of “class” and leads to descriptive terms such as upper class, lower middle class, and lower class. A common sociological starting point for class analysis is in the works of Marx and Weber and although Weber distanced himself from Marxist class analysis there are, in the present industrial, social and economic environment, applicable aspects of both analyses. Initially, both analyses present economic causes for the resultant material conditions of the classes. Marx views the relationship to the means of production of wealth and the exploitive relationship that must exist between the owners and workers as fundamental to his class analysis. Weber’s analysis starts with the concept of “market capacities” or, simply, what the people have to sell. A person’s material well being depends on the amount and kind of power they possess to generate income from the sale of their skill or material goods in a market economy. Another facet of Weberian theory is the concept of “status groups,” groups which are linked in many ways to class locations. For example, “Property as such is not always recognised as a status qualification, but in the long run it is, and with extraordinary regularity” (Weber, as cited in Joyce. (1995) p.36). Status groups are recognised by their consumption of goods determined by their style of life which, in turn, determines a social appraisal of honor. Within status groups, a certain life style is expected from persons wishing to belong to the group.

I consider that the basic theory of Marx, with some reconstruction to account for changes in social relationships to production of wealth, and inclusion of the more
economically based aspects of Weberian theory, provides an analytical framework with which I feel satisfied.

Capitalism, the economic system in which we live, relies on a class of owners, the bourgeoisie, and a class of workers, the proletariat. The material wealth of the bourgeoisie depends on and causes the relative lack of wealth of the proletariat. This relationship persists due to coercion which can be physical, legal, economic and/or consciousness control.² The bourgeoisie, the owners of the means of production, do not return all of the wealth produced to the worker but retain a proportion of the produced wealth in surplus value. Some of the surplus value is returned to a select group of workers to produce higher wages, resulting in correspondingly better material conditions and more elaborate life style. The dependency of the proletariat on the bourgeoisie using proletariat labour to produce surplus value is an unbalanced relationship as control and power are in the hands of the bourgeoisie. This process is exploitation, a concept fundamental to vocational preparation for manual work. Idealistic, purely cultural manual training has no intimated implication of class-based exploitation.

In the material above, a simple traditional Marxist framing of class locations has been used in which people who work for a wage are named proletariat, but in the context of the late twentieth century industrial society it is difficult to think of doctors, lawyers or university professors as “working class.” A chief-executive officer of a large corporation occupies, in traditional Marxist terms, a “proletariat” location, but in terms of control,

² Coercion is not limited to the four methods listed but may be applied by all of the four and/or many others. The “consciousness control” refers to the molding or shaping of mental faculties by, for example, mass-media delivered ideas. For a more detailed discourse on this topic read The Manufacture of Consent (Chomsky, 1984)
power, and authority, he/she assumes, and displays, ownership characteristics, that is, he/she emulates one of the bourgeoisie. The two locations are in conflict, as described in the previous paragraph, and so a “class location” is assigned depending on “delegated capitalist class powers”(Wright, 1997). As mentioned in the previous paragraph some of the surplus value produced is returned to a select portion of the “workers” in proportion to two major factors, the skill or expertise possessed\(^3\) and/or the authority wielded within the organization.\(^4\) If the factors of skills possessed and authority wielded, viewed together as “delegated capitalist class powers,” are considered within the traditional proletariat group a far more complex map of “class locations” is derived than the original Marxist three-group map.

State employees pose a particular problem as they, in most cases, are not connected to the means of production of wealth. In traditional Marxism all parts of the state apparatus are viewed as the superstructure of the capitalist state, providing mechanisms for the production and reproduction of capitalist ideology and the protection of the capitalist economic structure. In some modern interpretations a distinction is made between those aspects of the state which overtly protect the status quo, the Capitalist production machinery and ideology, such as the legislature, the judiciary, the police and the armed forces, and those departments that fulfil a utilitarian, socially beneficial service such as hospitals, welfare departments, education, or highways departments. This distinction parallels the two opposing motives for manual training in the school system.

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\(^3\) Skill and expertise are more often measured in increasingly higher credentials.

\(^4\) There are many other factors which may influence “class location” within the traditional proletariat, but within the confines of this introduction they are too nebulous to be discussed.
When manual training is given a vocational function it becomes part of the superstructure and, supporting the economic base, prepares workers for industrial capitalism.

The purpose of this introduction is to provide a grounding for the discussion featured in the thesis. An elaborated class-location map in the private sector and a map of state-sector locations will provide a helpful aid to understanding social class. A simplified map, with combined adjacent locations, for Canada is also included in this introduction to provide a specific basis for the national context.
### Relation to means of production

<table>
<thead>
<tr>
<th>Owner</th>
<th>Employees</th>
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<tr>
<td>Many</td>
<td>Capitalists</td>
</tr>
<tr>
<td></td>
<td>Small employers</td>
</tr>
<tr>
<td>None</td>
<td>Petty Bourgeoisie</td>
</tr>
</tbody>
</table>

#### Relation to authority

- Experts
- Skilled
- Non-skilled

#### Relation to scarce skills

( Fig. 1) A Class Typology (Wright, 1997)

- Extended expert managers: 13.9%
- Non-skilled managers: 3%
- Skilled supervisor: 6%
- Experts: 3.4%
- Extended working class: 73.9%

(Fig. 2) Modified Class Map for Canadian Employees (Wright, 1997)
It should be noted that the labeled framed spaces (for instance, non-skilled workers in Fig.1) are not specific classes but locations distinguishing class relations in capitalist society. In figure 2 the location classified as “unskilled workers” has been amalgamated with the two adjacent locations and given the popularly used name, “extended working class.” In figure 3 the terms “middle class” and “working class” are used to describe class locations consisting of adjacent employee locations displaying various levels of capitalist/worker distinctions, such as “authority” or “skill.”

Other Terminology

**Manual Training.** The name given to the first handwork course introduced into Canadian schools in 1900. It emphasized hand-eye coordination, spatial relationships, individual craft skills and elementary wooden project construction. It is also used to describe the educational contribution to manual activities made by Pestalozzi and Froebel.
**Industrial Arts and Industrial Education.** In the 1930s there was a shift in focus, and in name, from “manual arts” to “industrial arts.” This change signified a movement from craft-based, individual hand-skill courses to courses preparatory to factory-oriented, machine-based industrial production. In the 1970s any remnants of educational liberalism and progressivism found in Dewey’s philosophy and earlier versions of manual training disappeared with the loss of the word “art” and the change of name to “industrial education.” Although this thesis does not extend beyond the 1930s the different terms are sometimes used for explanatory reasons.

**Technology Education.** Industrial education changed to Technology Education in 1990/91. This was more than merely a name change as the curriculum has changed also. Technology education supposedly emphasizes design and problem solving as opposed to the tool skills and construction focus of industrial education. As the term refers to the subject taught in the school system of the 1990s, whether it be old or new curriculum, I use “technology education” to name the subject generally, with no intent to distinguish between the previous curriculum and the new Integrated Resource Packages for the Technology Education Component. A more specific definition of Technology Education illustrates the change of concept in the subject area:

the new focus is on design and problem solving, manufacturing, construction, transportation, communication, power and energy; technological choice; and critical study of the impact of technology (Lewis, 1991).

Technology education, Lewis indicates, is an integral part of the general education curriculum of the United States, the core curriculum, and it is not taught as a job preparation course.
Vocational educational. This term means any education designed as a direct preparation for work. In most common understandings it describes preparatory courses for skilled manual occupations or secretarial-type work, but includes all job-preparation work.
CHAPTER 2

In 1978 Timothy Dunn argued that the introduction of vocationalism into the public schools after 1900 was largely a result of a “thrust for efficiency” aimed at preserving stability as society adjusted to industrialism. “Vocationalism” in Dunn’s thesis included manual training for the boys and domestic science for girls. I use the term to refer specifically to “manual training” and other closely related courses. Vocationalism tried to shape students to conform to society’s needs by preparing them for industrial occupations.

Vocationalism drew only a minimal commitment to teaching marketable work skills in favour of inculcating industrial work norms including discipline, time-thrift, submission to authority, respect for property rights and the acceptance of one’s place in the social order. (Dunn, 1978, p. 2)

I argue that manual training had an idealistic origin in Europe and retained its educational and cultural functions, despite the pressures from a variety of vocational advocates, in the 19th century. It became a primarily vocational course after 1914. In this chapter, I offer a review of the educational theories of Pestalozzi, Froebel and Dewey, especially their theories of manual training. I show that manual training has an idealistic, educational basis.

Johann Heinrich Pestalozzi

The moment Rousseau’s *Emile* appeared, my visionary and highly speculative mind was enthusiastically seized by this visionary and highly speculative book. (Pestalozzi, as cited in Downs, 1975)

The classical tradition, represented by the belief that Greek philosophy was the highest form of wisdom, became the basis for Renaissance education. However, the
growth of scientific research and humanism was accompanied by the concepts of “nature” and “reason.” Man was not seen as dependent on God for salvation from his innate corruption but was capable of improvement through reason. Jean Jacques Rousseau was a “philosophe” of 18th century France and the father of the romantic movement (Russell, 1961). While he lessened the importance of the intellect he raised the position of innocence and human feelings, believing that nature and innocence were corrupted by education. Rousseau’s *Emile* (1762) took the view that Emile learned naturally by observation of real objects and the subsequent discovery of, for example, scientific relationships or principles. Since books were banned for Emile his education was accomplished in a natural way by manipulation and observation of concrete things. This conception of materialism, that is the reliance on physical matter as opposed to preoccupation with perceptions of the mind, the intellectual, influenced Pestalozzi, Froebel and Dewey, as did the child-centered educational philosophy demonstrated in *Emile*. The mind-body dualism understood in Rousseau’s materialism implies many contradictions (Rousseau was a believer in God) and, as with Dewey, pragmatism allows both conceptions. Canadian education finds a place for the materialistic but leans heavily in favour of the intellect. However, child-centered education is now an important facet of the public school system.

The book *Emile* and Rousseau’s naturalism were profound influences in Pestalozzi’s life. Whereas Rousseau’s writings, especially *Emile* and *The Social Contract*, helped undermine the power and privilege structure of eighteenth-century France and

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As the first philosopher of “Romanticism” Rousseau’s ideas directly influenced European and American thought from mid-18th century to mid-19th century. His political philosophy, as described in *The Social Contract*, has been connected to leaders from Robbespierre to Hitler.
Europe, Pestalozzi extended the dissenting and often contradictory naturalism of *Emile* to set an educational direction that he considered necessary to reform the corrupt⁶ society of the period. To understand Pestalozzi's educational practices more fully it is necessary to describe a little of his life and eighteenth-century Swiss society.

Pestalozzi was born in 1746 in Zurich, Switzerland. His father, a surgeon, died when Pestalozzi was five years old but his mother, in order to keep up the family social rank, deprived herself so that her three children were fed. Pestalozzi was kept at home and not allowed to play with other boys. Growing up relatively isolated in his home he developed intellectual interests, but spent each summer with his grandfather, a village pastor, who acted as teacher for the village children and a care-giver for the village poor.

His first choice of career was the ministry, so that he could work for the poor, but lacking natural ability in public oratory he was unable to give a sermon and thus failed his calling. While at university he joined a radical group called “The Patriots” and campaigned with them to correct public official's abuses of authority and other injustices. Several days in prison and the reputation that he earned as a member of the radical group put an end to his second choice of career, becoming a lawyer. After a serious illness his doctor advised him to live in the country and, as he was influenced by Rousseau’s naturalism and considered life as a farmer to be idyllic, he bought a farm. His attempts at farming failed and so he built a wool spinning mill on the property, a venture that also lost money, leaving Pestalozzi in heavy debt.

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⁶ "corrupt" refers to a society in which serfdom existed until Pestalozzi was turned 50, and in which the mass of people had no rights and lived in poverty. Government officials used their positions to increase their wealth and although Switzerland was nominally a republic, the ruling families considered their positions of power to be hereditary (Downs, 1975, chpt. 8)
Pestalozzi married a wealthy, beautiful woman, the one-time fiancée of his best friend, a "Patriot," who had died. Both being idealists and naturalists the Pestalozzis started a school on his property for fifty destitute children, many of whom were gathered from the street. They called their school an industrial school and the fifty children living at the house were trained physically, morally, and intellectually to become self supporting citizens. Despite some success with the children, the school became bankrupt and had to close down after only five years. Pestalozzi never considered his Neuhof teaching farm to have been a failure as he witnessed the improvements that some of the children had made. He never lost faith in social reform through education and remained optimistic, considering his own educational methods to be superior to anything offered in the eighteenth-century Swiss milieu.

In the twenty years following the closing of Neuhof Pestalozzi produced his greatest literary works. His educational ideas became more clearly defined, although he has been criticized for being too repetitious and inconsistent, for writing with many digressions and having no plans for the structure of his works. In 1798 the revolutionary French army invaded Switzerland and instituted a democratic constitution resisted by the population in some areas. Many people were killed and many children made orphans. Pestalozzi was given charge of an orphanage at Stans where, it is considered, he first applied his educational method. This situation lasted for only five months and more war caused the home for orphans to close down. The methods and principles with which he struggled at Stans did, however, lead to other educational schemes.
His friends found him a school at Burgdorf where he developed his teaching methods, until the government gave him use of Burgdorf castle, a school he ran for the next four years as a progressive educational establishment until it too was taken from him. Napoleon had dismissed the Swiss central government and restored power to the cantons. The government of Berne, the canton of Burgdorf, considered Pestalozzi to be a revolutionary and a radical and ordered him to vacate the castle, hence ending the school at Burgdorf. An attempt at cooperation with one of his disciples, Fellenburg, on a 600 acre farm school complete with workshops and designed to give a practical education to poor children, ended in failure for Pestalozzi as the two teachers could not cooperate.

In 1805 he moved his school to Yverdun where, because of his fame, many teacher came to learn his methods and many students were enrolled. Yverdun was a centre for educational experiment and became a famous school throughout Europe and America. It closed down in 1825 and Pestalozzi died two years later.

Pestalozzi’s life coincided with the social and economic changes that accompanied the shift from agrarianism to industrialism, the first stage of industrialism considered to be cottage-based work or handicraft. He did not realize that home-based handicraft was only a stage in industrial development and so many of his references to vocationalism refer to family-centred crafts and not factory work. In the 18th century farmers were typically impoverished but Pestalozzi, having adopted the new sciences, claimed that agriculture built on scientific research would prosper. Although agriculture and home-crafts were his

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7 I consider that many progressive reforms, including educational reforms, fail because the reformers are quite often opinionated, idealistic individualists who, while espousing collectivity and democracy, find social communication and compromise too difficult to enable them to organize action and make progress. It is noted that Fellenburg had a dominant personality and an inclination to assume control of everything (Downs, 1975).
main focus he was well aware of the alienation and dehumanization of workers in industrial factory life in which the work was both mechanical and monotonous. Factory workers were cut off from the pride of workmanship and the craftsmanship found in home industries. Considering all the negative aspects of factory work Pestalozzi recognised that industrialization potentially provided a higher standard of living and that what was required was a higher standard of education for man in order that he could survive economically. Pestalozzi stresses that neither agricultural, domestic nor industrial training were his aims but “education to manhood” was his main intention (Pestalozzi, as cited in Anderson, 1970).

Early industrialization was hard on the family unit. To make a living the whole family had to work long hours in the factory with the result that children were neglected and child delinquency increased. The family was no longer the centre of work life as home craftsmanship was replaced by factory production. Because Pestalozzi believed in the natural goodness of children he blamed their destructive social behaviour and delinquency on the exploitation and poor environmental surroundings forced on them by greedy employers. The need for education increased as the methods of production and society changed and paralleling these changes three main directions for educational reform emerged. The first type of reform was humanitarian and provided aid and charity for poor

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8Marx wrote in detail about the effects of the factory system and child-labour in, for example, Chpt.X of Capital, The Working Day(Marx, 1906. pp.284-289, 510-511).
9The three methods of educational reform reflect three directions for social action needed to alleviate poverty. a)Charity: giving aid to the needy may feed one mouth but perpetuates the social system that causes hunger, thus causing more hunger. b) Training workers to fit into the industrial system is a form of “social control,” and exacerbates the inequality and wide economic disparities which are the results of industrial capitalism. c) The inclusion of Manual Training in the core curriculum breaks down the mind-body dualism referred to elsewhere and encourages the education of free-thinking, autonomous individuals. This concept could be considered as leading to anarchy or at least egalitarianism. Both theoretical directions may be considered subversive.
children by teaching marketable skills such as weaving and spinning. The second route stressed vocational education, the teaching of work skills and behaviours to children who would have to work in factories after leaving school. The third direction of educational reform viewed manual training as a strong general education which disciplined the mind, hand and character (Gutele, 1968). Pestalozzi included all three reform elements in his theories. He was aware of the acute social stratification induced by industrialism but was not a social reformer or revolutionary like Marx or Bakunin. He never questioned that different socio-economic classes existed and believed that there was a variety of vocational education to suit different classes. He believed that vocational education should be part of the core curriculum but that it should be included in students general growth within the framework of natural education. Pestalozzi's role in the improvement of humankind was to work with the poor as a teacher, and as a creator of an educational theory beneficial to all classes.

It is hard to find a comprehensive outline or exposition of either a general educational theory or a plan for manual training in Pestalozzi's writings (Anderson, 1970, p. 1). His writings describe, in a somewhat haphazard way, his attempts at framing an educational methodology needed to produce authentic and practical people who would

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10 This concept of "manual training" as a valid and powerful education for mind, hands and character is the basis for the idealism that is contrasted with the vocational direction of industrial education.
11 In the Langenthal Address (1826) Pestalozzi recognised 3 classes, factory masters or capitalists, factory workers or "the growing number of people without property," and the middle class which had no share in the new prosperity and had lost its traditional importance (Silber, 1973, p.262).
12 Pestalozzi wrote "Man's happiness is domestic peace and domestic contentment, and these are based on the limitation of his demands within the circle secured to him by society" (Silber, 1973, p.62). Therefore the child should be educated to fit his "place" in society.
13 "Man is an independent whole and is of value in himself and in his community only in so far as in all his relationships he is what he should be." (Pestalozzi, as cited in Anderson, 1970, p.112)
then live happy lives. It is significant that the centre of his educational theories was the home with a loving mother to act as the model teacher, a reflection of his own widowed mother being the predominant influence in his childhood.

After Neuhof closed Pestalozzi had twenty years of life during which he wrote extensively about social, political and educational reform. His work at Stanz made him think that his use of scientific method, applied to education, would develop the “natural” abilities of poor children and his work at Burgdorf gained him wide attention. His fame provided the incentive to publish a book outlining his theories and methods and How Gertrude Teaches Her Children, published in 1800, sold many copies.

Pestalozzi’s first principle of education was to train students in observation. He saw this faculty as the basis of human development traceable to primitive man and his natural growth. Without formal schooling and with limited or no language communication, primitive human beings learned by seeing their world around them, by touching and shaping concrete objects, and by manipulating their physical environment to provide their necessities, food and shelter. After he had shown that the work of the primitive was a “natural” procedure he extended his theoretical analysis to education when he states “All instruction of man is then only the Art of helping Nature to develop in her own way” (Pestalozzi, as cited in Anderson, 1970, p. 49).

Having established that “instruction” is an aid to the “natural” development of man he proceeds to define the basis of all knowledge: “I have fixed the highest supreme principle of instruction in the recognition of sense-impression as the absolute foundation of all knowledge” (Pestalozzi, as cited in Anderson, 1970, p. 61). Pestalozzi saw educational
development moving in a natural path from Sense Impressions to Language and then to Clearness of Ideas utilising the three elementary means of knowledge, form, number and speech (Anderson, 1970).

In *How Gertrude Teaches Her Children* Pestalozzi discusses “Practical Skill; Its Importance and Its Cultivation,” stating that the worst gift that a fiendish spirit has made is: “knowledge without power of doing...” (Pestalozzi, as cited in Anderson, 1970, p. 81). Not only must man know and think in order to satisfy his wishes but he must also do. Knowing and doing are so intimately connected that when one ceases, the other ceases with it. He saw Nature acting on man in the same way that it acts on the rest of the animals. Nature makes man capable of practical skills but the “Art” of instruction must take it further than nature and cultivate these skills. In the cultivation or training of Practical Skills the instructor requires a graduated series of exercises, each skill to be learned thoroughly before proceeding to the next. His manual training consisted of the learning of specific skills in the use of tools such as saws, hammers and chisels. He considers that for a man to demonstrate ability he must act and actually manipulate real objects.

It must start from the simplest manifestations of physical powers, which contain the foundations of the most complicated human practical ability. Striking and carrying, thrusting and throwing, drawing and turning, encircling and swinging, etc., are extremely simple expressions of our physical powers (Pestalozzi, as cited in Anderson, 1970, p. 82).

Pestalozzi was primarily interested in education of the poor and therefore his manual training had the intention of teaching skills that the poor could use to improve their lives. In this understanding manual training could be seen as vocational and indeed
he uses the word "vocational" in his writings. He never thought that work was harmful for children but saw meaningful work as healthy as it combined "doing" with "thinking." He valued the actual "art of doing," and stated clearly that vocational education at his schools must be subordinate to the general education of man. The "power of doing" Pestalozzi defined as the visible statement of human intellect. He did not like the factory system and considered that his "vocational training" was education for the home crafts so plentiful in Switzerland of the day. At Yverdon he wrote a review of educational activities entitled *Views and Experiences* in which he explains clearly his views on vocational training:

> I wished to include in its activities an adequate training for agriculture, for domestic management, and for the industries, but, however much I felt that my institution required this, I was no less convinced that every vocational training which did not provide the individual with a commensurate cultivation of the head and the heart would not only be inadequate but would be unworthy and would degrade him to the status of one slavishly trained merely for making a living (Pestalozzi, as cited in Anderson, 1970, p. 102).

He devised different methods of vocational and manual education for poor students and for rich students based on their natural environment but I think that this difference should not be viewed as a mechanism for re-producing the class stratification of the 18th century. Industrialism was just emerging, agricultural life was widespread and cottage industry was the predominant means of production in Switzerland. Although Pestalozzi was very aware of the poor he never envisaged a classless society but saw only the improvement of the poor by his educational methods. He saw the "real danger of industry in the moral depravation of the factory worker, caused by the monotonous and mechanical kind of work he is forced to do" (Silber, 1973, p. 190). He saw the deterioration in moral character of the workers caused by alienation from the ends of their
labour and the methods of production. Far from being a social reformer or utopian, Pestalozzi tried to improve the worker’s living standards within the existing system by education of their intellectual, moral, and practical faculties.

Pestalozzi considered that the schools of 18th-century Switzerland were narrow and “unnatural” in developing one faculty, the intellect, through the use of a classical curriculum transmitted by books alone. On occasions he would throw away books and focus on observation and manipulation of concrete objects. In Pestalozzi’s Address To His House, he wrote that the skills of art and vocational training are the same. I argue that Pestalozzi had a holistic view of education seeing all faculties as interconnected and reliant on each other. A suitable conclusion to this review of Pestalozzi is a quotation from Views and Experience:

Should the school, however, abandon its unnatural and accidental role of promoting the development of only some of the talents and capacities and take up that of satisfying the essential needs of human nature, as does a well-ordered home life, its influence in aiding human nature to attain the goal of its existence would be assured (Pestalozzi, as cited in Anderson, 1970, p. 124).

The “enlightenment” flourished in Europe in the 18th century among the upper and middle classes. In that historical context it was the dawning of the time when education could be seen as a means to progress. Pestalozzi brought education to the poor and showed society that the poor needed education and, indeed, society needed them to be educated. He believed, showing Rousseau’s influence, that every person had an individual potential, and the right to education in order to achieve that potential. Pestalozzi saw that it was the duty of society to provide the required education.
The Pestalozzian educational ideas spread relatively easily through Europe as he had supporters and enthusiastic friends in various countries. There were English cultural connections with Switzerland since before the French Revolution but the educated people of Britain were informed of Pestalozzianism through writers at the beginning of the 19th century. The child-centered education of Pestalozzi made little impact on a country in which the systems of Joseph Lancaster and Andrew Bell, both based on emulation and rote memorization, vied for supremacy in primary education (Silber, 1973, p. 281).

A former pupil of Pestalozzi, named Gruner, started a Pestalozzian school in Frankfurt and while on his way to Frankfurt University a student, Friedrich Froebel, took a job teaching at the school, instead of attending the university.

It soon became evident to me that Pestalozzi was to be the watchword of my life. Three days afterwards (it was towards the end of August, 1805) I was already on the road to Yverdon, where Pestalozzi had not long before established himself (Froebel, 1908, p. 53).

Friedrich Froebel

Friedrich Froebel was born in Germany in 1782, the son of a Lutheran minister and a mother who died when he was nine months old. His father was absorbed with his church work and spent no time with the boy. Froebel grew close to his elder brothers, relationships which lasted into adulthood, although two of them died relatively young. One, Christian Ludwig, was a manufacturer but later, in 1820, became associated with Friedrich in his educational endeavours. After his mother had died, four-year-old Froebel, craving for a mother, adopted his stepmother lovingly but was rejected by her when her own son was born. He considers that his mother's death decided the external
circumstances of his whole life (Froebel, 1908). His childhood and youth were spent in a lonely existence exploring the surrounding woods and becoming familiar with plantlife and wild animals. This early separation from other boys Froebel considers the cause of his introspection and self examination (Froebel, 1908, p. 4). At fifteen he apprenticed to a forester for two years, but at seventeen he enrolled in university only to end in debtors prison after a further two years. In 1802 his father died and his inheritance enabled Froebel to enter university again in 1805 to study architecture. While in Frankfurt he was persuaded to teach at the Model school under the principalship of Gruner, a follower of Pestalozzi, and in this period he became enthralled with Pestalozzian theory and with education specifically. A visit to Yverdon in 1805 allowed him to meet Pestalozzi and from this time until his death in 1852 his life was absorbed with analysing, criticising, copying and modifying Pestalozzi's work as well as creating his own theories and schools.

As Froebel was born in Germany, 36 years after Pestalozzi, industrialism had progressed further and more intensely than it had in Pestalozzi's Switzerland. In his early life Froebel lived an isolated existence, examining and learning about his natural surroundings. He was religiously observant and derived a philosophy of God and nature that motivated his life pursuits and eventually his educational endeavours. He spent some time in the army with the purpose of defending the German states from Napoleon, during which time he acquired lifelong comrades. He wrote about the concepts of nationalism and patriotism and rationalised his decision to join the army by questioning the ability of a man to teach children he had refused to defend. Froebel never did fight the French but did
march to the Netherlands and, to judge by his autobiography, enjoy a relatively productive social life surrounded by fellow university students.

Pestalozzi’s goal was social reform to help the poor by educating them, his own social environment affecting his life purposes. Froebel was not primarily a social reformer, but rather a religious man and an idealistic educator. The social upheavals of industrialism did not affect him or his educational systems to the degree they did other educationists. His life path and his social interactions did, however, affect him and his educational methods.

Froebel was born at the beginning of early German Romanticism and the subjective and imaginative elements of romanticism influenced his educational approaches. At university he was surrounded by the idealism of Fichte and the dialectic of Hegel, both of whom influenced him, but the person who crystalized his thoughts on nature and self realization was Schelling, the German Romantic philosopher (Lilley, 1967). But it was in early life that he gained his greatest insights. He thought his home childhood had been full of repression and narrowing experiences, although his father’s Lutheranism and the church’s mystical language affected his thoughts and language. He had been sent to live with his uncle, a pastor, at age ten and life with his uncle had been peaceful and had shown him the unity in life. He had been able to mix with boys of his own age and the inner peace and religion he experienced with his uncle directed him towards self-realization. Froebel understood that a child’s early life and his relationship to his mother were significant factors in self knowledge.
As mentioned above, Froebel was deeply spiritual, and his familiarity with plant and animal life combined with his spirituality made him often mystical in his philosophy. He believed that God created man in his own image and likeness and since God was always creating it was man's nature to produce or to construct material things. Having established the relationship between man and God Froebel claimed that the chief end of education was to make the "unity" of man and God perfect. God is in everything and in everyone and we must strive to perfect the "oneness" with God. Froebel's concept of "unity" is used in a wide variety of ways to show the oneness of all things. He refers to the unity of the physical, intellectual and spiritual powers of man, and to the complete unity of the human being.

Yet the boy has not become a boy, nor has the youth become a youth, by reaching a certain age, but only by having lived through childhood, and, further on, through boyhood, true to the requirements of his mind, his feelings, and his body (Froebel, 1908, p. 29).

A wholly fulfilled child becomes a boy, who only becomes a youth if the fulfillment of boyhood is complete. The person becomes more "godlike in diligence and industry, in working and doing" (Froebel, 1908, p. 31). This point of view is related to the Calvinist and Lutheran rationales extolling the religious benefits of industrial capitalism and accumulating wealth. Lutheranism was socially conservative and supportive of established authorities but Calvinism was a radical force wishing to purify the individual and reconstruct the State. A detailed examination of these social analyses may be found in Religion and the Rise of Capitalism (Tawney, 1947) and The Meek and the Militant (Siegel, 1986).
His general educational method may be summed up in the phrase "self-activity." He proposed that self activity meant that the child was working according to his own impulses and decisions and not just repeating what he has been told. Development occurs when the child's inner aims unfold through activity. Froebel states clearly that self-activity does not exclude the teacher's guidance yet may exclude replication of a teacher's example.

Unity between God and man means that as God created so also must man create. On this principle of unity Froebel based his educational reforms. He showed the fallacy of giving people more power to acquire knowledge without greater power to use the knowledge. His concept of unity showed the connection between Pestalozzi's physical object training and inner mental growth. "Unity," Froebel's philosophical law, gave rise to "self-activity," his basic educational principle. He conceived of education as the training of children both to direct and to perform their own activities.

Apart from the kindergarten he initiated in 1840, Froebel also founded an organised system of manual training. His reasons for promoting manual training were educational and not economic, vocational, or utilitarian. It was a method of using the hands to develop the mind. It gave the child the power to show itself that it can use and manipulate the material world. Froebel placed more value in the inner mental advances shown by the child than the physical products they created. He thought that the creation of physical products was the best way to develop the decision making and controlling features of the brain. Manual activity is the outward sign of thinking activity, and its training has direct connection to mental development.
Pestalozzi used objects to enhance the receptive powers of the mind but Froebel had a wider view, seeing reasoning and implementation as part of the learning continuum. His students observed, thought about what they had seen and then produced what they had thought about. Creativity was the ultimate manifestation of these processes. The production of material objects displays one’s identity, one’s acquisition of knowledge, the accuracy and speed of concept reception and the development of reasoning powers.

James L. Hughes, Public School Inspector in Toronto in 1900, a disciple of Froebel, wrote: “He valued the change wrought in selfhood more than the products of its work or the improvement in hand skills” (Hughes, 1897).

He considered the concept of work in idealistic fashion, equating it to creative productivity, a way to attain unity with God. “The young growing human being should therefore be trained early for outer work, for creative and productive activity” (Froebel, 1911, p. 34). His concept of work was not the popular notion of work, the work found in the growing industrial factory system. “At present the popular notions of work and the pursuit of practical industry are wholly false, superficial, untenable, oppressive, debasing, devoid of all elements of life” (Froebel, 1911, p. 30).

Froebel anticipated future arguments about the value and purposes of manual training by disputing the concept of schools as vocational training establishments. He recognised that he would have received state authority and financial support if he had trained students to be workers: “...had I offered to train ......shoemakers or tailors, tradesmen or merchants........then should I have gained fame and glory for the great usefulness and practical nature of my institution for certain” (Froebel, 1908, p. 115).
Froebel associates all of his educational reform concepts with God. He was eventually criticised, and accused of heresy, by both the Catholic and Lutheran churches, because his perception of God was not that of the organised religions. I would argue that he was a pantheist, seeing God in everything and everyone. One can trace a direct connection between the philosophical pantheist, Spinoza, the German idealist, Fichte, (a one-time professor at Jena, Froebel's university), and Pestalozzi and Froebel. The philosophical connection is beyond the scope of this thesis but provides a greater insight into Froebel's philosophical laws of "unity" and his subsequent educational concept of "self-activity." It suffices to say that Froebel crystallized an idealistic educational basis for manual training, a concept originated by Pestalozzi.

A disciple of Froebel, Cygnoeus, introduced manual training to Finland, from where it spread to Sweden. Scandinavian educators developed a system of manual training based on Froebelian and Pestalozzian principles. These ideas were brought across the Atlantic by German and Scandinavian immigrants as early as the mid-nineteenth century and in 1886 James Hughes, Toronto's Inspector of Education and a Froebelian disciple, advocated for the inclusion of manual training in the schools' curriculum. With the money of Sir William Macdonald and the advocacy skills of James Robertson, "Sloyd," the Scandanavian name for manual training, became an integral part of the Canadian Education System in 1900. 14 In the U.S.A. the movement to include manual training began in the 1880's and John Dewey, born in 1859, just seven years after Froebel died, and living until 1952, was influenced by both Froebel and Pestalozzi. In The School

14 A detailed account of James Hughes, Sir William Macdonald, James Robertson and the beginnings of manual training in Canada is a part of chapter 2 and chapter 3.
and Society (Dewey, 1915) he included a chapter about Froebel's educational principles, and references are often made to Pestalozzi and Froebel in other Dewey works. Dewey is a transition from the European past into North American industrial society, to which I now turn.

John Dewey

John Dewey, a philosopher, educator, psychologist and social reformer wrote so extensively that a bibliography of his works covers more than 150 pages, and therefore my discussion of his conceptions of education, industrial education, and manual training will necessarily be partial. I will, however, endeavour to include as many facets of Dewey's viewpoints as may be needed to illustrate the educational and psychological foundations of manual training as an integral part of a core curriculum. The specific object of this section is to show that at the beginning of this century, Dewey, considered by Bertrand Russell in 1946 to be the leading living American philosopher, who shared the earlier educational idealism of Pestalozzi and Froebel and who recognised the profound educational and psychological value of manual training was also conscious of the development of industrialism and the class stratification engendered by the new industrial aristocracy.

Dewey was born in 1859 the son of a Vermont merchant but spent some time on a farm. He considered that it was this rural life rather than the urban environment of Burlington that shaped his youth. The neighbourly collectivism of his country community, combined with a type of nonconformist individualism, ameliorated the political conservatism of the region of Vermont in which he lived. In rural America most people farmed their own land for their own needs. Workers and industrialists were relatively few.
The French traveller Alexis de Tocqueville had, just 28 years before Dewey was born, been thoroughly impressed by the equality so obvious in American life (Brecher, 1972). Dewey himself considers that his rural life and his later residency in Michigan and Chicago put him in touch with that early American spirit of social democracy (Curti, 1959). He considers that philosophy does not come from the intellectual but from social and emotional influences (Curti, 1959, p. 500). Thus he believed that his philosophy was formed and shaped from of his social encounters, including those of his early life. But it was in this early life that he was exposed to his first cultural influences. His cultural heritage was the New England culture, a culture affected by the gap between leisure and work and between knowledge and practice, a culture that strongly influenced his future intellectual developments (Curti, 1959, p. 501).

Dewey attended the University of Vermont and after graduation taught secondary school for three years. He then entered Johns Hopkins University to study philosophy where he became interested in Hegel and Kant. His first appointment was at the University of Michigan where he taught philosophy and psychology and where he wrote *Psychology* (1886). This book was a mixture of Hegelian philosophy and the psychology of functionalism, of which he is considered to be the founder. The influences of Hegel that I see in Dewey's works may be the Hegelian "absolute," a term Hegel used for the universe as an inter-related unity. This perception of the "unity" of the universe is also

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15 An approach to psychology that claims that the study of individual behaviour should concern psychological processes of adjustment to the environment rather than psychological structures such as sensations and feelings. Dewey stressed the function of conduct and the need to study the mind through the study of behaviour. (Theodorson, 1979)

16 This "absolute" should not be understood here in any mystical way in connection with Dewey as he had "emancipated himself with some difficulty from the traditional orthodox theology." (Russell, 1961, p. 775)
a main premise of both Pestalozzi and Froebel. Dewey saw human unity in more general terms and thus did not envisage the dichotomy of work and leisure and knowledge and practice. Hegel also used the word “alienation,” a term later used extensively by Marx, an early neo-Hegelian. Marx used the word to describe the separation of people from a) the government, b) the results of their work, and c) their fellow workers. In several places Dewey refers to “alienation,” as for example in chapter thirteen of *Education Today* (1940), “Learning to Earn,” in which he describes a curriculum of a “trade school.” The curriculum would be so narrow that it would teach only “...those forms of industrial skill which will enable the future workers to fall docilely into the subordinate ranks of the industrial army” (Dewey, 1940). Dewey believed in democracy and democratic freedom and saw education as the means to achieving the goal, a classless, democratic society attained by an intelligence fertilized by education. Later on in his life Dewey recognised that the profit motive of capitalism would impede the “realization of his democratic conception of work and life” (Curti, 1959) and that direct action such as mass demonstrations and even revolution may be required.

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17 By “alienation” Hegel meant the mind’s realization that it exists apart from the unity of the universe, the “absolute”  
18 “Although very liberal in all economic questions, he has never been a Marxist” (Russell, 1961). According to definition Dewey was a philosophical liberal (Theodorson, 1979, p. 230). He was also the founder of a school of progressive education. He was an idealistic believer in democracy and hence argued against the use of the “class concept” by teachers as it could turn education into indoctrination (Dewey, 1940, chpt. 41). He was aware of and opposed to “the injustices and inequities of the present order, to their effects-impoverishment and insecurity-or to the disastrous effect of these tragic evils upon the culture of all groups in society” (Dewey, 1940, p. 328). He urged teachers to be active in “social reorganization” out of social and not class interests (Dewey, 1940, p. 330). I consider that Dewey was conscious of the oppression of lower classes brought about by the Capitalist “aristocracy” but his pragmatism directed him to support democratic “social reorganization” rather than “class struggle” (in a Leninist fashion). There are contradictions in Dewey. He was a liberal. Liberalism views society as composed of individuals rather than classes but Dewey talks of classes often.
John Dewey was philosopher, educator, psychologist, and social reformer. His views on education and manual training are so integrated with philosophy, psychology and social commentary that all these approaches have to be included in an appreciation of Dewey's educational positions.

Plato stated that it was the job of education to discover what each person is good for and then to train him/her to excellence in that field in order that all needs of society be met. Plato's society was acutely stratified into classes defined by the necessity to work, the slaves, and the freedom not to labour for subsistence, the leisure class. The slaves did all manual work to produce the necessities of living. The other classes had the leisure to pursue ideal interests. The provision of food, clothing and shelter is necessary labour but other non-necessary pursuits are also an integral part of being human. The problem arises when the division of leisure activities and necessary work coincides with a division of superior and inferior social classes, as in Plato's Greece, resulting in the depreciation of manual work. Leisure became equated with ideal interests and similarly work became equated to material interests. Dewey saw this association as a socially-produced relationship stemming from ancient Greece and not, as it is widely understood, a fundamental human condition.

Aristotle, a student of Plato, elaborated on these concepts. Slaves, artisans and women work to furnish the means of subsistence in order that those equipped with intelligence, the superior class, may be totally concerned in their leisure with pursuits intrinsically worth while. To each class there was an appropriate education. The servile class should be educated for "doing" and the leisure class educated for "knowing."
Aristotle drew the line between leisure and servile class so concisely that education for menial work included education for musicians, furniture makers, sculptors, builders, and cooks. We have, in later times, more finely stratified our occupations using terminology such as "fine arts" and "industrial arts." Education for the leisure class was to concentrate on the intellectual pursuits, the search for "knowing." Aristotle even stratified the leisure class when he identified higher social status with pursuits requiring higher levels of mental activity. Dewey saw Aristotle's main error as assuming the separation of practical and mental work. The education system is a result of the social system and the social system is affected by the education system, a type of dialectical relationship. Dewey considers that we cannot improve the education system by eradicating the distinction and status difference between mental and practical subjects without changing the social system which generates and reproduces class stratification based on the relationship to the means of production of wealth. He states that we must rise above the Greek philosophy of life and education and strive towards a democratic society, "a society in which all share in useful service and all enjoy a worthy leisure" (Dewey, 1940, p. 256).

Dewey, the psychologist, found that the basis of knowing was actually learning how to do things of a very immediate kind. In educational terms this meant the regular use of simple processes which are within the capabilities of students. The activities must be associated with some general type of social exercise. Dewey's psychological connection led him to believe that there was great growth value in the educational use of natural tendencies "to explore, to manipulate tools and materials, to construct." It is the task of the educator to incorporate these activities into the students' curriculum so that
they will gain skill and technical efficiency, satisfaction in the objects they are constructing, preparation for utility in later life, intellectual growth, and social awareness. He rules out the type of school project that follows strict procedures and results in a carbon copy of an original, as such a process eliminates the exercise of judgement and the choice of methodology. Dewey even values the act of making mistakes as he considers the realization of one's limits and the correction process itself to be educationally sound practice. "...it is more important to keep alive a creative and constructive attitude than to secure an external perfection by engaging the pupils action in too minute and too closely regulated pieces of work" (Dewey, 1916, p. 197). He perceived "manual training" to have been reduced to a series of tool exercises and joint constructions to raise students to technical mastery and describes arguments that say that students must learn to use tools before they actually make anything. Dewey argues that students can learn "how" while making something useful. To suggest that manual training has only utilitarian value, that it is "good" because it will help in some adult situation, is, he claims, to miss the point entirely. "For in schools, occupations are not carried on for pecuniary gain but for their own content. ...they supply experiences which are intrinsically valuable; they are truly liberalizing in quality" (Dewey, 1916, p. 200).

Dewey, the educator, divided the elementary curriculum into three sections:

1. courses which involve physical activities which may appeal to students for the intrinsic value of the activities;

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19 The term "elementary" extended further than its grade 6 boundary used in some places today. In fact the name "elementary" tends to be a variable depending on the jurisdiction. Vancouver school board includes grade 7 in elementary schools whereas Comox Junior Secondary Schools begin in grade 7. It should also be understood that many students only completed elementary school and did not proceed to High School.
2. courses which instruct the student on the social and physical environment in which they exist, for example history and geography;

3. courses which enhance intellectual communication such as mathematics and language instruction.

Courses such as manual training and physical education came under his first division. In the case of manual training it is the direct manipulation of materials and application of energy to produce interesting results which is the most important factor. Dewey recognised, as a psychologist, that the hand-eye coordination training also led to an improvement in attention faculties, a more creative imagination, and the ability to make better informed judgements. The shaping, joining, and changing of real physical objects enhances the powers of conceptualization and visual-spatial ability so integral to general intellectual capacity.

Dewey also saw that the constructive activities allowed the manifestation of basic aptitudes and instincts. That is, manual training or the building of a useful object fulfils an essential organic need. Manual training shows students what can be done with materials and, through the creation of useful items, enables them to conceptualize themselves in a social context. For the student the resulting useful item is a token or symbol of his or her own capabilities to produce tangible objects.

Dewey understood that the introduction into education of personal sense-perceptions through manual training was an improvement "over the reliance on symbols and abstract ideas" (Dewey, 1940, p. 58). The very reasons for perceptions, of seeing and hearing, is that we may "do," using head and hand. The first reason for manual
training must be to give an outlet for the integral motor instincts of the student and not to train skills or to produce technically perfect results. Although skills and physical results may be a beneficial outcome, neither constitute a prime motivation for manual training. Dewey was, predictably, an advocate for the inclusion of manual training in a central location of a school’s curriculum and recognised the place of Froebel as the first person to introduce a rational structure of manual training in the educational curriculum.

The connection between the three sections of the elementary curriculum may now be seen. If conceived appropriately many of the processes used in manual training may be used as introductions to, and illustrations of, historical and geographical curriculum. The connection with the third section is easily seen in relation to mathematics and in particular to arithmetic, geometry, and often trigonometry:

The child not only gets expertness in recognizing and handling certain number facts and relations, but, what is even more important, he gets a "number sense", he gets to be aware of the use and meaning of number; it becomes a reality to him, so that there is a vital motive in his own experience for pursuing it farther (Dewey, 1940, p. 60).

Dewey elaborates at length on the integral nature of manual training in the primary curriculum and concludes a chapter of Education Today by claiming that manual training should be considered a distinguishing and characteristic feature of primary education, “primary” meaning fundamental and basic (Dewey, 1940, p. 61).

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20 Examples from my own experience may illustrate this point. The arts of forging or foundry work need little explanation to show their historical roots. In the present subject-oriented curriculum it is very easy to digress into historical anecdotes relating to the forging art, but such a digression does inspire and interest students with respect to the processes they are involved with. The woods used in wood technology courses provide a direct route to world sources of the material, i.e., geography, and also the social relationships of workers involved in the production or harvesting of the wood, i.e., history or geography.

21 A student in my metal technology 9 class who had failed mathematics claimed that he would never understand the drill index for fractional drill bits, or the micrometer reading to 1/1000" (0.001”). The practical necessity of accurately constructing a metal project, a process which he liked, was the only impetus he needed to understand fractions and decimals, which he learned to do.
As early as 1896 Frederick W. Taylor published a paper for the American Society of Mechanical Engineers called "A Piece-Rate System: A Step Towards the Partial Solution of the Labour Problem" indicating a major problem between workers and the management of the growing industrialism (Callahan, 1962). It subsequently became a common demand that public education should adopt a more practical curriculum, meaning an emphasis on detailed measures of educational performances as opposed to the concepts advocated by Dewey, Pestalozzi, and Froebel. Dewey was part of the educational movement that opposed the move towards narrow utilitarianism in industrial education. That movement also opposed the Germanic separation of academic from vocational subjects but the industrial aristocracy, the beneficiaries of industrial capitalism, were so much in control that reformers had no hope for success. The School Superintendent for New Orleans, in an address to the National Education Association in 1914 told them "We are living in a practical, money making age."

Paralleling the capitalist drive for efficiency was a fear of German industrial superiority and the recognition that their system of industrial education contributed to their industrial strength led to a drive for industrial education in American schools, peaking around 1909. The National Association of Manufacturers had a Committee on Industrial Education which was pleased with the incorporation of vocational industrial education. There was an educational outcry against the industrial intrusion into schools and William Maxwell, superintendent of schools in New York City angrily attacked the promoters:

the educational world is now seething for the introduction of industrial or trade teaching in the public schools. That agitation, as every one knows, originated with the manufacturers...and second, in demanding that the State, after taxing
consumers for fifty years, through a protective tariff, in order to fill the pockets of manufacturers, should then proceed to pay the bills for training their workmen. (Maxwell, as cited in Callahan, 1962, p. 63).

The climax of the push for industrial efficiency came, as mentioned earlier, after 1911 when Frederick Taylor's *Principles of Scientific Management* was published, the main features of his scheme being "time and motion studies" and "unit times" for jobs. He identified the two major faults of workers as "natural laziness" and "soldiering" or the systematic slowing down of production. Harrington Emerson applied scientific management to schools when his address to the High School Teachers' Association of New York was published in 1912. Apart from a few progressive and democratic educators, Dewey included, most school administrators admired successful capitalist entrepreneurs and held as their models such active men as the Fords and Carnegies.

Industrial and social efficiency rejected "the natural" and the word became an adjective characterizing unsavory aspects of humans. For instance, Taylor made frequent references to "natural laziness." The efficiency movement conceived of education providing all that nature could not supply, the accustomization of the students, and hence the general population, to social control, and the subjugation of natural skills to social rules. Dewey stated in many ways that the ideal society he worked towards is a democratic society of free thinking people unconstrained by social restrictions. An industrial education spawned by an efficient industrial model trains students for limited and specific jobs, hence restricting their education and growth: "It is the aim of progressive education to take part in correcting unfair privilege and unfair deprivation, not to perpetuate them" (Dewey, 1916, p. 120).
Dewey had his own conception of social efficiency. He saw it as the socialization of one’s mind to such an extent that one can communicate one’s experiences freely. He saw it as the breaking down of class stratification so that all of society are conscious of each others needs and interests. Narrow, utilitarian, vocational industrial education was perceived as contrary to such a concept.

The two points selected by which to measure the worth of a form of social life are the extent in which the interests of a group are shared by all its members, and the fullness and freedom with which it interacts with other groups. An undesirable society, in other words, is one which internally and externally sets up barriers to free intercourse and communication of experience (Dewey, 1916, p. 99).

I have tended to use the word “vocational” to describe education for a particular trade or job. Dewey used the word in a much more general fashion to describe a direction of life activities which is useful to a person and helpful to his or her associates. He sees people having many vocations and the business of education is to make sure that one vocation does not dominate, or the person will become subservient to it. It is a function of society to ensure the credibility and status of every vocation and the aim of education to discover what vocations a person is capable of and suited to. A society which classifies occupations into a hierarchy of status levels produces an education system which stratifies its subjects and allows some vocations to dominate.

Any scheme for vocational education which takes its point of departure from the industrial regime that now exists, is likely to assume and to perpetuate its divisions and weaknesses, and thus to become an instrument in accomplishing the feudal dogma of social predestination (Dewey, 1916, p. 318).

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22This quotation is from a chapter “The Democratic Conception in Education” in Democracy and Education. In this chapter Dewey refers to a variety of “groups” but includes the contentious group “class” on several occasions, for instance: “...the breaking down of those barriers of class, race...” (Dewey, 1916, p.87). Based on Dewey readings and my own analysis, I consider that the term “groups” used in this quotation may refer to the group “class,” and since a “democratic society repudiates the principle of external authority” (Dewey, 1916,p87), the breaking down of class barriers and the resulting authority relationships will progress to class destratification of society.
Strictly speaking many facets of education are vocational and provide persons with, in Bourdieu’s term, cultural capital which is exchangable for economic capital (Bourdieu and Passeron, 1994). Even universities started as vocational institutions training priests, doctors and lawyers. It is more than coincidence that education became mass public education when reading and writing became necessary skills in developing the new industrial businesses. Cultural education, the education of high status culture, has been reserved for “a small limited class as a luxury” (Dewey, 1940). Dewey states clearly that the demands for industrial education have required an industrial education that is dependent on the particular state of industrialism at the time. In the fifty years of his life since Manual Training came from Europe he witnessed major changes in industrial technology and parallel changes in the approaches of Industrial Arts.

Dewey saw two possible choices for the direction of schools and the role of Industrial education. One he saw as a replica of early German schools with separate schools specializing in either liberal studies or industrial vocational studies. A course which develops discerning taste in music or literature would be seen as only good for the wealthy leisure class whereas an industrial education would train “future workers to fall docilely into the subordinate ranks of the industrial army” (Dewey, 1940, p. 130). He also foresaw a school giving all students a “respect for useful work, the ability to render service, and a contempt for social parasites whether they are called tramps or leaders of

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23 I refer to the French sociologist Pierre Bourdieu whose work figures in later parts of this thesis. Dewey did not refer to “cultural capital” but in “Vocational Aspects of Education,” p.312, in Democracy and Education he uses very similar concepts.

24 This perception of Dewey’s will be revisited later in the thesis in discussion of the new concept of “Technology Education.”
society" (Dewey, 1940, p. 131). This school will recognise the vocational aspect of all studies and treat them equally, developing motor skills in all students which are not repetitive but may be used to construct creatively and inventively. Such a school will develop an industrial intelligence, an understanding of the present state of industrial manufacturing, of transport and the markets so that he or she may make their own choices and control his or her own financial future.

I have tried to show that Dewey understood the main difference in educational values to be the distinction between “culture” and “utility.” This he showed to be a socially generated differentiation rationalized in Greek philosophy and society. It has been the cause of psychological theories concerning “thinking” and “doing,” political confrontations between rich and poor, educational streams of “intelligent” and “practical,” and social stratification based on the relationship to the means of production of wealth. The system of education in the U.S.A. seemed to him to be a mixture of “cultural” and “utilitarian” subjects. The “cultural” subjects did not, in his estimation, exhibit any “useful” social service and the “utilitarian” did not excite the imagination or activate the thinking powers. He saw the main problem to be constructing an educational system for a democratic society which would do away with the above dualism and promote free and creative thought in all students while having them recognise that leisure is a reward for original and self motivated productivity.

This chapter has emphasized the “idealism” of the educational and psychological reasons for the inclusion of manual training in the school curriculum found in the works of Pestalozzi, Froebel and Dewey. The next chapter examines the Canadian educational and
industrial environment at the end of the last century and introduces the addition of manual training to Canadian education. The ironies and contradictions apparent in the emergence of manual training in Canadian schools also were obvious in general educational thought. Canadian 19th century education had been strict, disciplined and subject oriented but by the end of the century the "natural," child-centered education of Rousseau, Pestalozzi and Froebel had begun to influence general education practices. These "naturalistic" approaches to education have influenced many facets of modern Canadian education but the concepts of manual training, espoused by Pestalozzi and Froebel, have subsequently been lost under the pressures of industrialism and the resulting vocationalism. To expose the irony even further, one educator who campaigned for the inclusion of manual training in Canadian education was an influential and outspoken disciple of Froebel, James L. Hughes, a topic for the next chapter.
CHAPTER 3

The Inauguration of Manual Training in Canada.

The nineteenth century in Canada was marked by industrialization, social dislocation and growing urbanization (Cook & Brown, 1974, p.2). Europe was similarly affected in the whole of that century. In England the Chartists had been defeated in 1839 and in Germany insurrection had broken out, as socialist politics acquired popularity between 1845 and 1850 (Lewis, 1965). The Origin of Species appeared in 1859, and became within a decade a landmark of scientific investigation and discovery. Industrialism, new science and psychology, changing social structures, revolutionary political analyses, and class conflict created an environment calling for new ideas in education.

For a period, it seemed schools would have to adapt to the expectations of the whole of society, and not just provide professional training for the wealthy elite. The signs of educational experiment were to be found on both sides of the Atlantic. Pestalozzian educational ideas had been tried at New Harmony, Indiana in a utopian socialist community started by Robert Owen in 1824, but the community failed and Owen returned to England in 1827. Americans were introduced to Froebel’s ideas a little later, after 1848, by German liberals escaping from the revolutions in their country, and Pestalozzi’s theories came to be accepted at Normal Schools across the eastern United States. One of these normal schools, at Oswego, New York, was visited by John Putman, later to become a co-author of an influential survey of British Columbia’s schools in 1925.
Earlier educational practice came to be seen as too bookish and driven too much by examination requirements. Schools still catered for those few who could afford education, and had received prior training and instruction in the family. All of these changes form the backdrop to the rise of "progressive education" at the turn of the twentieth century. One of the most vocal supporters of a progressive education, John Dewey, labelled it "New Education" in his *The School and Society* (1915). New Educators sought to change schools better to equip students for daily life in the "new" society. Formal memory work was to be replaced by practical activities with concrete materials, and a child's education had to have some connection with the child's community. Manual Training was an integral part of this "progressive education."

"Within the present century, Finland was the first country to give a recognised place in the curriculum of the primary school to woodwork and other manual exercises" (Salomon, 1874, as cited in Robertson, J.W., 1899, p. 24)²⁵

Finland had been under Swedish rule since the twelfth century but was annexed in 1809 to Russia as a grand duchy. Russia had allowed a degree of self-government and in the latter part of the nineteenth century there was a successful movement to re-establish Finnish language, culture and democracy. The establishment of woodwork in the Finnish school system contributed to that progressive nationalistic movement, and was "in great measure due to the influence of Uno Cygnoeus (1801-1888)" (as cited in Robertson, 1899, p. 24). Cygnoeus had a project to re-organize the primary schools of the country

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²⁵Canada's James W. Robertson was a leading exponent of New Education. Robertson outlined, in 1899, a proposal to begin systematic Manual Training in public schools across the country. In his proposal he quoted writings of Otto Salomon, the Director of the Seminary for Teachers at Naas, Sweden in 1874. Salomon had given a series of lectures to teachers at the Seminary and they had been published under the name of *The Theory of Educational Sloyd* (Salomon, 1874). Details of Manual Training in Finland, Sweden and Norway during the nineteenth century are from that publication as cited in Robertson's proposal.
and this was accomplished during the years 1858-1866. His official role in the Finnish education system was Director of Education for Finland (Selleck, 1968, p. 113).

Cygnoeus stressed the educational benefits provided by manual training and minimized the economic advantages possibly gained by the students in the form of tool or trade skills. In 1866 Manual Training was made compulsory for all male teachers in Training Colleges and all school boys in rural districts (Sadler, as cited in Robertson, 1899, p. 25).

Manual Training, the physical manipulation of concrete materials, continued to spread in northern Europe. From Finland this branch of education moved to Norway where it became established in 1860. By 1891 it was a mandatory component of the training of every Norwegian teacher and had become an integral part of urban school curriculum. Norway was another step in the spread of Manual Training from its origins in Switzerland to Canada.

Manual training began in Sweden in the late 1860s as a training scheme for home-based industries. “It was first of economical rather than educational significance” (Salomon, 1874, as cited in Robertson, 1899, p. 23). In 1872 a work school for boys had opened and by 1874 a training department for teachers of the discipline had been added to the school. At this point the economic rationale for the manual training was displaced by an educational motivation. “The question now began to be looked upon from an educational rather than an economical point of view” (Salomon, 1874, as cited in Robertson, 1899, p. 23). Only trained teachers could provide “Sloyd” training for school children, “Sloyd” being the Swedish term for “dexterity,” and the Swedish equivalent of manual training. By 1882 “Sloyd” training had been extended to all Sweden and different
forms of Sloyd had been replaced by the medium most suitable for educational purposes, Wood Sloyd. The first Swedish “work” school in 1872 was opened by a man, Herr Abrahamson, wealthy enough to start and support the school.

Herr Abrahamson has made a noble use of his wealth in founding the Seminary, and providing for its continued existence; as a kindly host too, he makes his interest and presence felt in all that concerns the common work and the common pleasure. (Salomon, 1874)

Ironically, although Froebel was German, Manual Training had a slow start in Germany. Purely vocational Schools of Industry, a form of trade schools, were established early, but they had a completely different function and philosophy. Their reasons for operation were to teach skills and train workers. They were vocational schools. The German Association for Manual Work for Boys, promoted Manual Training and financed the training of teachers of the discipline in its own college in Leipzig. This college also trained many foreign students. By 1900 parts of Germany had recognised the value of Manual Training and made it a state-sponsored part of schooling. “The governments of Prussia, Saxony, and Baden, now make state contributions in aid of this branch of school work” (Sadler, as cited in Robertson, 1899, p.23).

I turn now to examine the connection between the European origins of Manual Training in the works of Pestalozzi and Froebel, the educational practices of the northern European states, and the introduction of Manual Training into the education system of Canada. I believe that it is necessary to initially provide a brief portrait of Canadian education and the social / industrial environment in the preceding century, and especially the last thirty years of that century, to provide the educational context into which Manual Training was introduced.
Before 1840 schooling was informal and voluntary. Egerton Ryerson was superintendent of schools for Upper Canada from 1844 until 1876 and influenced many changes in the education system of, firstly, Upper Canada and secondly, for his last nine years as superintendent, the province of Ontario (Prentice, 1977). During his thirty years as superintendent the number of students attending schools increased by almost three times. Ryerson was a Methodist and religion, in general, dominated school aims and reforms during this period. The predominant view was that humans were naturally bad and that intellectually oriented education could improve them. Indigenous Canadians and the labouring classes were considered to be ruled by their feelings and hence socially and morally deficient. The aim of education was to suppress animal passions in students, and discipline and order were the main preoccupations of school organizers. This was an opposite viewpoint to the natural and child-centered education of Pestalozzi and Froebel, as described before. Adult control was necessary and rewards and punishments were used as methods of enforcement. Most children would leave school at age twelve or thereabouts to help parents, and the years of school attendance were used to prepare them for the disturbed society ahead of them. Materialism, ignorance and crime were the three major faults of society seen by educators and the school institution was a safe haven for children from these vices.

Not only was school seen as a protection for children but education was also equated with economic success and was a road to wealth. Mass public education was a way that Upper Canadians could join the morally advanced and economically wealthy elite of the western world (Prentice, 1977). Education was also seen as a training for and a
route into the “respectable class” by imparting not just cultural capital but symbolic capital (Bourdieu, 1994) in the forms of acceptable manners and tidy appearance.

Work also changed during the nineteenth century in a way similar to changes described earlier for Switzerland. Rural communities with a fixed hierarchy of ranks and power were disappearing and home based craftwork was being replaced with industrial production and a new capitalist aristocracy, the bourgeoisie. But the value system which distinguishes between mental and manual pursuits, originating in Plato and Aristotle, was reproduced by Ryerson. He emphasized the differences in value between creative labour and operating labour and between “professional” pursuits and “ordinary” work.

Many immigrants from Europe imported class concepts emanating from feudally based relationships in their old, long-established countries. Ryerson too, accepted a class stratification but based on acquired skills or knowledge and saw education, rather than inherited position, as the route to economic success. Education produced, for Ryerson, an upper class of educated people and a reciprocal lower class of uneducated menial labourers. He advocated a “trade school” at which the lower classes might learn the fine art of a trade in order to improve their economic standard or provide themselves with intellectual stimulation while performing their menial, repetitive, manual tasks. He did not envisage a class-free society. He accepted that there would be a wealthy upper class and a large lower class but education would help the poor to live with the class differentials. He thus advocated and helped to realize a free public education system.

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26In the light of the hundred and twenty years since the end of Ryerson’s superintendency and the subsequent changes in social structures, industrialism, capitalism and sociology, etc. his class analysis appears to be somewhat simplistic but this thesis is not the place to deconstruct Ryerson’s ideas. It would appear, from Chpt. 4. of The School Promoters, that Alison Prentice recognised the same incongruities and ambiguities in Ryerson’s class analysis.
Although the common schools were free, class-based considerations affected the practices of individual schools. Rewards were given to schools depending on their successes so that poor areas with low attendance received poor rewards, resulting in a widening gap between wealthy areas and poor areas. Alternative schools increased so that by 1869 14.9% of Ontario’s children attended private schools and 80% attended common schools. As industrialism spread, the concept of division of labour also became common and it infiltrated the school system resulting in division of students according to achievement, age and gender, all of which contributed to the class structure. These divisions may have been official but were not strictly adhered to as young children were accepted into the new grammar schools. It was in fact suggested that “bona fide classical scholars should be admitted at the age of ten” even though the official age for entry was thirteen (Prentice, 1977, p. 149). It seems apparent that the Aristotelian dualism concerning manual labour and mental activities was integral to early Ontario school development.

Ryerson and his fellow educators promoted and achieved large segregated schools in order to attain control, order and efficiency in Upper Canada and later Ontario. However, as late as 1863, 17.2% of Toronto’s children did not attend school for reasons such as employment, lack of clothes, living too far from school, being required at home, or sickness. These were the children of the poor as the wealthy had alternative private schools or tutors to keep them out of the free common schools. The aims of efficiency and respectability also resulted in an hierarchy of teachers depending on their certification and gender. Teachers with inferior certificates, and female teachers, were assigned to
lower grades, all-female schools and low-status classes within the system. The social class structure was already being defined in the school system and was manifested in the assignment of teachers (Prentice, 1977).

As Ryerson was nearing the end of his superintendency in the 1870s, Canadian education saw vast changes moving from a regional concern to a national occupation and the last part of the 19th century witnessed coast to coast developments. Canadian life was mainly agricultural with some small manufacturing, neither of which required much educational input. From the mid-70's to the mid-90's there was a world wide recession and so, although there was industrial growth, it was slow. However after the 1878 election, tariff legislation was introduced which prompted greater industrial output. The Canadian Manufacturer's Association called for technical education as the growing industrialism needed trained workers. High immigration and settlement of the west saw increases in manufacturing, and to keep pace with European and United States industrial growth politicians and educators called for industrial arts training.

There was opposition to the demands for this vocationalism, the training of workers, from several educators who argued for a purer education devoid of skill training for specific jobs (Stamp, 1970). The educational philosophies of the objectors may have been varied and inconsistent with the argument of this thesis but their objections are noted to show that there were attitudes other than the “pro-vocational” advocacy. Commonly held opinions, some of which are listed below, were against the “anti-vocationalists,” and

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27 These changes occurred at the governmental level and at major centres but it is well established that due to Canadian geography, and size, schools in rural, isolated areas retain varying degrees of autonomy, even in current times. The terms “provincial” and “national” as used here have to be understood in their historical and geographical context.
the push for practical education persisted. To present a picture of the support for industrial education I will list a small sample of the advocates: Canada Educational Monthly, Quebec’s Council of Arts and Manufacturers, The Manufacturers’ Association of Ontario, the Nova Scotia coal mining industry, the Canadian Manufacturers Association and the Dominion Board of Trade. It is significant that in 1911 Ottawa, with support from industrialists, appointed a Royal Commission on Industrial Training with James Robertson as chairman.

One of the first advocates for Manual Training in Canada was James L. Hughes. In this chapter I analyse Hughes’ views, and their European background and include a review of a report on elementary technical education prepared for Ontario in 1900 by W.S. Ellis, the principal of Kingston Collegiate Institute. Hughes and Ellis represent the views of other educators and illustrate the support for Manual Training before 1900. The opinions of several other supporters of manual training are presented as examples of advocates for manual training other than J.W. Robertson and Sir William Macdonald, the best known promoters of manual training, usually considered the “founders.”

Hughes and Ellis represent different perspectives. Hughes was an “idealistic” disciple of Froebel, and Ellis too was predominantly “idealistic” but with occasional displays of vocational pragmatism. “Idealistic” in this context indicates the belief in an “excellence” or “perfection,” an “ideal,” as opposed to the philosophical meaning of the word.

James Robertson was former Dominion Dairy Commissioner and Principal of Macdonald College in Ste. Anne de Bellevue, Quebec (chpt.3).
James Hughes was born in rural Ontario in 1846 and by age 28 had become Inspector of Public Schools for Toronto, a post which he held from 1874 until 1913. He was primarily one of Canada's leading reformers of elementary education but later became a social reformer with the intent of improving order and efficiency in the growing city. He believed that the way to correct what he saw as the increasing deterioration of the cities was through education (Stamp, 1970). He thought that "teaching is the preparation of the child for the art of living, all the child living at his best for his best" (Hughes, as cited in Stamp, 1970, p. 318). He did not agree with the overly "bookish" form of education which had predominated in Upper Canada / Ontario and thought mechanical tools were important learning devices. Hughes considered that learning by a physical activity was more valuable than learning by bookwork. He stressed the central Froebelian notion of "self-activity" as a way to give the students a wider perspective and build their characters. He sought to produce autonomous, self-regulated and self-motivated individuals. "Schools must become "gardens" Hughes argued, in which "each child" grew "to be its grandest most complete self" (Hughes, as cited in Sutherland, 1976, p.175).

At the end of the 19th century there was more interest in the welfare of the child and Froebel's ideas became more influential. In the tradition of Froebel, Hughes was eventually responsible, after a long campaign through his inspector reports and through newspaper articles, for the start of the kindergarten in Ontario. There were, in 1895,
Froebellian societies in Toronto, Ottawa, London and Winnipeg and as a spokesperson for Froebel's ideas he was a strong advocate for "manual training" seeing it as a natural part of the educational sequence following kindergarten. In his school inspector reports he argued for the inclusion of manual training from 1886 until its inception across Canada in 1900, seeing it as the starting point of, and the means for the continuation of, child development.

James Hughes was thought to be ahead of his time. He was a leading educator in North America, active in the affairs of the National Education Association (Sutherland, 1976, p. 235), and friendly with highly reputed educators in the United States such as William Harris. Toronto became the host city for the conferences of many American societies, for example, the National Education Association, and the centre for many new approaches to social problems, education being one way to deal with these problems. That these conferences were held in Toronto accentuated the importance of the city as a "centre for new approaches," and also that some Canadians were initiators of new ideas in their fields. Hughes was such an innovator in education (Sutherland, 1976, p. 26), and thus invited to speak frequently at education conventions in the U.S.A.

James Hughes presented a report and recommendations on manual training to the Public School Board of Toronto in 1900 (Hughes, 1900). He had been instructed by the Toronto School Board to prepare the report and his recommendations were to guide the Board in introducing Manual Training. He included three "fundamental principles" to help the Board in introducing the new course:

It should be done as economically as possible; the aim should be educational rather than economic; and the work should be correlated so far as possible with the other work of the schools. (Hughes, 1900, p.14)
Hughes began his report by defining his conception because the words "manual training" were used to describe several types of training. He emphasized that he did not mean just any form of trade-training, or any guidance towards a particular occupation, as these were not among the purposes of public schools. For a subject to be worthy of a place in the school curriculum it should have both educational value and economic or practical value, and there need be no conflict between the two.

In Hughes's opinion Manual Training is a method for the child to communicate ideas by shaping, manipulating and constructing material objects using the hands. When a child starts with a plan, either its own or the teacher, and eventually produces a material project, she or he has progressed through a logical sequence of stages. Hughes argued that Manual Training was "not to be understood as a system of trade schools, or as something to be taught chiefly for its economic value, but as a system of definite self-expression with things; as formative, constructive, self-expression" (Hughes, 1900, p. 4).

Hughes demonstrated the influences of Froebel on his own educational ideas when Hughes traced the development of manipulation and construction of physical objects from early childhood (the building of sand castles or mud pies), through Kindergarten (structured and immediately productive construction activities), to Manual Training (a more formal educative practice suited to older children). This development is a "natural" progression fitting the growth and maturation of the child. Hughes knew, of course, that inclusion of Froebel's ideas would appeal to most teachers in Ontario's schools as they had been exposed to Froebellian ideas at Normal School. A major purpose of the Toronto Normal School had been to introduce the new teaching methods into the common schools.
“Object lessons” had been the favoured new intellectual method. School students, rather than learning from merely the printed word, would spend some time with real physical objects and study from nature rather than books. As early as the 1860s Edward Sheldon at the Teacher Training School at Oswego, New York, had refined the “object lesson” teaching method which influenced Toronto Normal School (Houston and Prentice, 1988). The Oswego Teacher Training School was specifically a Pestalozzian school, later to be visited by J.H. Putman.

In his report Hughes summarised the main reasons for starting Manual Training in the school system, and combined them in two groups, educative reasons and economic reasons. His report was for the Toronto School Board and advocated the inclusion of Manual Training in the schools of Toronto. He favoured manual training and his reasons were acceptable to anyone committed to public education. Some of his reasons refer specifically to the benefits of manual training and others to more general educational benefits.

Why did James Hughes favour Manual Training? He believed Manual Training was the perfect way to provide a total education. His beliefs demonstrate his “idealism” and the initial “idealistic” motivation for the introduction of Manual Training. In this context “idealism” has two meanings. Hughes accepted the “common” understanding of “excellence” or “perfection,” but his epistemological opinions show signs of Kantian “idealism”. He was aware of “sensory perceptions” affecting, or being affected by, the mind, in the Kantian sense.
In Hughes' use, a subject is “educative” if “knowledge” or “culture” is gained by the recipient, or when the “educative” experience develops the brain and generates “executive power.” Practical work develops the brain, since the mind is active in guiding the hand; hand practice implies intellectual practice. He considered that Manual Training develops executive power, the power to carry things into effect and the power to make things happen. Hughes thought that the most important function of education was to develop this power. Manual Training requires the mind to create “ideals” and then guide the hand in manifesting the ideals in physical form. He believed that most forms of schooling either imparted knowledge or required the student to change some given form of knowledge into a new form of thought. Education has its true value when acquired knowledge is changed to some physical manifestation. Hughes thought that education had been lacking in value because it had tended to increase the ability to acquire knowledge while reducing the tendency to use the knowledge effectively. Schools had emphasized the “acquisition of knowledge” and ignored the “application of knowledge for practical purposes.” He believed that education must develop the inner mind but the education is incomplete until the inner mind is empowered to execute, is given the strength to “initiate” and not just “react.” Executive power is characteristic of the autonomous individual. Manual Training develops “executive powers” by various ways intrinsic to Hughes’s “educative reasons” for the inclusion of Manual Training discussed here.

A subject may be educative either because it gives added knowledge or culture, or because it develops the brain itself and gives greater power, especially executive or outgoing power. Manual Training is educative chiefly because of its use in the development of power, and this is the most important function of education (Hughes, 1900, p. 5).
Manual training is an integral part in the training of “independent, original, self-reliant” individuals possessing the “power to initiate and accomplish new ideals and plans” (Hughes, 1900, p. 6). Below, I paraphrase some of the ways which Hughes considered manual training to be educative. I include certain of Hughes’s educational, epistemological and physiological views to provide qualification of the items.

Manual Training trains the powers of observation. Children examine and observe most closely when the finished project is their own and close observation will determine the accuracy and precision of the final article. It develops the powers of perception and judgement with respect to size and shape. The children will be handling concrete materials providing experience of “real” objects. Hughes considered this experience to be the best basis for mathematical culture. The manipulation of physical materials helps develop conceptions of real objects. Children, in their early years, construct ideas from observation of material things. Manual Training is a continuation of a systematic growth of physical conceptualization.

The concentration over a period of time required in Manual Training develops attention span. The ability to pay attention for a sustained period is the basis of real intellectual progress. The beauty and precision displayed in a constructed material project is a window to the powers special to each individual child. The special powers of each child become visible not only to the teacher but to the child itself.

Manual Training is an aid to school discipline. When a child becomes conscious of the creative and interesting production of a meaningful project, discipline is not a problem. Lack of activity and productive occupation cause discipline problems.
The physical manipulation, shaping and joining of physical materials develops a disposition towards "accuracy, exactness and definiteness." Hughes considered these factors to be "fundamental elements of character" and believed they were essential developments in the production of projects in Manual Training. It provides a basis for precise and concise thought patterns in later years. Hughes listed a number of ways in which ideals are absorbed by the brain: visual perception, oral description, use of material objects, or the transference of ideals and perceptions into physical products. He considered the last two ways to be the most valuable and lasting.

Hughes referred also to physiological benefits arguing that Manual Training provides opportunities for physical exercise. The physical manipulation of materials and tools provides required exercise, as well as developing hand-eye coordination and manual dexterity. Manual Training provides many opportunities for the processes of thought, stimulated by perceptions, to control the activities of the hand. Practice in the activities improves the expertise or facility.

The production of a useful and beautiful project develops a positive attitude towards work, there being a direct connection between the worker and the produced article, an ownership of the design, productivity, materials and finished project. It cultivates the "virtues of neatness, accuracy, diligence, perseverance, order and definiteness." Hughes qualified this list of "virtues" with some beliefs typical of the pre-Edwardian period. "It preserves the taste for work that children have naturally, and increases respect for honest labor" (Hughes, 1900, p.10), and "It increases the proper

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29 The phrase "pre-Edwardian" is used because Hughes wrote his report in 1900 and "Edwardian," although referring to features of people from the reigns of any of the King Edwards, is used more specifically to describe those of persons from Edward VII's reign from 1901 until 1910.
Hughes believed that more people fail in their life because they lack "true self-reverent faith" than because of any other cause. He not only emphasized individual improvements but considered Manual Training improved societal morality. Hughes quoted Swedish statisticians who claimed that since the introduction of "Sloyd" into Swedish schools, adult drunkenness had declined and thriftiness has increased.

It may be argued that Hughes was influenced, possibly indirectly, by Karl Marx.

In the ideal conditions of society in the coming time all men shall be happy producers or workers for the common good. (Hughes, 1900, p.10)

Hughes recognized the positive relationship to work when there was a connection between the worker and the "design, productivity, materials and finished project," that is, if the worker was not "alienated" from the product of his or her work.

On the other hand, Hughes was also appealing to the puritanical element of the school board, the believers in protestant morality. Sobriety and thrift were values held by the predominantly protestant dominant class, from whom the school board would be chosen. Business sense, the work ethic, work skills and productivity were all economic factors which would have been valued by the school board members, many of whom would have been business people.

As stated above, Hughes perceived two non-conflicting sets of reasons for the inclusion of a subject in the school curriculum. The "educative" reasons discussed above formed the first, and the economic or practical value of the subject was the second. Following is a summary of Hughes' economic reasons for the inclusion of Manual Training (Hughes, 1900, pp.10/11):
Manual Training does not teach specific trades, but the training of hand and eye, acting in conjunction with an autonomous mind, will provide a background suitable for any trade or career. The culture of the “shop” trains students to become workers able to meet new conditions and to become adaptable to changing means of production. He recognised that the many faculties, trained and valued as educative (see “educative reasons” discussed above), are required by, and are advantageous to, a great majority of occupations. From a wider perspective Hughes saw the improvement in skill level of the general population through education providing a wider base for individual and national wealth. The greater wealth provides more opportunity for domestic comfort and culture, resulting in “incidental physical, intellectual and moral advantages” (Hughes, 1900, p. 11). It was argued that manual training would produce poorly trained workers, but Hughes stated that it would produce workers who would be more easily trainable because of skills and knowledge learned in manual training.

James Hughes was an advocate for the inclusion of manual training in the core curriculum. It should be part of every child’s education so that they should be fully prepared for optimum development as they mature. He considered that manual training would prepare men and women not just for a living but that it would equip them for “higher living.” He had been promoting Froebelian concepts since 1876 and in his report he exhibited his own idealistic tendencies, as seen in the following extract. Although Hughes’s idealism tended to lean towards the search for “excellence,” he exhibited Kantian tendencies when he referred directly to the value of manual training:

It will be introduced into all schools...not to teach trades but to give more power; not merely to mould material things but to mould humanity; not only to give manual dexterity but to lead to creative activity in productive departments of life
work; not for the making of things but for the making of better men and women (Hughes, 1900, p. 12).

To reinforce his arguments Hughes included extracts from a report delivered in 1898 to the "Imperial Parliament" by the commissioners on Manual Instruction in Schools under the National Board of Education in Ireland. The commissioners had studied evidence produced by 186 of the leading educators of Europe. It is significant that the Irish writers of the report made reference to stratification in society based on job selection and established a connection between it and Manual Instruction in schools. They did consider the training to be valuable for all but more especially for manual workers.

Such training we regard as valuable to all, but especially valuable to those whose lives are to be mainly devoted to industrial arts and occupations (as cited in Hughes, 1900, p.12)

Hughes, an idealist, yet still concerned with material and economic factors, did not refer to any specific segment of either the school population or the workforce as he was concerned with the general educational value of manual training. In contrast, the Irish report gives precise pedagogical reasons to support manual instruction in Irish schools, many going beyond Hughes' educative reasons;

It makes the children alert; it makes them more intelligent; it is entirely a training of the intelligence, and there is no getting off with guess work; it cultivates the power of rapid observation; it makes the children from the very first attach great importance to exactness; it goes to develop the inventive faculty; it is a relief to the children by varying the nature of their school work; refreshed and brightened by it, they have greater zest for their book work; it has been found an effectual check to nervousness; it gives a dull child the chance of getting onto the same plane with smarter children, and thus gives to dull children a useful incentive to exertion in the other work of the school; the exercises in it are the most popular with the pupils (as cited in Hughes, 1900, p. 13).

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Hughes used "Imperial Parliament" to mean the British Parliament in Westminster, Ireland being under British rule in that period.
Viewing manual training as “a relief” or as a refreshment so that they approach their book work more actively appears to be socially or even pedagogically superficial, stemming from an unconscious or unintended acceptance of Aristotelian dualism. A child doing a concrete project cannot merely erase a mistake as he/she may do with written paperwork or computer text, and so such a reason has validity. Mistakes in physical materials must be corrected or altered in such a way as to camouflage the mistake. Being able to alter projects to correct mistakes was and remains an educational value of manual training. The use of tools, and the “self esteem” gained in the production of a concrete project, was and is a most effective pathway to overcoming nervous dispositions. References to “smarter children” and “dull children” originate in the equating of verbal intelligence to general intelligence and the ignoring of “performance” intelligence. Binet and Simon did not attempt intelligence testing until 1904 and their system acquired currency only during and after World War 1, therefore comments regarding “dull” or “smarter” children must be considered in historical context. The Irish evidence Hughes included in his report, supported his arguments for the inclusion of Manual Training in the Toronto schools, although the reasons are in some ways out of keeping with Hughes’s idealism and with Froebelian educational thought.

Hughes ended by recommending a course of studies for both girls and boys, emphasizing that the aim of the school board in introducing manual training should be educational and not primarily economic. In the light of 1998 conceptions of integration of subject areas, it is of passing interest that Hughes recommended manual training work
should be correlated as far as possible with the other work of the school. One of Hughes' recommendations has persisted. He asked the board to appoint “one skilled carpenter for each room opened” (Hughes, 1900, p. 15). This appointee, a skilled tradesman, was to be the new teacher for the Manual Training classes. The effects of this type of appointment, that is, of a tradesman rather than of a teacher, warrants discussion at a later stage.

Hughes was one of a growing number of people wishing to introduce technical education to Ontario's schools. In 1873 a report had been written for the Mechanics Institute of Ontario about technical education. Growing industrialism was affecting the demand for labour of certain types. The year 1899 seemed to be a turning point for technical education and manual training as numerous reports appeared in rapid succession. Several examples will show their variety.

John Millar, B.A., the Deputy Minister of Education for Ontario wrote a Report of a visit to the schools of Massachusetts and the opinions on the subject of technical education, released in Toronto in 1899. He pointed out that a by-law in Massachusetts stipulated that every city over 20,000 must maintain a manual training department in each high school. There were 23 schools with manual training facilities distributed in 14 cities. Millar thought that there was little time for most high school students in Ontario to include manual training as there were too many “classical subjects.” He considered it better to teach manual training to 11 or 12 year old students as “hand-eye correlation” was trained better at an earlier age. The formation of a good technical school however should “give

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31 In section 5 of the Sullivan Commission on Education, The Curriculum, it states: The Commission recommends: (1) Teachers use an interdisciplinary approach in their teaching; (Sullivan, 1988)
students ready access to the industries of a large manufacturing city” (Millar, 1899). The Deputy Minister of Education understood one of the “idealistic” functions of Manual Training but saw “technical education” as vocational. The Board of Trade for Toronto released a report on technical education also in 1899, and there was a report by J. D. Allan in the same year about Technical Education from a business perspective.

Lieutenant-Colonel Farewell LL.B., Q.C. prepared a report in 1899 for the Ontario Education Association on the same subject of Technical Education (Farewell, 1899). He gave his report at the Easter meeting of the Association in 1899 and it was specially printed out by order of the County Council of the County of Ontario. Farewell considered that the study of languages other than English should be discontinued in about one-third of Ontario’s High Schools. He proposed that Manual Training, including the use of tools and implements, be substituted. He also advocated practical courses on agriculture, mechanics, manufacturing, mining and commerce. He understood that High Schools were teaching subjects mainly for the learned professions but noted that doctors, lawyers, teachers, engineers and clergymen owned, and thus paid taxes on, a relatively small amount of property. The majority of those being taxed were employed in manufacturing and distribution and they were not receiving any education for those areas. Farewell cited T.H. Huxley to reinforce his call for the introduction of manual training as vocational instruction. “We cannot continue in this age of full modern artillery to turn out our boys to do battle in it, equipped with the sword and shield of the ancient gladiator” (Huxley, T.H. as cited in Farewell, 1899). The Association voted to report Farewell’s paper in newspapers, inform Departments of Education throughout the province about the
paper, and report to the next convention of the Ontario Educational Association
instructions to carry out the ideas in the paper.

The Ontario Department of Education commissioned several studies, one by A. McMillan in 1893 entitled “Defects of our Public School System” and a second by Bernard McEvoy in 1900 resulting in a Report on Technical Education. The predominant view expressed in these papers was for Manual Training and Technical Education to be introduced as a preparation for practical occupations. They were seen as either pre-vocational or vocational courses with little mention of the ideal, general educational function as expressed by James Hughes. Ellis’s report is representative of these reports and serves to illustrate commonly held views in Ontario at the time. As a teacher he had a bias towards the educational functions of manual training but agreed also to its vocational purpose and economic value.

W.S. Ellis

The same year James Hughes presented his report to Toronto School Board, W.S. Ellis, the Principal of Kingston Collegiate Institute, wrote a report on Elementary Technical Education for the province of Ontario’s Department of Education (Ellis, 1900). His aim was to persuade the Department to finance the inauguration of a manual training course for boys “and girls too, if thought best,” so that Kingston Collegiate Institute “may serve the largest purpose as an educational institution” (Ellis, 1900, p. 37).

Ellis began by emphasizing that the technical course he recommended must, first of all, be considered of educational value but also fit students for the practical side of life, whether in professional, mechanical, or commercial pursuits. He questioned whether
Ontario had an educational system suitable to provide its citizens with the highest level of material and intellectual prosperity.

The schools of Ontario had, he thought, three aims: to train mental faculties and stimulate intellectual growth, to provide information deemed necessary for all citizens, and to give some special training for future employment. Ellis recognised that, from his perspective, these aims may not be the ideal motivation for a state-funded public school system but that was the current state of education and that was his preoccupation. Ontario Schools, he argued, devoted 90% of school work to Departmental examinations aiming at University entrance and future professional careers (Ellis, 1900, p.6). He considered that a “broad and liberal school curriculum” should, by contrast, prepare students for any future life direction and prepare them for entering industrial, manufacturing or commercial occupations. He was not advocating “trade schools” but a school curriculum that would better prepare students for adult life and suitable career choices.

Canada was a young country with enormous mineral resources and skilled, educated men were required. Industrial and commercial conditions were changing quickly and a different type of worker was needed for the various means of production and the many divisions of labour required in the new factories. The skilled artisans of earlier times were being replaced with “men of intelligence, educated and trained, with ability, to grasp the ideas of the guiding head of the department and translate them into finished products” (Ellis, 1900, p.8).
Ellis was not referring to the production worker whom he recognised as entering industry without education and then deteriorating further in ability because of his use of repetitive machine operations. His comments and curriculum suggestions were directed rather at "the man who goes in, educated to do independent thinking, trained to work quickly and accurately, and capable of gaining knowledge of men, materials and machinery" (Ellis, 1990, p.8), that is, the management and skilled technician. He listed a number of the alternatives to an industrial career - law, medicine, preaching and teaching - thus recognizing the middle class aspirations of the school system in 1900. Of those entering high school about 45% "leave without finishing any course of study" (p.9), the lack of any relevant courses being given as the main reason (Ellis, 1900, p.9). Parents did not wish their children to waste time studying what they considered to be useless subjects in school when they could be trying to earn a living (Ellis, 1900, p.9). Ellis claimed that the high number of students leaving school could be reduced if technical courses were to be included in the curriculum. The higher number of students graduating from school would serve to raise the educational status of Ontario.

Ellis, in outlining the technical courses, listed the educational values but also indicated their use as a foundation for the practical work of life, in a mechanical or commercial occupation. He criticised the 1900 education system as it was overloaded with subjects of purely educational value with no practical, useful purpose. He considered the system a selection device for those attempting to obtain a credential such as a university certificate. His ideal school would have four departments: English, Science, English: Grammar, Composition, Literature. History, Geography. Science: Botany, Physics, Chemistry, Zoology, Mechanics, Geology, Mineralogy. Mathematics: all aspects.
Mathematics, and Manual Training, each having equal value. To this point, Ellis has displayed "pragmatism" as opposed to "idealism" irrespective of form.

He elaborated on manual training:

Let it be stated once for all that the object of manual training is not to turn students into mechanics (Ellis, 1900, p. 14).

Ellis noted that few Ontarians thought that a student should be a writer or editor because he used a pen, nor was it the intention of the school that a student should become an artist if he used a paint brush in Art Class. He emphasized that manual training should not be confused with Trade School curriculum or Manual Training Schools, the purpose of the former being to teach a particular trade and that of the latter to teach skills, tool use and work processes in order that a trade may be more easily learned after school. Ellis' conception of manual training claims educational value in developing thinking and reasoning powers, claims to give students knowledge and experience applicable to most occupations, and seeks to develop mind and body powers neglected by the usual curriculum of the day. This facet of Ellis' thinking, specific to manual training, exhibits his idealism grounded in Froebel and similar to Hughes'. Manual Training was still an idealistic concept.

(A century later, teachers have been asked to incorporate different styles of teaching in order to make contact with students who may have different methods of learning, in contradiction to traditional oral presentation reinforced with written bookwork. Though manipulatives have been used in elementary school mathematics for many years, maybe as a legacy of Froebelian Kindergarten, the use of physical objects to
reinforce theoretical content tended to be limited to the sciences in secondary schools.

With the acceptance of different styles of learning, physical, oral, written, and visual pedagogies are now in use.)

W.S. Ellis was well aware of differing methods of teaching and argued for the desirability of Manual Training from that premise.

All minds are not constituted in the same way, consequently are not capable of equal improvement by the same subjects and methods of teaching. So long as we have to deal with different mental attitudes and strengths we require different methods of treatment and problems of various kinds to get the best results for all. There seems to be no good reason, except conservative and prejudice are to be ranked as such, why the concrete and practical problems of actual life should not be turned to account for mental training, as well as the theoretical and the abstract of the schools. (Ellis, 1900 p. 17)

Although Pascal and Simon did not introduce intelligence testing until 1904, Ellis was aware of different aspects of intelligence, such as “verbal” or “performance” intelligence, and recognised that schools emphasized verbal intelligence. He was advocating the inclusion of manual training in order that “performance” intelligence may be recognised.

But nowhere is there any provision made, or any encouragement given to the student whose mind has a practical bent, or who is likely to gain distinction, either in applied science or in mechanical work. This purpose Manual Training fulfils. (Ellis, 1900 p. 17)

Ellis listed, in detail, many of the advantages of Manual Training as a valid educational tool and a means of mental discipline equivalent to the regular classroom. He did stress that the success of this work depended on the teacher, and a trained mechanic or carpenter who may have been able to show students how to perform tool operations may not have accomplished anything educationally useful. A teacher who was also an expert workman could train reasoning, observation, and other mental faculties of students. The
“teacher” and not the “workman” must be the major influence in the Manual Training shop. This is in conflict with Hughes’ beliefs. Hughes recommended that “tradesmen” and not “teachers” be hired, a contradiction to his predominantly “idealistic” perspective whereas Ellis argues that “the teacher” and not “the workman” should be the major influence, an idealistic perspective.

Ellis visited a number of schools in the North-East of the United States and gave an analysis of the work and direction of the schools. Interest in manual training had arisen in the U.S.A. in 1876 after the Philadelphia Exposition at which the relation of education to national progress was a major theme (Cremin, 1961, p.23). A display of the Moscow Imperial Technical School provoked the interest of, amongst others, John Runkle, the president of Massachusetts Institute of Technology and Calvin Woodward, vice-principal and math instructor of Washington University, St. Louis. The Russians had started group training in instruction shops instead of individual job training as took place in apprenticeships. Woodward took this idea and started the first manual training school in the U.S.A. in 1879 at St. Louis. He advocated manual training as an integral part of a broad and liberal curriculum and not as a trade preparation. “The goal of the course was liberal rather than vocational” (Cremin, 1961, p. 28). There was opposition to Woodward’s views and a major debate occurred during the 1880s, but in the 1890s manual training advanced rapidly, supported for its vocational purposes by businessmen requiring free practical trade training for their employees. Many new manual training schools were privately owned and operated, and the public thought of their founders and financial supporters as “philanthropists.” President John Runkle of M.I.T. was
instrumental in the starting of the publicly financed School of Mechanic Arts to provide manual education in Boston.

In public schools it was common for the number of students enrolled in manual training to decline as their final year of school approached and Ellis blamed this "handicap" on manual training not counting towards a student's school record. Manual training was optional for all students but not compulsory for any.

The Pratt Institute in Brooklyn, founded in 1887 by Charles Pratt, promoted manual and industrial education and encouraged the "habits of industry" and "all that makes up right living and good citizenship." No definitions were given for "habits of industry" and "right living" but considering the growth of industrial capitalism and the private ownership of the school I suggest the aim of the school was to train workers to fit into their place in capitalist society. Both "trade training" and educational manual training were taught at the school and all other subjects were taught with a focus on the industrial environment. Manual training was superficially related to "Sloyd" but with some improvements. Sloyd involved repetitive exercises on small parts with no finished products resulting. In some schools in the USA, and especially in this school, the repetitive exercises were rejected and a manual training class worked towards complete projects. A student's promotion to the next grade of the Pratt school was based completely on the student's daily work, with no examinations being used.

The Technology Education Teachers PSA. in School District #71 made a report on Technology Education to the Education Committee of the School Board on Tuesday 27th January, 1998, and exactly the same point was raised. University entrance does not consider high achievement in Technology Education as a valid factor in the selection process.
In 1880, in New York, an “association of philanthropic people” was formed with the intention of promoting “the domestic industrial arts among the laboring classes, to diffuse true principles and correct methods of living....” (Ellis, 1900. p. 25). Private funding provided a college for teacher training and it was in full function by 1887.

In 1894 the Boardman Manual Training School was established in New Haven with a private donation of $70,000. The students would work on one project, each student producing one part of the complete product. When all students had finished their individual parts the complete object would be assembled. Ellis benignly explained that: “This theory is quite opposed to that on which most manual training courses are laid out, and I mention it to show that there is room for individuality in this line of school work as much as in any other” (Ellis, 1900. p. 27). The students’ training was preparation for assembly line production or “Fordist” methods.

The segregation of the school population according to courses of study was noticeable in state-supported and private schools in the late 19th century on both sides of the Atlantic. Boston had separated two streams of the secondary school into the Latin high school and the English high school. The former taught classical courses and the latter provided an education suitable for the general population and for the businessman. In 1894 the municipality segregated the school system further and formed the Mechanic Arts high school. This school was similar to other high schools except 50% of the student’s timetable was devoted to manual training and technical drawing. Ellis commented that “no one questions its position as easily the leader of such institutions in the New England states” (Ellis, 1900. p.29). He thought this position important, as all other “first rate”
manual training facilities he had visited were privately financed. The Mechanic Arts High School was operated by the municipal board that controlled all the other education of the city. Ellis was coincidentally asking the Ontario Department of Education to finance manual training at the school of which he was principal (Ellis, 1900, p. 29). The Boston school was an example of how an excellent manual training facility could be established even using public money.

Ellis made observations of American society during the period of his school visits. In the north-eastern United States, where he visited, there were associations between high-status colleges of science and engineering and high school centres of manual training. The fact that he saw this proximity as significant indicates he envisaged manual training as a suitable preparation for scientific or engineering studies. He regretted there were no available American teachers of manual training in 1900 to teach Canadian manual training courses, had they been offered.

He also noted a major change in the social organization of work. The individual craftsman, the apprentice and the journeyman were becoming anachronisms. Work was shifting from individual country towns and villages to large centres where power to run the factory was cheap, and shipment of materials and finished products was convenient. Tradesmen, made redundant by the new industry, were demanding more education for their children so that they may be made employable. Ellis' vision of manual training as a preparatory course for a scientific or engineering university education never materialized, as technical courses at high school, while counting for a graduation certificate, are not
demanded for selection to either science or engineering faculties. He noted several times that although many large tertiary education establishments were state operated and funded, manual training courses had all been started by private donations of money, the money, one might presume, of wealthy industrialists.

The last of his observations of American society was directed at the schools. He noted that American schools were not restricted by external examinations as his Kingston school was and Canadian schools in general were. Success in school was based entirely on everyday school standing, not summary examinations. In Ellis’ interpretation Americans did not try to make scholars but tried to educate their students, whereas Canadians did not educate but attempted to make scholars who could answer a percentage of the examiner’s questions.

Ellis’ conclusion emphasized that manual training, far from being in the way of academic education, actually improved general ability. The manual training courses he observed were never used as school reformatories. Practical work could not be used to control a student who had learned poor behaviour in a bad home life and was disruptive in all departments. Although he advocated manual training for its idealistic, educational benefits he nevertheless recognised that the faculties educated in a person made the person more employable, and thus it helped the common economic good, by helping provide a better life for all. He recommended to Kingston School Board that his school be equipped with all the tools, benches and machinery for a manual training course for boys, “and girls

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34 Robin Houlgrave, House-coordinator, Highland High School, Comox, formerly Technology Education teacher (Personal communication, June 2nd, 1997)
too, if thought best,” and saw no problem in suggesting a search for a private endowment from a “philanthropic” person.

In Ellis’ report two major contradictions become apparent. As an educator he saw manual arts as a truly educational course, displaying an “idealistic” perspective in both the “common” meaning and Kantian philosophical understanding of “idealism.” However he knew of many privately owned schools that were, according to his report, teaching manual training for economic purposes as a vocational course. He considered manual training as a beneficial course for students intent on attending science or engineering courses at university rather than as a preparatory course for the industrial work force. If his views sometimes veered towards the latter, they were limited to the management or skilled technician roles in industrial manufacturing and manual training was a preparatory vocational course. His views were congruent with the fact that Canadian schools attracted mainly middle class students and that American society was at a later stage of industrial development than Canadian society. The contradictions evident in the motivation for inclusion and use of manual training are always present and may be seen in a concluding quotation of W.S.Ellis:

Then the object should be entirely to gain power from the doing,----not to gain the power to do (Ellis, 1900, p. 34).

35In simple Marxist analysis the concept of “middle class” creates a problem. They are a class of people who do not own their own means of production and sell their labor on a labor market but do not seem part of the “working class,” the proletariat. On page 11 in the introduction, detailed class definitions are given with class location maps indicating the relative positions of class locations. The class of employees is separated by a) relationship to authority and b) possession of skill or expertise. Several middle class locations were listed on p. 75 as examples of the middle class aspirations of the school system in 1900; medicine, law, preaching and teaching. There was an identifiable petty bourgeoisie of whom many would possess skill or wealth necessary to include them in a middle class, and a growing industrial employee population with authority and/or skill levels allowing them to exercise “delegated capitalist powers,” that is, they were in the middle class.
Hughes displayed "idealistic" reasons for the inclusion of manual training in the school curriculum. Ellis demonstrated that he understood the "idealistic" rationale but was sufficiently pragmatic to advocate the "vocational" benefits. Farewell saw one reason for the addition of manual training. It was a vocational course to prepare students for practical occupations. The Deputy Minister of Education, John Millar, expressed educational reasons for early manual training but advocated technical courses as a preparation for industrial occupations. I turn now to the two main protagonists of Manual Training, J.W. Robertson and Sir William Macdonald, their role in its inauguration, and Robertson's part in the change of manual training from an "idealistic" purpose to a vocational course.
Chapter 4

The Foundation of Canadian Manual Training: J.W. Robertson and William Macdonald

There were a variety of advocates of manual training in Canada at the end of the 19th century. Some were prominent educators such as James Hughes, others spoke for “social justice” through vocational training such as Lt. Col. Farewell, and others were involved in politics such as Deputy Minister, John Millar.

In this chapter I examine the Canadian founders of privately funded, publicly regulated Manual Training, James Robertson and William Macdonald. Macdonald provided the financial backing, but in the change of rationale for manual training from “idealism” to “vocationalism” the major historical figure was J.W. Robertson, a school promoter and the administrator of William Macdonald’s fund for the promotion of Manual Training. Robertson’s contribution to Manual Training, his subsequent chairmanship of the Royal Commission for Technical Education, and a brief review of the North American movement for the advancement of Technical Education are a major theme of this chapter. The initial biographical details give insight into his later actions and motivational changes.

The promoters of new educational ideas for Canadian schools, Hughes, Ellis and Robertson, were operating in isolation, yet advocated the same sorts of courses, and their reports were based on similar research. Each report was presented as the original ideas of the writer, each writer being familiar with the growth of Manual Training in Europe and the United States of America. They, the Canadian promoters, did not, however, mention the other educators.
J.W. Robertson

James Robertson was born the son of a farmer in Scotland in 1857. From age 14 to 17 James worked for a firm in Glasgow as a clerk, a position in which he learned many of the communication skills later so helpful to him (Iles, 1907). In 1875 his father, with his family, emigrated to Canada where he farmed 3 miles from London, Ontario. His father, helped by James, exported farm produce to Great Britain. James noticed that much Canadian dairy produce was of inferior quality. He found employment in a cheese factory and thoroughly learned the manufacturing process. Eventually James became manager of the factory and was so successful he was shortly managing eight similar factories. He became well known as a farmer and producer of cheese, and was in demand during winter months telling farmers about his methods. In the winter of 1878-79 he attended college at Woodstock, Ontario where he crystallised the self-motivated, practical education he had acquired at work. In 1886 the Ontario government asked him to be professor of dairy husbandry at Guelph Agricultural College and in 1890 he was appointed Dairy Commissioner for all Canada. In 1895 he was made the Agricultural Commissioner for Canada.

In the late 1880s meanwhile, William Macdonald, sole owner of the Macdonald Tobacco Company and a millionaire,\textsuperscript{36} was elected to the board of the Bank of Montreal. He noted that the business of rural branches of the bank improved whenever dairying was introduced to that area (Neilson, 1989). His research into the reasons behind these

\textsuperscript{36}A detailed study of William Macdonald's connections with James Robertson and manual training follows.
improvements led him to James Robertson. Macdonald, who had a rural background, was interested in training young men for agricultural leadership. He wanted to start a residential school for rural Quebecois with an English background, a school modeled on a seminary for Catholic priests (Snell, 1963) in which selected students would be trained as leaders for farming. He approached Robertson for advice on this subject. Robertson dissuaded him from the idea but managed to interest him in supporting a project for the improvement of field crops by awarding large prizes to farm children for selecting from their families' farms the best heads of grain to be used as seed.

Robertson also interested Sir William Macdonald in some criticisms of the education system. He considered that schools concentrated too heavily on book work and did not include any training for “doing.” The new industrialism and the growth of cities changed the lifestyle of the new migrants to the cities, many of their rural life skills being lost. Robertson, a new educator, thought manual training would be a step to correcting that loss. Macdonald believed that practical education was most needed in rural schools, but Robertson persuaded him that it should be offered in urban schools since rural schools took their leadership from the cities, and it would therefore spread more easily. Manual skills learned in the rural lifestyle ought to be taught in urban schools. Newspapers were published in the cities and it would therefore be easier to acquire public support.

Robertson convinced him that manual training was the first step in the plan to improve rural schools and help keep farm children living in the country (Robertson, 1899).

In 1899 Macdonald, at Robertson’s suggestion, established “The Macdonald Sloyd School Fund” with provisions to provide equipment, materials and teachers to selected
schools across Canada for three years, after which local authorities would assume costs. In a letter to Macdonald, dated October 14, 1899, Robertson listed the estimated costs of nine manual training centres at $20,800, including nine sets of equipment, nine teachers, eight trips by provincial representatives to Britain and/or Sweden and material supplies to nine schools. The second year and third year would cost $8,440 per year adding up to a total of $37,680. Macdonald wrote to Robertson in July 1900 stating that he had deposited $40,000 in the Macdonald Sloyd School Fund account in the Bank of Montreal, but by July 1901 Robertson was asking for another $60,000 to cover the final cost of manual training centres in the schools, which had increased from the original nine estimated to twenty one. A statement issued in 1909 by Macintosh and Hyde, the chartered accountants for the Macdonald Manual Training Fund in Montreal showed a total final expenditure of $186,374. Macdonald and Robertson had ten years of active collaboration but it finally ended in 1909 after numerous conflicts regarding Robertson’s inability to handle finances wisely (Neilson, 1989). He tended to ignore budget restrictions and this led to confrontations with Macdonald who was known for his frugal lifestyle. It may be assumed that the vast difference between Robertson’s initial estimate of $37,680, and the final figure of $186,374 for the Macdonald Sloyd School Fund, may have caused conflict.

In 1899 James Robertson, as Commissioner for Agriculture, made a speech entitled “The Macdonald Sloyd School Fund, Manual Training in Public Schools” (Robertson, 1899). Although speaking to the government as a farmer, Robertson’s paper (1899) suggests that he may have been aware and knowledgeable of the educational
theories of Froebel, although he never mentions his name. He saw that manual training was a growing educational movement in major European countries and in the U.S.A. He viewed practical work as a correction to a school system heavily laden with "book studies," a school system that alienated the children from "occupations in which bodily labour plays an important part." The school education encouraged children to leave their farm homes and seek city work in clerical and professional occupations. The possibilities of over-educating rural people was a common topic for discussion but Robertson thought it impossible to over-educate anybody. He did believe that students could be "overschooled" resulting in career choices for which the students had no aptitude.

Perhaps one of the many causes which have helped to bring about a preference for clerical, professional and scholastic occupations, in those who have no natural fitness for them, and a corresponding distaste for manual and bodily labour, has been the too exclusively book and language studies of the common schools (Robertson, 1899, p.5).

He thought that a narrow scholastic education, although allowing students to be "modestly proud of their knowledge of the history and theories of the past" would not give them the "ability to fill a man's or woman's place in the present" (Robertson, 1899, p.6).

Robertson connected the agricultural objects of his department to educational reforms by emphasizing the value of an educated farming community. In Pestalozzian and Froebelian fashion he traced the growth of the child from infancy to youth and indicated the place of schooling in this continuum of maturation. Schooling should be an integral feature of growth, and hand-eye coordination training had to be included.

Manual training is a means of developing mental power. These,—systematic training of the senses, of the hands and eyes, and of the mind--, are some of the objects of practical and manual instruction (Robertson, 1899)

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37This situation is reminiscent of his own childhood and youth described earlier.
Most educational movements began in the cities and later spread to the country districts. He predicted the growth of manual training would follow in the same direction. He also hoped city boys would learn to love manual, industrial and productive labour for its own sake, and afterwards choose such occupations for the sheer delight they provided (Robertson, 1899, p. 7).

Robertson stressed he was not advocating Trade Schools. He was promoting practical instruction for its educational value in developing intellectual and moral qualities of the highest standard, with no regard to any occupation that a student may follow after school. Robertson was a Kantian idealist but also a seeker of excellence and perfection (p. 9) in education when acting as an advocate for manual training. He claimed manual training was a way to “perfect” morality, the ideal morality, and that the physical manipulation of concrete materials introduced more complex ideas through the sensory experiences. He did, however, recognise that manual training, as general education, was good preparation for technical instruction at a later stage.

As evidence of the benefits of manual training Robertson quoted the Annual Report of the School Committee of Boston for 1892 and the Report of the Commissioners of National Education in Ireland of June, 1898. James Hughes also used the latter but in peripheral fashion. Robertson used the Irish report and considered it to be of such high quality and wisdom that it was beyond criticism. Canada was part of the British Empire, its culture was anglo-centric and Robertson was raised in Scotland, and thus the British Isles and Ireland under British rule would be a natural source of information for Robertson. He was also aware that “manual training in the primary schools was begun in
London about 1886” (Robertson, 1899, p. 13) and that “the manual training was found so thoroughly useful and acceptable that it was speedily extended. In 1890 woodwork was recognized by the Education Department as a school subject”(Robertson, 1899, p. 13).

He emphasized the educational values for manual training, omitted the contentious issues concerning intelligence differences, and included several comments about the economic value of manual training. The Irish report considered that the great majority of their students would pursue manual occupations and would thus be better prepared for their adult life after manual training, a reflection of the higher percentage of the population attending schools in Ireland and the greater numbers of the working class expected in schools. Its authors believed that manual training would improve school attendance and students would stay in school until they were older. The report showed that Technical Education was an important method of improving industry in Ireland and considered manual training as a suitable preparation for Technical Education. Robertson’s choices of which parts of the report to include indicate his personal scale of importance for the inclusion of manual training.

During his research he visited London, England. As manual training was not recognised as a state-supported, publicly-recognised school subject it was financed privately by the Drapers’ Company through the City and Guilds Institute. As early as the 1860’s some more-perceptive industrialists had voiced concern about education. Germany was developing technological education parallel to the growth of its industries. “It was an awareness that industries on the continent benefited materially from this higher standard of education that led many industrialists to support the Education Act of 1870” (Simon,
The Education Act of 1870 established universal elementary education for the working class of Great Britain, and more secular education through the establishment of elected School Boards. There was a parallel development of less authoritarian and rigidly disciplined “memorization” teaching methods (Simon, 1965, p.125). The first Technical Instruction Act was passed in 1889 allowing county councils to support technical education out of property taxes. When it was eventually recognised by the Education Department as a valid school subject it received public funding (Lawson & Silver, 1973).

In Britain, manual training was specifically woodwork and was called Sloyd, the Swedish term. In 1884 a British teacher, Miss J.W. Warren, visited Naas, Sweden to study Sloyd and returned to Britain as a strong supporter of the system. By 1899, 296 British teachers had visited Naas and were teaching Sloyd in British Schools (Selleck, 1968, p.114). It consisted of a series of repeated exercises sequentially arranged to have educational results. The students chose to make projects using three criteria: they should be necessary, they should be useful and they should be, if time was available, agreeable. The Swedish method of repetitive processes used in building “models,” that is Sloyd, adopted by the English system was brought into Canada by Robertson. In his report he referred to only one example of American manual training in the Boston School Committee report mentioned above, and takes no account of the changes made in Sloyd to fit the American culture and society as cited in Ellis’ paper (Ellis, 1900, p.23).

He imported the English version of Sloyd from an acutely class stratified society into a new society, predominantly Anglo-centric, but

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38 In 1911 1% of employed people in England were higher professionals, 3.05% - lower professionals, 10.14% - employers and managers, 4.84% - clerical workers, 1.29% - foremen, 79.67% - manual workers.
constituted of a multi-racial population and immigrants many of whom lived in rural environments. Of the 24 teachers hired twenty-two were from Britain, one was from Sweden and one was from the U.S.A (Sutherland, 1976, p. 183). I maintain that not only the system and methodology were imported but also the culture of the particular segment of the acutely class-stratified society from which it came. A skilled tradesman, brought out of the workplace into the school environment, brought with him not just his skills but the culture of the work situation. He also brought his perceptions of the employer-employee relationship, the perceptions of the worker. The two unqualified British teachers hired for Vancouver taught on special certificates (V.S.B., 1901). To help reinforce the English methods of educational woodworking in Canada, Robertson sent eight representatives to England in 1901 to become more familiar with the English version of Sloyd, and its place in the English school system.

Robertson held contradictory views. He possibly knew of Froebel but never mentioned his name. He was an idealist, both in his search for excellence and in the Kantian understanding, yet wished to shape the school system to enable both adults and children to live happily in their ordained lives. Education, he thought, should be directed to fit children and grown people to “be happy and capable, in the sphere of life in which they are to live” (Robertson, 1899, p. 20). He incorporated into his own language the sentiments of the Irish commissioners regarding low intelligence children, accepting the differences between verbal and performance manifestations of intelligence (Robertson, 1911-13 the % share of total wealth was 92% for the top 10% of individuals over 25 years old and 8% for the bottom 90% (Hamilton and Hirszowicz, 1993). For an elaboration on the subject of “social class” see pp 6-14 above and (Wright, 1997).
1899, p. 20). Echoing Froebel he argued that the principles and spirit of Kindergarten education should persist through life-long education. Manual training he saw as an integral feature of life-long education. A child, he believed, was an indivisible being with physical, mental, and moral faculties and powers. Schools had concentrated on only one of these facets, the mental or intellectual. Manual training would educate the child to “observe, to interpret, to construct and to describe. It is educational handwork, not trade handwork.”

Robertson concluded his report by explaining the Macdonald Sloyd School Fund. Manual training in England began with financial donations from private individuals and guilds, later to be supported by local education authorities. For Canada, Robertson proposed that Sir William Macdonald was prepared to finance the opening of manual training facilities in one place in each province, for example, for the children “of Fredericton, N.B.; of Winnipeg, Man.; of Calgary, N.W.T.; and of some place in British Columbia” (Robertson, 1899, p. 27). He hoped that the inclusion of manual training would bring long-lasting benefits to the boys of Canada and all would join in “…the earnest hope that the wisely patriotic and generous benefactor, may long live, gladdened by knowing that the children and the grown people of Canada rise up and call him Blessed” (Robertson, 1899, p. 28).

James Robertson, an agriculturalist, had promoted education for the benefit of farmers and farming. With Macdonald’s financial backing Macdonald College opened at Ste. Anne de Bellevue in western Montreal island in 1907. The college, an agricultural

39Macdonald was a multi-millionaire industrial capitalist, the employer of underpaid women and under-age children (Frost and Michel, 1995, p.63)
college and a training school for rural teachers, had Robertson as principal from its
beginning until 1910. He was addressed as Dr. Robertson and had received honourary
degrees from at least five universities including McGill University in 1909.

In 1910 Robertson was appointed chairman of the Royal Commission on Industrial
Training and Technical Education. There had been calls for technical education before. In
1901 the Dominion Trades and Labour Council had petitioned the Government in Ottawa
for a Royal Commission and a Minister of Industrial Education on the grounds that the per
capita industrial production for Canada was substantially lower than that of the United
States (Pavey, 1971). In 1907 Mr. Hugh Guthrie, Member of Parliament for South
Wellington, called for a commission of enquiry to investigate the Canadian need for
technical education. He was supported by the Trades and Labour Congress of Canada,
the Canadian Manufacturers Association and many leading educators. He was not
successful but tried again in 1909. This time the benefits to the Canadian economy were
deemed more important than provincial jurisdiction over education and the government
instituted the Commission on Industrial Training and Technical Education (Pavey, 1971).
As education was under provincial jurisdiction the purpose of the commission was to
gather information to give to the provinces. Its job was to find out how technical
education improved industrial efficiency in the interests of both labour and capital, and to
improve efficiency by promoting industrial education (Outline, 1910). The plan of the
commission was to survey industrial centres of Canada first, and then visit both industrial
and educational facilities in the U.S.A, Great Britain, France and Germany. It had its first
meeting on 6 July 1910, held its first investigative assembly in Halifax, Novia Scotia on 18
July 1910 and eventually visited 100 cities, towns and important localities, conducting 173 sessions (Need of Canada, 1911). It heard evidence from "educationalist, capitalists, employers and workmen" as well as a few women suffragettes interested in finding a place for women in technical education and industry.

The Report of the Royal Commission on Industrial Training and Technical Education was published in 1913 (Royal Commission, 1913). It comprised more than 2353 pages in four volumes. Part 1 was an introductory report of the commissioners' opinions and recommendations submitted on 28 March 1911. Part 2 outlined the plan of the commissioners and surveyed the Canadian situation. Part 3 was published in two volumes and reported on the commissioners' examination of education and industry in England, Scotland, Ireland, Denmark, France, Germany, Switzerland and U.S.A.. Part 4 covered submissions presented to the commission from people of the nine provinces of Canada. Sections from Part 1 cited below indicate the overt change of motivation for the inclusion of Manual Training from its idealistic, Froebelian purposes to a vocational function.

The commission surveyed the needs of and for workers in a variety of industrial situations from manufacturing plants to foundries. They were researching "industrial efficiency."

Our duty ...to make full investigation into the matter of Industrial Training and Technical Education in so far as these can promote industrial efficiency which is all important to the development of the Dominion and the promotion of the home and foreign trade of Canada in competition with other nations (Royal Commission, 1913, p.58)
There was an intent to investigate the needs of industries for trained workers. The accepted paradigm was that public money should be used to train workers to make profit for industrial capitalism and, of course, the workers would benefit from earned wages.

The Commission has also made inquiry into the needs of existing industries in respect of labour, the quality of labour which is available and the requirements of such labour for industrial training and technical education (Royal Commission, 1913, p. 59)

They considered that the quality and quantity of technical training was dependent on a sound base of general education. Manual Training should be taught from kindergarten to the age of 12 for “cultural or self-realization purposes” but should be considered as pre-vocational education. After age 12 it should be directed at “discovering aptitudes and tastes and developing skill and ability for some occupation” (Royal Commission, 1913, p. 10). Education should prepare “the pupil for later life as an individual, as a working earner” (Royal Commission, 1913, p. 11). The commissioners were specific in their criticisms of Canadian secondary education. Secondary schools tended to give youth a distaste for manual labour. They were organised and conducted mainly to prepare students for college or learned professions and ignored any preparation for students leaving school at age 16 or 18 to start a manual trade. Vocational Education should be provided for students “who are to follow manual industrial occupations” (Royal Commission, 1913, p. 13). It seems the commissioners were “class concious” as they recommended different types of vocational education for different “class locations.”

Vocational education for manual trades students should be fully advantageous to them in their vocations as the secondary eduction provided in the general school system has been advantageous to those who enter the learned professions, other professional occupations, or the leisure class (Royal Commission, 1913, p. 13).
The commissioners thought that Canada was "behind the times" and that schools had become too "bookish" with little contact or relation to industrial life. Technical education and vocational training, was the way to national progress. Canada's "warfare is ever against ignorance, helplessness, poverty, disease, vice and ill will. Industrial and technical education is to train individuals for that warfare" (Royal Commission, 1913, p.15).

As the Commission conducted hearings across Canada it generated newspaper reports in each locality. The purpose of the commission was to investigate the correlation between technical education, vocational education or industrial training, and industrial efficiency and production. This conception of education was a turning point away from the "idealism" of Froebel. Newspaper citations from during and immediately after the Commission provide insight into Robertson, the Commission and the essence of the new direction of vocationalism.

The Yarmouth Light noted that Robertson admired the English system, although they held Latin in high esteem while not valuing Nature Studies (Technical Education, 1910). Only leading men of the Yarmouth community appeared before the commission and no artisans or similar workers were interviewed. The local newspaper reporter thought that the commission could never understand the problems it was addressing without communicating with the workers themselves. Mr. T.B Kidner, the English-born director of manual training for Yarmouth, made a presentation to the commission. In his view manual training was an excellent preparation for industrial training. It was a
preliminary vocational course. Kidner's perspective is further evidence of the changed understanding of manual training (Technical Education, 1910).

In September 1910, representatives of the Women's Suffrage Association of Quebec made a presentation to the commission in Montreal. They were there because there were no women on the commission, and women were “to be excluded from the classes of the new Technical School on Sherbrooke street” (Plead Cause, 1910). The director of the Technical School told them that according to the college charter they were unable to accept women for their courses. The women had previously met with Premier Gouin of Quebec about the exclusion of women from the Technical School and he had informed them of the commission. Mrs. Hammond Bullock, the spokesperson for the delegation, told the commission that her “object in coming here today is to help women industrially, politically and socially” (Plead Cause, 1910). This is particularly relevant to early Manual Training and to later Industrial Education vocational courses as both were directed at boys only, an indication that the Suffrage Association of Quebec had little influence in this field.

Dr. Robertson addressed the Canadian Club in Ottawa during his duty as chairman of the Royal Commission. Among the many topics covered was the need of the country for technical education. He saw boys of fourteen being attracted from schools by the promises of high wages and because there were no apprenticeships available, finding themselves at eighteen unqualified “to go into any calling that will make him a good workman with command of a trade” (Need of Canada, 1911). All schools needed some opportunity for boys older than twelve to display their abilities in both handwork and
“bookwork” to give some indication of how they should prepare for their life’s work. Opportunity was also needed for boys aged fourteen to sixteen, intent on entering some skilled trade, “to learn in school the meaning and use of common tools.” Robertson thought that schools should provide an equivalent education for boys meaning to enter industrial life to that which high schools were offering to students “going into a profession” (Need of Canada, 1911). His statements definitely indicate a move to vocationalism, a move away from his original “idealism.”

Not all newspaper reporters saw “vocationalism” and other of Robertson’s ideas as praiseworthy. In an address in Winnipeg, Dr. Robertson asked why school children, even the youngest, should not be educated by making useful things, and being paid for their work.

“But then he said,” he said with meaning, “you have the trade unions.” Enough said. The implication was eloquently powerful... It is probably true that the education of the child, as opposed to the system of mind cramming, can be better facilitated by teaching along the practical lines that you advocate. It is doubtless true also that the Manufacturers’ Association would not applaud your sentiment, but your statement...organised labour would admire your ideal and condemn your statement. Why should not this system be adopted in our schools at the present time?...because of the cursing influence of capitalism upon everything affected by it...Is not the reserve army of labour swollen to sufficient proportions without turning the schools into manufacturing establishments. Have we not enough of the spirit of capitalism in our educational system of today? (Trades Unions, 1912)

The above quotation is from The Voice, Winnipeg. It is an example of a different interpretation of Robertson’s suggested vocational school direction, an indication of alternatives to the dominant paradigm. The reporter from The Voice supported practical education as opposed to “book learning,” but was against the use of vocational education
and school facilities for commercial manufacturing. Schools had other purposes than becoming an active part of capitalist production.

When the Commission heard deputations in British Columbia Harry Dunnell, the organizer for manual training, did not testify but his 1911 report was cited. John Kyle, Director for Night Schools and future Organizer of Technical Education, did give testimony. William Dalton from the Vancouver Board of Trade, a body of merchants, manufacturers and traders, testified that the Board was “very much concerned that artisans engaged in all trades should be properly and scientifically trained in their respective trade or calling” (Royal Commission, 1913, p. 2341). His comments are within the parameters of the dominant paradigm and congruent with those of the commissioners. Predictably, Herbert Bensen, president of the Trades and Labour Council of Vancouver, had different views. He observed that organized labour would be against technical education if it was a means to train strike-breakers for times of labour unrest. He saw beyond the accepted paradigm in stating “If the employer wishes the country to supply him with skilled workmen, employers should do their part by training apprentices” (Royal Commission, 1913, p. 2341).

Dr. Young of British Columbia was in charge of establishing a system of technical education for the province after the Commission made its report. He considered it important to keep technical education separate from the university education. The latter would “devote itself more to the higher branches of engineering” (Technical Schools, 1912). Dr. Young was designing vocational education to take the place of apprenticeship training. He planned technical education for girls also in the form of “domestic science.”
Facilities in the Victoria Normal School were to be built "where practical housekeeping will be done." (Technical Schools, 1912). It is important to note that the concept of Technical education as defined by the Royal Commission included manual training, still an elementary course for boys up to twelve years old, industrial education for boys older than twelve, and household sciences for girls older than twelve.

The commission gave its report to the house of commons on June 4, 1913. It would take at least three months for members of Parliament to study and absorb the four volumes of research compiled by the Commission, which had not, at that time, included any recommendations for provincial actions with respect to technical education. (Vocational Training, Calgary Herald, 1913). Technical education was of interest to reporters across Canada since the Commission had crossed the country and its report had then been submitted. Reporters noted that there was a low attendance at high schools due "chiefly to commercialism" but also because the courses were unattractive to the average child. "Higher mathematics, obsolete languages, declensions and conjugations are not alluring to the average mind of fourteen." The reporter considered manual training to be a great stimulation of interest in school work and a foundation for technical education. Technical education, the study of machinery and tool use, would generate interest in the boys who would normally leave school (Vocational Training, Calgary Herald, 1913).

Dr. Seath, the British born Superintendent of Education for Ontario and Dr. Merchant, supervisor of industrial educational schools of Ontario, visited England and other European countries to see how these countries were providing training for young people to prepare them for industrial occupations. Their reports, in conjunction with the
Federal Commission report, provided a strong argument for the inauguration of industrial education (A Plea, 1913). In 1913, there was a common reason for the provision of industrial education in schools. It was thought that a function of schools was the provision of vocational training for industrial occupations.

The Toronto Globe reporter considered that every educational course was a function of two variables, vocational function and cultural content, and that a course would become known and valued by the variable that became most dominant.

The terms “vocational” and “cultural” usefully applied to education have come to be more clearly understood, not merely by educational experts, but also by the general public (A Plea, 1913).

The reporter emphasized that every course has a vocational aspect if used as training for making a living “whether by manual work in a factory or by intellectual toil in one or other of the learned professions” (A Plea, 1913). The courses of training in both elementary and secondary schools had been, before 1913, “more or less vocational, but with an almost exclusive professional bias” (A Plea, 1913).

The Toronto Globe reporter’s comments referred to a debate over the purpose of schooling, common since the beginning of public education systems. As early as 1859 the British social philosopher, Herbert Spencer, posed the question “What knowledge is of most worth?” (Herbert Spencer, 1859, as cited in Tomkins, 1986, p. 37). In the context of the thesis this debate was about the nature and purposes of manual training, resulting in mixed motives for its introduction. Some sectors believed in the Froebellian principles of personal development while other saw manual training as a means to develop useful skills to counteract the overly bookish curriculum. Some saw manual training in schools being
used to develop skills necessary to reduce unemployment, rural depopulation and early school leaving. Manual training was also seen as a means of producing skilled labour, in place of the declining apprenticeship system. James Hughes, a Froebel disciple, believed that manual training's main function was developing the internal character, rather than the external production of material things (Tomkins, 1986). The Ontario teachers manual listed four purposes for education under the heading "Education for Social Efficiency."

Education aided social control by, for example, teaching students respect for institutions. Its main purpose was dissemination of knowledge upon which social progress depended. Social Improvement brought about by education was to advance the welfare of society in general and not that of the individual student. Education's purpose to turn each student into a productive social unit (Tomkins, 1986) demonstrated the inclusion of the school system in the industrial efficiency movement. The debate over the idealistic, cultural purposes for manual training and its vocational function came to a climax when the Royal Commission was published. The commission recommended that "from 12 years of age and onward the general and cultural education should include adequate vocational education" (Royal Commission, 1913, p.20). The vocational education recommended did not have a "professional bias" but was specifically oriented towards manual trades.

The time had arrived when schooling had to be made an option for all social classes and the Royal Commission recommended expenditure of $350 000 per year for ten years to equip elementary schools with machinery, teachers, and supplies. It was recommended that Dominion secondary schools be granted three million dollars per year for a ten year period to equip them suitably for industrial training. Judging by the financial
allotments, the Commission considered the secondary school courses designed to train
workers for industry were more important than the primary "manual training." Robertson
seemed to have lost sight of the idealistic, cultural value of manual training as it became a
pre-vocational course for technical education.

This period marked the change of manual training from its original "idealistic,"
cultural function to a "vocational" purpose. The "cultural" variable, originally the most
dominant, was surpassed by the "vocational" purpose. It has been shown that the desire
of the political and dominant-class for industrial efficiency pervaded the education system
influencing the addition and direction of manual vocational courses (Callahan, 1962,
Dunn, 1978). The size of Canada, the small population and the broad distribution of the
school system would imply that manual training instructors had a high degree of
autonomy. The policy changes proposed by the Royal Commission would have been felt
more acutely in highly regulated urban areas. Nevertheless, the interpretation and
implementation of the policies would vary with individual manual training teachers.

Robertson originally promoted manual training for mainly idealistic, educational reasons
like those of Pestalozzi and Froebel. His arguments, documented in his report (Robertson,
1899), verify this interpretation of his reasons. The Royal Commission, of which he was
the chairman, adopted another reason for the inclusion of manual training, vocationalism.

After the commission had released its report comments were made by newspaper
reporters regarding the societal effects of the inclusion of industrial education in schools.
The commissioners had observed that:

Comparing a German city with one in England or Canada one is struck by the
absence from the streets in the evening of the youth of both sexes standing on
street corners or wandering aimlessly about (Royal Commission, 1913, p.4).
The reason was given that four fifths of German states had well organised, compulsory, vocational training in schools for students 14 to 17 years old (Industrial Efficiency, 1913). It was also shown that Germany was far ahead of Canada in technical and industrial development, due, it was argued, to vocational education. "What vocational training has done for Germany, it can do for Canada." (Vocational Training, Hamilton Spectator, 1913). Working class students had a purpose for staying in school, and industrial education provided another method for social control. The commission itself proposed forms of social control in the formation of "habits of obedience, courtesy, diligence and thoroughness" (Industrial Efficiency, 1913). The school experience should lean more directly towards "the inculcation and conservation of a love of productive, constructive and conserving labour." The commission stated directly that the results of technical education should "be sought through":

The preservation and strengthening of a spirit of willingness to accept and fill one's place in organised society which implies relative positions and relative degrees of authority (Royal Commission, 1913, p.19)

Technical education, the commissioners thought, would be successful if the students learned to accept their place in society and their corresponding position on the authority scale. I argue that the Commission not only changed manual training from a cultural, educational subject to a vocational subject but that it also advocated the training of obedient workers.

In February 1917 the Smith-Hughes Bill passed in the United States Congress. Its purpose was to promote vocational education throughout the country. It stated that:

the controlling purpose of such education shall be to fit for useful employment; that such education shall be of less than college grade and shall be designed to meet the
needs of persons over fourteen years of age who are preparing for a trade or industrial pursuit (Smith-Hughes, 1917).

In April, 1917 Robertson contacted the National Society for the Promotion of Industrial Education, in New York, to investigate their work and to learn more about the Smith-Hughes Vocational Education Act. This society consisted of representatives of a variety of industries, several union groups and some educators. Its secretary sent Robertson a document about the society and copies of the Smith-Hughes Act. The document explained why the society existed:

Its sole aim is to serve in advancing the efficiency of industrial education in the United States. It has no private ends to serve. (The National Society for the Promotion of Industrial Education, 1917)

Industrial education was required in schools because, it stated, manufacturers and industry lost profit when using untrained workers. “Training on the job” was too costly and the constant moving of unskilled workers from shop to shop was inefficient. The paper resorted to patriotic grounds to justify State-financed industrial education. The commerce of the country suffered when industry became less efficient. It argued that the State should provide industrial education: “In a democratic country the education of its citizens is one of the most important functions of the State. A worker who is not trained to work is not educated” (The National Society for the Promotion of Industrial Education, 1917).

Vocational education was seen as a wise business investment, “perhaps the wisest of all,” but the society did not expect corporations to train their workers. It promoted State-financed industrial education to ensure profitable and efficient manufacturing.

By 1917 Dr. James W. Robertson’s role in the inauguration of manual training and industrial education was nearing its end. In 1919 he was appointed Canadian director of
food supplies, and represented Canada on the food section of the Supreme Economic Council in Paris. He died in Ottawa, Ontario on March 20, 1930.

This chapter has examined the support, understanding, motivation and personal agenda of J.W. Robertson, the main advocate for the inclusion of manual training. Hughes was a believer in the cultural and educational values of manual training as originated by Pestalozzi and Froebel. Ellis, in his report to Ontario's education department seeking financial support for manual training in Kingston Collegiate Institute, of which he was the principal, understood the cultural and educational functions of manual training but recognized that students with such a training would be very employable. Robertson, a farmer with modest formal education, gave "idealistic" reasons for his support of manual training but made an unequivocal change to vocationalism when he became chairperson of the Royal Commission for Industrial Training and Technical Education. He, a practical man with a farming background, was a personal friend of Dr. John Putman, an Hegelian idealist but influenced by Dewey's pragmatism. Dairy Commissioner and Agricultural Commissioner for Canada, Robertson was a prominent civil servant and as such he made his connection with the leading capitalist and financial supporter of educational endeavors, William Macdonald. Macdonald was the source of money that enabled "new educators" to include manual training in the Canadian school system.

William Macdonald.

William Macdonald, a major capitalist, was probably the richest Canadian of his day but used much of his wealth for the advancement of education, mainly in expanding McGill University but also in the establishment of Manual Training in Canada. Most of
the information known about Macdonald comes from published materials about his public ventures, the buildings he financed, and his donations. Little is known about his personality and philosophical theories. When he died in 1917 he left three boxes of personal letters but two of them were destroyed by his family to keep his reputation as a philanthropist unsullied. The one remaining box, kept by the Stewart family, was later given by Lillian Stewart to Edgar Andrew Collard, a writer in the Montreal Gazette, who was commissioned to write a biography of Macdonald. Macdonald’s wealth started Manual Training in Canada and I consider this portrait of Sir William Macdonald to be a vital part of its history, sociological impact, and eventual “vocationalism.” His personal reasons for supporting manual training for Canadian boys may never be known, but an examination of his life and some of his activities may help shed a light on his motivation.

William Macdonald was born on February 10, 1831 in Prince Edward Island. The British, having driven out the original French settlers, encouraged immigration from Ireland and Scotland. Macdonald’s grandfather, John, a strong Catholic, left Scotland in 1772 with two hundred clansmen and bought 40,000 acres in Prince Edward Island. John’s son, Donald, married the daughter of a wealthy Protestant landowner and the family remained religiously divided as their son William grew up. Three sisters became Ursuline nuns and William may have been destined for the priesthood (Neilson, 1989). However, he rejected Catholicism at age sixteen. His two older brothers were sent to the Catholic Stonyhurst College in England whereas he was sent to the Central Academy in Charlottetown. He was apprenticed to his mother’s cousin, a store owner in

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40 Dr. Stanley Frost (personal communication, March 19, 1996, McGill University)
41 Any residual antipathy for the French Canadians may have influenced Macdonald’s factory practices in Montreal where his workers were all French but management were English Canadians.
Charlottetown, and although he resented it, the experience may have stimulated his interest in business. Eventually, estranged from his father, he left home at age eighteen to engage in commerce. He managed to raise capital for his business, although whether it came from his father or through family connections is not known.

In 1852 he moved to Montreal and two years later was visited by his father with whom he was reconciled. In 1858 he started the tobacco company, living all the time in hotels, and finally, in 1869, he bought a townhouse on Sherbrooke Street almost next door to McGill University where he then lived with his mother and sister. Three years after he started his tobacco company the American Civil War broke out and it is thought that his business grew rapidly as a result. Northern soldiers were deprived of tobacco from the southern states and Macdonald’s Ontario and Quebec tobacco supplies, cured and prepared in Montreal, met the demand. By the end of the war, 1865, William was the sole owner of “W.C.McDonald, Tobacco Merchant and Manufacturer.” The name was spelled McDonald until 1898 when Sir William changed it to Macdonald.

In 1871 the factory employed five hundred workers, more than half low-paid women and under-age children. He ran the business himself and ironically did not smoke. He built a new factory in 1875 which still operates in Montreal. As he ran the company with only a few assistants he produced a wide profit margin. Supervisory staff were kept to a minimum, no reports of his company business were needed for shareholders, customers had to pay by cash or certified cheque before another order was accepted and they had to provide their own transportation. Although girls of fourteen and boys of twelve were allowed to work in factories, people testified that Macdonald had children as
young as ten working in his factory. By 1888 he had little direct connection with the factory but left control of it to his assistant, David Stewart. He was then able, when questioned about the age of his children workers, to truthfully state that he did “not knowingly” employ children under twelve (Frost, 1995). The workers were French-speaking Catholics but his managers and supervisors were English speaking Protestants. He reduced worker’s wages in the winter and, on criticism, he suggested that they should save for times of need. When asked if he had a system for the workers to share in the profits he replied that the $200 000 he paid them was out of the profits. He stated that he would like to do more for the workers but could not see how it could “be brought about with any degree of safety to the capitalist” (Macdonald, as cited in Frost, 1995, p. 64)

From 1870 until his death he became a great benefactor to McGill University providing the buildings for the Physics, Engineering and Chemistry disciplines as well as a Student Union building. He gave large sums of money to the faculties of Law, Education, Art, Architecture and Music and donated many thousands of books to the library. A syndicate of developers planned a Ritz-Carleton Hotel on one corner of campus and Macdonald threatened to ruin them all if they did not sell him the property for just a $500 profit. He gave the site to McGill and the McLennon Library stands on that property now. In total his gifts to the university exceeded $13,000,000 and he would refer to McGill as “his university.”

William Macdonald had a rural background and grew up conscious of the hard work and poverty of the farming people, although he never suffered due to his family wealth. In conjunction with the previously discussed educator, James Robertson,
Macdonald set up the Macdonald Rural Training Fund to help educate and hence improve the lives of the farming population.\textsuperscript{42} In 1899 he financed the Macdonald Sloyd School Fund and it is considered that this was at Robertson's suggestion. In 1907 he provided the land and buildings for an agricultural college for training rural teachers at Ste. Anne de Bellevue, subsequently called Macdonald College.\textsuperscript{43}

Sir William Macdonald was notoriously a solitary man. He was seen as a man of strong principle with well determined policies to guide himself. It was this strength of conviction that, it is thought, caused him suffering and unhappiness (Snell, 1963). He became Chancellor of McGill in 1914 and, as he was becoming frail, the only outings he would take would be drives around campus. He died in 1917. Peterson, the Principal of McGill and his neighbour for twenty one years, said of him:

Solitude had made him self-reliant; I doubt if there ever was a man who was less dependent upon others. His philosophy of life rendered him absolutely detached, independent, and self-contained (William Peterson, 1917, as cited in Frost and Michel, 1995, p.73).

He left nothing to any of his relatives but left his business and wealth to the two sons of David Stewart, the man who had run the company for more than thirty years.

The image of a quiet reserved man has lasted, but his activities during his life tell otherwise. He did threaten to ruin the developers of the Ritz-Carleton Hotel and they knew enough about him to believe him. There are anecdotes about him giving expensive gifts to women but no written or reported evidence of any amorous life. He made a

\textsuperscript{42}It is interesting to note that much is made of the Macdonald Rural Training Fund by the McGill academics interviewed but it is confused with the operation of the Macdonald Sloyd School Fund, which is not mentioned. Manual training is not mentioned at all but is referred to, euphemistically, as "practical" training.

\textsuperscript{43}Dr. Helen Neilson (Personel communication, March 21, 1996, Macdonald College, Ste. Anne de Bellevue)
fortune from manufacturing and selling tobacco, a product he disliked intensely, in a factory staffed with underpaid and often underaged people. He poured his wealth into education establishments which “entrenched a middle class of managers, teachers and farmers” (Frost and Michel, 1995, p. 77).

Why did this man fund manual training? It is possible to surmise that he funded McGill to make up for his own lack of university education and that he funded rural schools and Macdonald college in order to improve farmers’ skill so they might grow better tobacco. Maybe he spent so much time at the university because he missed having had children; thus the students became surrogate offsprings. There is a possibility that he was influenced strongly by Robertson and when he became aware of his dependency he eventually broke off the partnership. As he strictly controlled his spending habits, Macdonald’s differences with Robertson may have arisen from the fact that the latter tended to spend money freely without thought of budgets or restraints. Without any personnel writings available his motives may never be known, but every Junior Secondary School and every High School in Canada has some form of “shop” facility and the concept originated in Canada with Sir William Macdonald’s tobacco manufacturing and sales profits made by the exploitation of women and children’s labour. Whether he believed in the purely educational value of “manual training” originating in Pestalozzi and Froebel, or whether he financed manual training facilities and educators to provide vocational training and prepare workers, may never be known. His biography gives some insight into his social outlook which, in combination with his industrial organization and relationship to his workers, indicates a vocational intent for his financial support of manual training.
Changing social and industrial patterns in European, American and Canadian societies led to changing requirements for education. These changes occurred earlier in the more firmly established European and American communities but later in the new country of Canada. Industrial development was causing a population shift from rural environments to growing urban centres with corresponding social unrest and new demands for education. Many segments of society, including the business community and the educators, required and promoted education for all classes of the population. In this chapter I have discussed the effects that two people had on the inauguration of Manual Training as a purely educational subject and the important effect of one of them in changing manual training into a pre-vocational course. They promoted a new style of education with physical manipulation of real objects, and practical application to each student’s life in society. Manual Training was a subject with a documented cultural and educational value but also a practical and economic vocational function. A precedent for its inclusion in schooling had been set in Europe and later in America and both sources were researched by its advocates to justify the inauguration of Manual Training in Canada. The most prominent supporter of “new education,” J.W. Robertson, seemed to have ambivalent motivations for promoting Manual Training as he was in social contact with “progressive” educators but was primarily connected to agriculture, firstly as Commissioner of Agriculture and secondly as principal of an Agricultural College, Macdonald College at Ste. Anne de Bellevue. The man who financed Manual Training was an industrial capitalist and a city resident, but with interests in rural living because of his early life and his business with tobacco grown on Ontario’s and Quebec’s farms.
I have shown that manual training started in Canada as an idealistic concept with cultural and educational values, although there were always people who saw school as a training situation for future occupations. It changed to a vocational or pre-vocational course when the Royal Commission on Industrial Training and Technical Education published its report in 1913. The next chapters will examine this change, in the context of British Columbia’s education system, its industries and its society. In Chapter 4 I will argue that manual training started in Vancouver, British Columbia for “idealistic” reasons but changed in 1914 to a vocational subject. The two central characters in this change were Harry Dunnell and John Kyle and their respective influences on Manual Training in British Columbia are an essential theme of the next chapter.
Chapter 5

The Inauguration of Manual Training in British Columbia

Manual Training had an idealistic, educational and cultural basis for its value and for its inclusion in a school system. The original ideas of Rousseau, Pestalozzi and Froebel defining the value of manual training were complemented by those of the American educator and philosopher, John Dewey. The “new educators” of eastern Canada, influenced by developments in the United States and the move to industrial efficiency through education, were an integral part of the adoption of those idealistic concepts. Chapter two illustrated this idealism with an examination of the ideas of two of the educators, James Hughes and W.S.Ellis, compared and contrasted with those of other advocates of manual training and technical education. Chapter 3 investigated the views of the leading exponent of “new education,” James W. Robertson, and the financial support provided by Sir William Macdonald for Dr. J.W Robertson’s scheme for the inclusion of Manual Training. Although Robertson gave idealistic reasons grounded in Froebellian concepts for his support for manual training, his farming background in conjunction with Macdonald’s industrial capitalism indicated utilitarian reasons based in the growing sciences and industrialism. The vocational intentions of manual training definitely emerged after the work of the Royal Commission on Industrial Training and Technical Education was completed. It is the intention of this chapter to examine the original manual training classes in Vancouver and the new teachers of manual training in their social and industrial context. The growth of manual training in British Columbia illustrates its change from idealism to vocationalism in the context of this province. The social and
industrial environment of the area provides some elucidation of the timing and positioning of the first manual training courses. Were the first manual training facilities located to accommodate a particular social class? How did manual training as vocational education correlate with "class" distribution? Manual Training was introduced to the school system in 1900 and it is helpful to understand the environment in which it was established to further understand the change from "idealism" to "vocationalism."

The site of the first school in "Vancouver" was Hastings mill, a sawmill on the banks of Burrard inlet, built in 1865. A little village made up of the shacks of employees gradually grew up around it and by 1873 the village families required a school for their children. Vancouver's first school was opened for the twenty school-aged children in the district, with Miss Julia Sweeney, the daughter of the mill machinist, appointed as first teacher. The first High School in the province was built in Victoria in 1876 and a second was built in New Westminster in 1884. 1886 was an important year for the village that had grown around the Hastings mill as the C.P.R. finally pushed its line through to the mill area and the town changed its name from Granville to Vancouver. Vancouver's first high school was opened in 1890 as the village was now growing rapidly into the province's major city. The Macdonald Sloyd Fund provided financial resources to open work places for Manual Training in 1900 and in that year two facilities were established in Vancouver and two in Victoria.

The education system was, and is, influenced by the social and industrial environment. What types of people lived in Vancouver? Did they want progressive education, classical education or job training? What was the social distribution of the
population and did it affect the schooling offered in particular areas? In its first year, 1886, Vancouver had a population of 1000 people and five operating companies (Galois, 1979, p. 204). By 1900 the population had risen to 24,750 and the number of operating companies had risen to forty-four. The capital behind these companies was predominantly from the United Kingdom but American capital was also invested. However, commercial and banking capital, especially in the area north of Pender and east of Burrard, came from Central Canada. Although much of the capital for the mining and forestry industries came from the U.K. or the U.S.A there were owners of capital in the city, many of whom lived just east of Burrard and south of Pender.

From 1890 to 1900, as the town was growing rapidly, there tended to be a movement of this capitalist class to the West End, west of Burrard, where housing lots were 66 feet wide and more expensive (Galois, 1979, p. 279). East of Burrard the housing lots were only 33 feet wide and the cheaper lots, combined with a growing number of industrial sites around the shores of False Creek, attracted a working class population. The area known as Yaletown was a housing area for skilled workers and unionised workers, whereas the east end of False Creek was the home of predominantly unskilled workers and a growing Asian population.

Vancouver became, in this period, the commercial, financial and management centre for industrial capitalism in the province, but unlike older established communities class distribution in the city tended to be uneven. A result of the uneven distribution of classes and the type of capital and industry was a large number of the petty-bourgeoisie class ranging from self-employed professionals to manual labour contractors, the latter
gravitating towards working class areas. It should be noted that although parts of the city have been classified as specific class areas, these designations only referred to the class with the highest percentage living in the area. The uneven distribution resulted in both capitalist class and workers living in the same areas but in different proportions. Two manual training centres were assigned to Vancouver. One centre was located in an area of mixed social classes at the Dawson school on Burrard and Barclay, and the other in a working class area east of Main, between Hastings and Georgia, at the Strathcona school (Ross, 1911). The positioning of these centres made manual training available to students from all social classes, supporting its idealistic function as a valid educational component.

Dawson school was built in 1887 as a four room school, but more space was required almost immediately due to the rapidly expanding population. The area with the largest school age population was the east side of Vancouver and the Lord Strathcona school was built there in 1891, but it was known as the East School until at least 1900 (Ross, 1911). In November 1900 Professor J.W. Robertson, on behalf of the Macdonald Sloyd School Fund, visited British Columbia to make arrangements with the Education Department and the Vancouver and Victoria School Trustees for the establishment of Manual Training centres in the schools for three years. The intent was to show the benefits of hand work for the general school life of a child. Neither the Education Department nor the Vancouver or Victoria cities were to bear any cost other than the provision of some sort of school rooms. All other costs were to be covered by Sir William Macdonald (P.S.R. 1908). Mr. Harry Dunnell and Mr. W.H. Binns were hired to teach manual training in Victoria, and Mr. S. Northrop and Mr. L.A. Campbell were hired for
Vancouver, the latter two on special certificates and not teacher's certificates. Dunnell
was brought from England especially to set up the initial manual training centres
(P.S.R., 1900, p.273).

At the Dawson School the original old school building was brought back into use
as the manual training "shop" and at the East End School, or Strathcona School, the only
place available was the top flat of the school. Although much money was spent in that
year on extensive school repairs and beautifying school buildings the donated equipment
for Manual Training was housed in whatever spare space was available (V.S.B., 1901).
Students from all city schools, eight in total, attended the manual training centres. On 9
January, 1901 a provincial Normal School was opened at the Vancouver High School
under the principalship of William Burns. Students at the school attended a short course
at the manual training centre to get some idea of this new concept in educational work.

As arranged, the courses in manual training carried on for three years and the
population was kept informed of the new courses by press releases and exhibitions of the
boys work. The population needed educating about the reasons for this style of education
as it was such a different concept to accepted schooling. There did not appear to be any
overt opposition to the new courses, to practical education through the manipulation and
shaping of concrete materials, but it was obvious that there were many who were skeptical
about the concept.

The public was generally critical but teachers even more so (P.S.R., 1908). The
teachers hired, Mr Northrop and Mr Campbell, were not trained teachers but had special
certificates. They were manual training teachers and what they had to show children
would not have been valued by teachers of academic skills whose criticisms may have been based on social class values, Platonic/Aristotelian dualism (p. 41/42), or lack of sympathy for the kinds of educational practice recommended by Pestalozzi and Froebel. The three explanations may be valid but it is not the intention, in this context, to analyse the teachers' reasons for their criticisms.

Dr. Robertson visited Vancouver again in 1903 to see how manual training was proceeding and whether it should be continued. The Macdonald Sloyd Fund donated the equipment to the schools on the condition that manual training would continue for at least one more year at the expense of the school board. Vancouver School Trustees held a public meeting in City Hall to discuss the question of financing manual training and a unanimous decision was made to continue with the programme. Victoria and Vancouver continued to finance the schools and supplies but in 1905, when the manual training instructors were given equal status with regular teachers, their wages were then paid by the provincial Education Department. Harry Dunnell, appointed Inspector of Manual Training in 1903, had many applications from around the province for financial support from the Macdonald fund. He was aware of Macdonald's intentions to finance only the introduction of Manual Training to show that it was worth including in the school curriculum, and there was, therefore, no money available. Dunnell considered that if it had not been for Macdonald's financial support manual training would never have started. The public and teachers may have wanted it, but the inaugural expense would have been prohibitive. When the first Report of the Manual Training Inspector was written in 1908
only one other city had started a Manual Training centre without outside support, New Westminster.

**Harry Dunnell**

Harry Dunnell was an advocate for the inclusion of Manual Training in the schools of many more cities and suggested that the Education Department should now pay for the equipment and teachers if the cities provided the spaces. He recognised that the equipment would last for many years, lowering the overall cost after the initial finances had been covered. The United States and many countries in Europe, as well as parts of Canada, were including Manual Training in the school curriculum. Dunnell wondered if Canada could afford to lag behind other places and suggested that Manual Training should be established as soon as possible as an integral part of the school curriculum. Harry Dunnell made no overt mention in his first report of any reasons for the inclusion of Manual Training other than the implied economic rationale mentioned above. The world was making economic advances because of industrial capitalism and school children had to be exposed to practical work in their education. Manual Training was the way to do that.

There was ambivalence in this introductory period as seen in the words of John J. Banfield, chairman of the Vancouver School Board in the annual report of 1903;

I congratulate the citizens upon the efficient staff of manual training school teachers, and the benefits derived from this practical education, the training of the eye and the hand, as well as the incidental development of the faculty of exactness. These schools, three of which were established by Sir William Macdonald, were in June of the past year handed over to the School Board, according to the agreement when they were first established. (V.S.B., 1903, p. 19)

He recognised at least three of the educational benefits of Manual Training, as opposed to the vocational concept of training workers for industrial capitalism.
This report was not entirely accurate in its facts, as Banfield mentioned three schools established by the Macdonald Sloyd School Fund. The third one was the Mount Pleasant or False Creek School, the location of Vancouver's first city-supported manual training centre. This school, built in 1887, was Vancouver's fourth school but was not one of the two schools at which Manual Training was initially established (V.S.B., 1901, p. 273).

Vancouver School Board took over the Manual Training Courses during 1903 and better accommodation had to be provided for them. This was not for the betterment of the Manual Training Courses but because "the noise interfered very much with the other teachers" (V.S.B., 1903, p.23). New buildings were erected at the Dawson School and the Strathcona School but a building at the Mount Pleasant School which could be used for Manual Training was already available.

1905 is a memorable date for Technology Education Teachers in British Columbia as this was the year Manual Training was mentioned for the first time in the Public Schools Act. Manual Training instructors were included as equals with other teachers as recipients of government grants as part of their salaries.

By 1908 Manual Training had been taught for over seven years and had been shown to be successful. In this time manual training must have been seen as a valuable inclusion in the curriculum or "a decay would surely have set in" (P.S.R., 1908, p. 33). Dunnell observed a slow growth that should have been rapid if financial aid had been available to help small towns develop manual training centres. Manual Training was not a compulsory subject, indicating that only a group of students took the course. Its
"elective" nature was a sign that the activity was not viewed as educationally, psychologically or socially beneficial to all students. It was not made part of the "core" curriculum. Vancouver was Anglo-centric at that period with the majority of capital investment being British and a high percentage of teachers being immigrants from Great Britain (Putman-Weir, 1925, p. 179). It is conceivable that the class based value system and social perspectives formed in a class-stratified society (Bernstein, 1977; Joyce, 1995; Willis, 1977; Wright, 1997), Great Britain, were brought with the new immigrants.

Utilitarian learning and vocational education was seen as "low-status" knowledge whereas information based on vicarious experiences acquired through books was "high-status" knowledge (Eggleston, 1977, as cited in Tomkins, 1986, p. 39). When the schools opened in August, 1908, there were ten Manual Training centres in operation with nine instructors and space for 2000 students. Only a small proportion of the province's boys were "enjoying the advantage of Manual Training in connection with their school life" (P.S.R., 1908, p. 33), but it was hoped that some method would be made available to extend the discipline to small country town schools.

Harry Dunnell included in his first report:

Suggested Regulations for Manual Training and Domestic Science Schools.

1. A course of work, approved by the Education Department, to be taught in each school.
2. Every instructor must also be a qualified public school teacher.
3. Each boy or girl must receive at least two hours' instruction per week.
4. Each instructor must be responsible for not more than 24 pupils per lesson, and not more than 240 pupils per week.
5. Plans of all new work-rooms to be submitted for approval to the Education Department. (P.S.R., 1908, p. 33)

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44 John Eggleston, a British sociologist wrote *The Sociology of the School Curriculum* (1977)
Interest was shown in many districts for the inclusion of manual training in the
schools but in all cases the same reasons were given for its absence. The School Boards
were unwilling to meet the initial cost of equipment. Some schools were willing to
maintain an instructor ("instructor" appears in these early reports and not "teacher,"
depending on credentials or perceived status of the discipline) and officials hoped that
before long, the purchase of the desired equipment would be financed. Dunnell thought
that only two instructors would be needed for the required work in Cranbrook, Fernie,
Nelson and Rossland, and the four cities could share the costs of the salaries. The
Inspector of Schools considered that no part of the Province needed technical skills as
much as the Kootenays, a vocational understanding of the purpose of Manual Training
(P.S.R.(2), 1909, p.27).

By the time of his second report in 1909, Harry Dunnell was visiting every manual
training centre at least twice a year and at his second visit he gave the boys a written and
practical test to evaluate their progress. He was very satisfied with the results as over
75% of the boys passed the test. He claimed that the courses were popular with 98% of
the boys. He commented on the large number of parents that were pleased with the
benefits that their sons were acquiring from manual training instruction but he did not
elaborate on the type of benefits. He demonstrated his personal values and assessment of
the value of manual training in his regret that manual training was only an "elective" and
not a "subject necessary to qualify for entrance to the High School" (P.S.R., 1909, p.28).
He thought that if manual training was considered worth while then it should be a core
subject in the time-table, but if it was not thought to be valuable enough to be compulsory
then it should be scrapped as it was only wasting the boys' time. If manual training was to be a "core" subject all students would take the course. Dunnell did not see Manual Training as a vocational course for a specific group of students, for example, boys who planned a practical occupation such as carpentry, mechanics or foundry work. He believed in the general educational value of manual training for all students and thought that it should be included in the selection examinations for High School.

The boys attending manual training courses spent only half a day a week in the "shop." It seemed that the regulations suggested by Dunnell in the previous year, listed above, had been ignored by the Education Department as he urged, for the second time, that they be printed in the Manual of the School Law, especially No. 2 regarding the qualifications of Manual Training instructors. The fact that he emphasized that item, which mandated each Manual Training instructor to be a qualified public school teacher, indicated that the School Trustees were hiring tradesmen or craftsmen and not teachers with craft skills, definitely contrary to Froebel's ideas and those of W.S.Ellis (p. 78). According to the Public School Reports most manual training instructors had "special certificates," not teacher's certificates.

It was during the school year 1908-09 that a High School Manual Training centre was opened and equipped with a wide variety of machine operated equipment including a planer, jointer, bandsaw and twelve wood turning lathes. All Applied Science students were required to take a manual training course, a course choice similar to that observed in the Eastern United States by W.S.Ellis (p. 71). It was an elective for all other students and could be taken in addition to their other courses (P.S.R., 1909, p. 29).
Dunnell’s visits to schools in 1910 were limited by his work at the Normal School. He was nevertheless very impressed with the work being done at the schools and especially at the High School. He was pleased with the high attendance rates for the manual training courses and hoped to see more centres opening as the Government had offered to assist in establishing the work. In his 1910 report he digresses from reporting the actual processes of the Manual Training Department into a discourse on the Froebellian educational reasons for manual training. The “idealistic” function of manual training was the most important part of Harry Dunnell’s rationale for its inclusion in the school system. Great care had to be taken in hiring instructors, and regulations had to be put in place regarding their qualifications as manual training grew. If an instructor had no teaching experience or training much of the value of the work would be lost. The projects, or models as Dunnell called them, could easily be made by machinery in factories. The making of projects was a means to an end--educational development.

It is the broader education of “learning by doing,” “the all-round development of a boy’s faculties,” “the rounding out of his education” that are the primary ends of manual instruction, and to attain these ends it is necessary to have the very best teaching. (P.S.R., 1910)

The only subject was woodwork since it allowed for a greater number of exercises, a variety of tool uses, and a great number of body movements. It was adaptable to all boys from ten to fourteen years old. But Dunnell emphasized that because it was woodwork did not mean that a joiner or carpenter would be able or eligible to teach it. I think that it is evident that Harry Dunnell was influenced by Pestalozzi and Froebel. The frustration seen in his reports can be traced to the contradictions between Froebellian conceptions of manual work and the vocational and “life-skill” conceptions held by many
people. It is significant that Harry Dunnell was a fully qualified English teacher and had possibly encountered the work and ideas of Pestalozzi and Froebel during his college or university studies.

By 1911 facilities at the High School were being expanded. A building was being erected to house a forge room, a metal turning department and a machine shop. The intention was to broaden the scope of the courses so that a boy should not only be taught to earn a living with his hands, that is, become a manual worker, but the new tools and processes should also be used to prepare boys for mining, engineering and mechanical courses which would be available at the planned new university (Ross, 1911). The possibilities of manual training as a preparation for university technical courses were noted by W.S. Ellis on his observation trip to the Eastern United States (p. 84). It is significant that manual training centres were compared favourably with centres in the United Kingdom but not with those in the United States indicating the dominant cultural influence at that time. High School centres were considered to be better than those in use in England. Officials hoped that manual training would become an option taken instead of other subjects (Ross, 1911). Manual training as an “elective” or “option” lessens the value of the discipline; viewed in this fashion, “elective” status minimises its educational value and maximises the vocational intent. Manual training as a vocational course or pre-apprenticeship course was becoming the dominant paradigm.

By the end of the 1914 school year thirty eight manual training centres were open and thirty six instructors employed. Manual training was now being taught at Nanaimo, Cranbrook, Nelson and Oak Bay, many centres in the Lower Mainland, Saanich and
Victoria although not at Victoria High School. Woodwork was taught well but theory was a weak point and freer use of the blackboard and many wall illustrations, it was thought, would correct that. When summer schools were held in Vancouver nearly all of the instructors would attend, indicating their desire to learn every aspect of manual training. At the Easter holidays in 1914 a Manual Training Association was formed with a branch on Vancouver Island for teachers in Victoria and other island areas. Dunnell attended some of the meetings and found the teachers to be enthusiastic and mutually supportive, and he thought that if they were to remain that way manual training would certainly benefit (P.S.R., 1914). He did warn the instructors that specialists of all descriptions tended to think that their subject is the pivot around which every other subject revolves and they should try to avoid that perspective. He emphasized that every effort should be made to correlate manual training with other subjects so that the children would benefit fully.

In 1914 Harry Dunnell resigned to become Art Instructor at Victoria Normal School. Dunnell made some astute observations during his time as Inspector of Manual Training, one especially regarding manual training instructors' status in relation to the rest of the school staff, the "teachers"! In the form of a recommendation to Principals he wrote: "When you hold your teachers' meetings do not leave out two members of your staff, the manual-training and domestic-science instructors" (P.S.R., 1914, p.59). As a parting statement to the manual training instructors themselves he reminded them that the important aspect of manual training was the way in which the work was done and not the actual work that was done, the finished project. The work was only valuable when it
made the students think intelligently what they are doing. It seems apparent that Dunnell had an idealistic conception of manual training and abhorred repetitious exercises that might emulate the work place. It also appears that he had received some exposure to the concept of Sloyd, in particular the version popular in the United Kingdom, as opposed to the manual training practiced in the United States which went beyond the mere exercises of Sloyd and produced fine finished projects (Chpt. 2, pp. 65-73).

John Kyle

In 1914 the British Columbia Education Committee, possibly in answer to the recently published report of the Royal Commission on Industrial Training and Technical Education, appointed a Director of Technical Education for the province. John Kyle, the new director, brought a new perspective to practical education and many innovations to the school system from 1914 to 1938. Kyle was born in Hawick, Scotland in 1871 where his father ran a fine arts store, making picture frames and selling paintings (Slinn, 1979). His grandparents owned a grocery store and sold their own home grown vegetables. John Kyle came from a petty bourgeoisie family and not from a “skilled worker” class location (p. 11) that may have been common to many of the early manual training instructors. His art training began when he was twelve years old at school but he enrolled in night school to further his art skills and obtain an art teacher’s certificate. Kyle left school in 1885 having passed the elementary teacher’s certificate examination, but then apprenticed as a jeweller and watchmaker. Kyle worked at that trade for only one year before becoming a teacher, first in Hawick and then, as art teacher, in Acrington, Lancashire. In 1897 he won a scholarship to the Royal Academy of Art in London from which he graduated as an
Honorary Associate of the Royal Academy of Art. He also won a scholarship to the École de Beau Art in Paris where he studied Industrial Design. After his time at college he taught art at Huddersfield Technical School in both day and night classes. His experience at night schools later influenced his educational directions in British Columbia. In 1904 he became an Headmaster in Scotland but resigned to move to Canada the following year. The Vancouver School Board hired John Kyle as Supervisor of Drawing in 1905. As Supervisor he identified two aims for drawing classes; art for the young students should train eye and hand and foster a love of beauty, but older students should master geometric shapes, scale-drawings and working drawings so they would have a solid foundation upon which to build a trade or profession. He believed that Arts and Crafts taught in school should be closely related to the world of work (V.S.B. 1906). He was always conscious of life after school and the necessity of earning a living and he made reference in his reports to the vocational uses of drawing.

As mentioned above, Kyle was always interested in night school as it was the route that he had taken in his education. In 1909 he was appointed Director of Night Schools in Vancouver. He considered that night school was a way for young people to return to school to be educated for work of a higher standard and more creditable nature. He was always an advocate for night school and commented about them in his reports until he retired in 1938. He believed that work, for most people, was merely a way to earn a living and, in many cases, the workers had no interest in what they were doing. Night School, Kyle thought, allowed students to attend voluntarily and therefore they were there because they wanted to learn. “At night school these people emancipate themselves and study that
into which they can put their heart and soul" (P.S.R. 1935, p.44). These comments by Kyle were credible when referring to night school for hobby pursuits, but not so believable for many workers having to attend night school in order to keep their jobs. The setting up of night schools in communities in the province was not easy as many school trustees objected to the extra work they were required to do when their school board offered night school and they could see no need for it.

A large proportion of night school was of a technical nature and definitely vocational. Manual Training, Domestic Science and Commercial courses at public day school were also technical and so, after the report of the Royal Commission on Industrial Training and Technical Education under J.W. Robertson's chairmanship was made available to the provinces, a department was created within the Department of Education called Technical Education. With his night school experience John Kyle was the choice for the position of Organizer of Technical Education and from 1915 the Manual Training Reports for the province were part of the Report on Technical Education.

Robertson's Royal Commission on Industrial Training and Technical Education marked not only an apparent change in his perspective but a change in the emphasis placed on manual training across Canada. In British Columbia the change from Harry Dunnell, a seemingly progressive teacher with views grounded in the ideas of Froebel and Pestalozzi, to John Kyle, an art teacher from a petty bourgeoisie family with a vocational perspective of both art education and education in general (P.S.R., 1915; P.S.R., 1918) paralleled the transition from idealistic, educational reasons for manual training to a pre-vocational emphasis. It is not my intention to explain the change of intent of manual training as the
sole responsibility of John Kyle as he was an employee of the people and school trustees
of British Columbia many of whom were business people with power. There were also
social and industrial pressures to produce efficient workers, and schools had a role to play
in inculcating the required attitudes (Dunn, 1978; Callahan, 1962). It is significant that
Kyle’s interest in night school as a source of vocational education, and art as a vocational
training, were congruent with the dominant industrial, social and economic attitudes of the
time.

As Organizer for Technical Education John Kyle’s first focus was on night-
schools. He approached hundreds of businesses to explain how their employees would
benefit from technical courses at night-school. However not many of these firms were
interested in their employees being educated (P.S.R., 1915, p. 86) despite Kyle listing
various benefits. The Department of Education helped establish night-schools in technical
subjects in places around the province. School Boards looked for instructors who
demonstrated high skills in their trade and could train students in recognised trades. It
was seen that many students were leaving public school at fourteen and not progressing to
High School. They had not received any vocational education at school and could not find
apprenticeships in any established trades, thus entering the work force as unskilled
labourers with no possibility for advancement. Kyle did not define “advancement” but one
may assume he meant economic and social progression.

Every possible means must be used to induce these young people to study at night-
schools in order to prepare themselves for taking part in work of a higher class and
therefore of a more commendable character. (P.S.R., 1915, p. 87)
He then proceeded to advocate pre-vocational courses at day-school designed so that any academic classes were grouped around and related to handwork or practical classes. In this fashion many of the students who were leaving school early could be induced to remain in school. These pre-vocational courses were started in 1915 but ended in 1916. No reason was given for the end of the pre-vocational courses but economic conditions had influenced technical education and manual training since its inception. As a broad generalization, the demand for technical training is directly influenced by economic depression or expansion, the cyclical changes of capitalism. Economic depression results in high unemployment and low demand for training whereas economic expansion produces high employment and high demand for training. In B.C. and Canada the period around 1900 was a good economic time and manual training was introduced. The economic depression from about 1910 until 1915 slowed down the growth of training facilities; but as a result of the world war, the eventual soldier resettlement, and an improvement in the economics, the demand for technical training increased. It is possible that the pre-vocational courses were not favoured after several years of economic depression.

Kyle, aware as he was of the job market, was especially interested in coal mining, and coal mining areas such as Cumberland which he referred to in his first report (P.S.R.,1915, p.87). Coal mining required many different trades such as electrical engineering, stationary engineering, surveying, geology and chemistry. A good education was required for anyone interested in making advancement in mining. In Cumberland imported skilled labour from Europe was used when required and unskilled labour was brought in mainly from China, the latter earning about $1.25 per day while the white
labour had a daily rate of up to $4.00 (Isenor, 1988, p. 74). No youths were employed in the mines and employment was difficult to find, and so Kyle recommended pre-vocational courses for the Cumberland youth not required in the mines. There is no record of such classes taking place but night-school was conducted. In 1914 Cumberland held 2 night-school classes attended by 57 students. Cumberland’s neighbor at the mouth of the Puntledge River, Courtenay, offered 5 classes but only 44 students attended. Cumberland and Courtenay eventually shared the first manual training teacher in the Comox Valley.

A small diversion will illustrate John Kyle’s perspective. He recognised dressmaking and millinery as an artistic trade but noticed that no girls working in clothing workshops ever came to his night-school dressmaking classes. He recognised the women, the work-room hands, as merely dressmakers’ labourers, just sewers, and not dressmakers. The night-school classes available provided instruction in design, dress cutting and fitting, instruction that was not given in the work-room due to lack of time or lack of the employer’s wishes. Kyle observed that the employees, working class women, did not “realize the possibilities in such an artistic trade as dressmaking and millinery” (P.S.R., 1915, p. 88). It is indicative of Kyle’s personal history and his social outlook that he would not recognise that the working class culture would not encourage an entrepreneurial inclination. Their cultural capital, social capital and linguistic capital would tend to reproduce the culture and expectations of their social class (Bourdieu, 1994; Willis, 1977). Kyle also directed his wishes for the benefits of night-school to the owners of the work-rooms, the employers.

we must look forward to the day when the employers will come to our prevocational classes for work-room hands who have had valuable preliminary
training. They will then have the privilege of being introduced to girls who desire
to take up the work in all seriousness... (P.S.R., 1915, p. 88).

It seems evident that, although social reform unionism was prevalent and active in British
Columbia educational reform during this period (Foster, 1970, p. 59), and Marx and Weber
were published sociologists, John Kyle did not consider the contradiction of public funds
being used to support capitalist production nor the real purposes of the owners of capital,
that is, economic profit and control of their workers (Braverman, 1974, p. 90). It would
appear that he believed in an early form of Human Capital Theory (Schultz, 1963) that
was seen in the 19th century and early 20th century (Kiker, 1966). It seems to be obvious
that Kyle would think this way as he had risen to a position of power in the education
system, but I consider that an analysis of his conceptions and a knowledge of his
background help to justify the argument concerning the transition that manual training
went through.

The last section of John Kyle's first report on Technical Education was about the
main topic of this thesis, manual training. He considered manual training to be the
foundation for all the vocational and technical work that he had previously reported on.
Manual training was, he considered, well taught, but he observed no connection with it
and the bookwork studied in other classes. It should be correlated with the other subject
areas taught by the grade teacher, and it was seen as important that the Manual Training
instructor should be very familiar with the regular school subjects. Correspondingly the
regular teachers should be familiar with the manual training course content.

He made criticisms that hand-training was given more importance than eye-training
and that much more emphasis should be placed on Design. Manual training became an
application of drawing skills learned in Art class. He stressed that he was not looking for original designs but projects built in “good” form and proportions. Kyle observed that blunt tools were common and as such would never be used by a tradesman. I emphasize that the 1915 report was Kyle’s first one as organizer for Technical Education but in the report he started relating manual training instruction to the work place, a markedly different understanding of the subject than Harry Dunnell had exhibited.

The instructor of manual training cannot begin too early to instil workmanlike habits in the students (P.S.R., 1915, p.89)

The job of the instructor was to teach the students “good taste and judgment” and also technical skills. As he applied the phrase freely to all aspects of manual training from metalwork to woodwork one must presume that “good taste” was important to John Kyle. The stated value judgment was based on Kyle’s own values and attitudes derived from his cultural background and must have been difficult to rationalise in a multicultural school society, except that English was the dominant culture. When city high schools included metalwork in the curriculum he thought that it was imperative that the choice of projects must exhibit “the exercise of taste.” “Coarse objects” for farm or workshop use should be left for rural high schools and manual training schools in the country. He suggested that fine metal surface finishes such as etching or repousse might be introduced to the High School as it was not as expensive as smith’s work or forging and it allowed opportunity for teaching “good taste.” He did accept that forging work may be more important in the rural schools.

By Kyle’s 1918 report, Manual Training had become the first item to be reported, although it was only given a quarter of a page in contrast to the one and one-half pages
given to Night-School. Manual Training teachers had agreed on a syllabus of fundamental operations which must be mastered, and they had also decided that each teacher should have the freedom to design course work that would suit the particular district. This autonomy is still evident in 1998. Kyle emphasized that businesslike methods and rapid work should be the aim of the students. Manual Training classes should stress efficient use of time (P.S.R., 1918).

Night School was designed specifically for boys and girls intending to enter industrial life but at places like Cumberland the classes were not well attended. The people attracted to night school in Cumberland were mainly workers and Kyle blamed the three shift system for the low attendance. Another problem was the high turnover of instructors at Cumberland. He thought that this was because the instructors were so well-informed of mine technology that their promotion was usually rapid. Kyle’s answer was to suggest that working miners be given instruction by correspondence courses. A benign picture of the coal mining industry and communities is painted in John Kyle’s reports but a more realistic image appears in recent works of local history such as *One Hundred Spirited Years* (Isenor, 1988, p. 67-97). The Cumberland mine owners hated unions and resisted attempts to promote worker autonomy, using imported Chinese labour at low rates to break the strike of 1912-14. Ginger Goodwin, a union organizer, was shot to death in 1918 and his funeral on 2 August 1918 prompted British Columbia’s first general strike. From 1900 to 1923, more than 300 miners were killed in explosions and cave-ins in Cumberland mines. A knowledge of the social and industrial environments of the areas
discussed in Public School Reports gives a different perspective of the reports than a superficial reading can provide.

In 1916-17 Technical courses were introduced into King Edward High School, Vancouver but, as there was no proper shop available, practical work involving manipulation of materials was limited. In general Kyle observed that boys leaving school at fourteen who could not qualify for High School were not receiving any vocational training and so he was a strong advocate for both technical courses in high schools and purely Technical Schools. He also promoted junior technical classes at elementary schools, other than existing manual training classes, to encourage students to stay in school because most students were leaving school at 14 with no prospects for advancement. In 1919 he convinced the government to finance Technical Schools and over the next seven or eight years special Technical Schools were started in at least four major cities. During these years, in 1922, the British Columbia Teacher's Federation suggested that a survey of the provincial school system be made as an assessment of the state of British Columbia education.

In this chapter I have examined the city of Vancouver, its growth and social distribution and the inauguration of manual training centres related to the city environment. Vancouver was a growing city with a population of mixed social classes catering to the mining, forestry and commercial enterprises of British Columbia. One of the first centres for manual training was in an area servicing the children of all classes, on Burrard Street. The second centre was in a working class area servicing the east end of the city. Both of the two men hired were allowed to teach on special certificates. The
first four British Columbia teachers brought from England included the first organizer of manual training, Harry Dunnell, a qualified English teacher originally hired for a Victoria manual training centre. Dunnell had experience of Sloyd and focussed on the educational functions of manual training, from an English Sloyd position rather than the less formal American version of manual training. From his reports it appears that he was familiar with, and agreed with, the educational philosophies of Pestalozzi and Froebel, and encouraged manual training as a purely idealistic educational part of the curriculum. The publication of the Royal Commission’s report on Technical Education coincided with Dunnell’s resignation from teaching and his move to Victoria Normal School as its Art Instructor.

John Kyle directed his attention to the use of schools as preparation for future work. His appointment as organizer for Technical Education followed Robertson’s report of the Royal Commission on Industrial Training and Technical Education. His main interests were night schools and technical education, eventually resulting in a new Technical school for Vancouver. Night school, technical work and Art School had been his route to a career and he emphasized the same importance and directions for Technical Education while he was organizer. The appointment of John Kyle as organizer for Technical Education marked the changing point for manual training in British Columbia from an idealistic, cultural, educational course to a vocational or pre-vocational course. The Putman-Weir survey, Kyle’s reaction to the survey and the affects he had on the British Columbia school system after the survey, are central to my next chapter.
In 1924 J.H. Putman, the Inspector of Schools for Ottawa, and G.M. Weir, Professor of Education at U.B.C., were commissioned to make a survey of the school system, the results of which were published in 1925 (Putman & Weir, 1925). The commissioners made observations, criticisms and recommendations about Manual Training in the report. They made suggestions about the structure of school curriculum and age groupings within the school system which affected the function of Manual Training and Technical Education. The study of the report which follows demonstrates the crystallization of vocationalism as the function of manual training in the British Columbia school system.

The Putman-Weir Survey

Putman and Weir’s introductory comments about the province and its population are revealing, and provide some insight into the British Columbia society of the period.

Its backbone is distinctly Canadian, but it has many types of native born English, Scotch, and Irish and a small minority of either American born or strongly inoculated with American ideals. It has an English element holding the same social and political views that were held by the English squire of 1850. It has an English element which represents the finest and most progressive modern English thought, and it has a small English element that is noisy and assertive and wants everything at the expense of the state. The ideals of the Canadian-born element vary and are less easily defined. As a class the Canadian-born element lacks cohesion. It also lacks the colour and extreme opinions held by the British born and has less class-consciousness (Putman-Weir, 1925, p.14). These opinions support the assertions of “anglo-centricity” and “class stratified society” argued in this thesis. Putman’s and Weir’s social analysis, in conjunction with their
Putman's belief in Hegel's classical idealism with its use of dialectic rationalism was changed by its own dialectic process, and the social forces of growing industrialism, into what seemed like its opposite. Idealism seemed to change to pragmatism. Dewey had been an Hegelian but became a pragmatist. Putman retained some idealism but it became a practical idealism (Wood, 1985).
influenced by the leading educational idealists of the period who themselves were effected by the new industrial growth and subjected to pressure from industry and commerce to include practical vocational courses in the school curriculum (Wood, 1985, p. x). Another influential group, Organised Labour, had been hostile to the inclusion of manual training in schools as early as 1890 as it would, they thought, produce semi-skilled and cheap labour. They saw it as undermining structured apprenticeships and undercutting union-management negotiated wages. But the Canadian Trades and Labour Congress at a convention in 1900 were in favour of technical education in high schools as a supplement to apprenticeship training. (Foster, 1970, p. 76)

Progressive educators had tended towards Froebellian, child-centered, educational idealism but one of Putman's main influences, G. Stanley Hall46, moved away from those directions to a more scientifically rational analysis of children. Putman believed in "education by doing" and that children be educated to fit into the community, but his scientific rationale now stressed psychological testing combined with educational streaming for, he thought, socially beneficial reasons. The "streaming" affected the students future vocational roles but Hall and Putman believed it to be dependent on pure scientific analysis. It has since been shown to be determined by many complex sociological influences such as language use, social class and individual "habitus" (Bourdieu, 1994, p.31: Bernstein, 1977). Putman, I argue, started as a humanistic,
educational idealist but his pragmatism and new-liberalism\(^4\) changed his concept of schooling from the education of the autonomous individual with collectivist ethics to the training of young people to fit into a social role. His change paralleled the change of J.W. Robertson and, more importantly for this thesis, the change in the role of manual training in the school system from idealism to vocationalism.

The other educator who conducted the 1925 survey of British Columbia education was Dr. George M. Weir, the head of the Department of Education at the University of British Columbia. He was twenty years younger than Putman and represented another generation of progressive educators, a group with more sociological training. He too was a progressive educator and a liberal politically, and was considered to be the more radical of the two commissioners (Johnson, 1964). He had also received his doctorate from Queen’s University and had also been influenced by its predominant philosophy of Neo-Hegelian idealism.

One of the foundations of Weir’s progressive educational beliefs was psychologically-based and scientifically-validated intelligence testing. There was, he believed, a relationship between innate intelligence and personal morality, nationality and socio-economic background (Wood, 1985, p.167). As a liberal he had an aversion to socialism and in paternalistic fashion he thought that the lower classes, who were, he believed, less intelligent and of lower morality, needed to be protected from anarchy and

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\(^4\)The principles of “new liberalism” were articulated by such writers as the British philosopher, T.H. Green, and were adopted by young Canadian liberals such as Mackenzie King. It was thought that the “new liberalism” would go beyond social class demarcations and assign power to expert professionals. It was directed at social efficiency through scientific ideology, but blended with Neo-Hegelian idealism it produced, not only the Progressive Educators, but new powers for business and professional groups (Wood, 1985).
communism. Working class children should be coerced into staying in school longer, trained for a vocation fitting their social stratum, and prepared to fit comfortably into a society run by a professional elite.

Dr. John Putman and Dr. George Weir blended their Hegelian rationale with new concepts of public opinion polling and scientific testing, heavily influenced by Putman’s liberal politics and Weir’s liberal sociological analysis, to prepare the first Canadian provincial survey of education. They were appointed by the Liberal premier of British Columbia, John Oliver, during an election campaign in June, 1924, in an attempt to win the support of middle class urban reformers. The province was in a state of unrest as world prices for primary resources were high and Vancouver was heading for an economic boom. The business community wanted commercial and industrial concerns left alone as they were doing well, but class conflict was rising. Caucasian workers were dissatisfied with the importation of Oriental labour as the immigrants were expected to work for lower wages and their employment created unemployment among the Caucasians. Despite his efforts to placate the middle class, Oliver lost the election and the Putman-Weir survey began under a new government.

The school system had changed from a centralized system in 1871 controlled by one man in Victoria, to a locally operated system controlled by the cities, district municipalities and rural districts. The Provincial Treasury covered 38% of the costs of education in teacher’s salaries, many of the text-books, and grants to assist school building. 521 government assisted schools served a population of little over half a million people spread over a province seven times bigger than England. These factors combined
with the physical geography of British Columbia resulted in a degree of autonomy for individual school boards.

Nineteen items were submitted by the Department of Education to guide the commission. Number 5 and number 12 are items particularly relevant to the topic of this thesis.

#5. Should manual training and domestic science be taken up in elementary schools? If yes, in what grade should they be started? Should these subjects be made obligatory in the elementary and high schools of a) cities of the first class; b) cities of the second class? (Putman-Weir, 1925, p. 2)

It should be noted that Manual Training was a voluntary inclusion in a school's curriculum dependent on local economic circumstances, although government grant money was available and instructors were now recognised teachers paid by the government.

An important question that would influence the inclusion of Manual Training in the school system and its future purpose as a pre-vocational course of study was raised in item #12.

#12. Is it advisable to establish junior high schools (grades seven, eight, and nine) in the larger districts? (Putman-Weir, 1925, p. 2)

Putman and Weir classified the views about the education system heard from the hundreds of submissions to the commission, into five groups: a) Reactionary or Ultra-conservative b) Conservative c) Moderate d) Progressive e) Radicalism (Putman-Weir, 1925, p. 24). Groups a) and e) were the smallest of the groups, the Reactionaries drawing on the past, and the Radicals looking towards the future. Putman and Weir chose the views of the Moderate group, considering them to be a stabilising factor as this group represented about 50% of the taxpayers. However, several "Moderate" recommendations were advocated by the progressive group, such as vocational education, junior high
schools, technical education for girls and boys, and intelligence and achievement tests to evaluate both students and efficiency of instruction.

They believed in the principle of "equality of opportunity" (p. 25). This statement of ethical philosophy, they thought, was the "right" way to think, the way the best democratic thinkers thought. As educators of relatively high status, they had maneuvered themselves through a sequence of selection processes to arrive at their present positions, and it is therefore expected that they would assume the acceptable perspectives of their society. However, Marx had been published, Weber (1995) had produced works about social inequality, the Russian Revolution had taken place and the British Columbia union movement had had input into educational reform (Foster 1970). More recently, other principles of equality have emerged such as the principle of "equal consideration of interest" (Singer, 1979, p.19). From a current perspective Putman and Weir appear to have adopted a "socially safe," liberal interpretation of the education system, modified by a degree of progressivism.

Putman's and Weir's practical idealism was translated into "practical efficiency" as a desired objective of the education system. They considered that 100% of the population would agree with that objective but they recognised that there were many routes to fulfilling it. They realised that the current school population's parents would not approve of manual training as an integral part of the school curriculum. Schools were there to teach academic disciplines which were conceived of as having the only true value. This perception of schools was, once again, based in the Greek dualism (p.41-42), and Latin and Algebra were used as high status, acceptable subjects (Putman-Weir, 1925, p.36).
The "formal discipline" theory, required to rationalize many traditional subjects, was recognised by the commissioners as having a deadening effect on the natural tendencies of exploration and intellectual growth inherent to a child, conceptions particularly reminiscent of Froebel.

The greatest exponent of modern sociological theory underlying rational school practice is probably Professor John Dewey. Education is life, not a mere preparation for life consisting in the memorization of facts (Putman-Weir, 1925, p. 44).

The commissioners criticized the academic schools which ignored the philosophies of Rousseau and Dewey. They considered that the main aim of the school was to generate "purpose," a reason for "doing," and then to teach the methods for "doing." A child should be taught as a child with reference to the life and objects around it, not merely as a preparation for adulthood. Real education emanates from real situations that arise in everyday life, they claimed. "Real education has to do with action, and all action implies conduct or behaviour" (Putman-Weir, 1925, p. 80). They started discussion of this concept with idealistic views influenced by Froebel and Pestalozzi, but their extrapolation, their embellishment, implies values that arise in their social class and political and educational backgrounds.

A person really well educated cannot behave badly nor can we say that a person who habitually behaves well - that is, meets every life situation in a way it ought to be met - is not well educated (Putman-Weir, 1925, p. 81).

The terms "badly," "well" and ... a way it ought to be met" are value judgements grounded in the commissioners' social, political and educational experiences.

Froebelian influences and their past experiences as "new educators" became evident when Putman and Weir were addressing the question of manual training in the
school system. They identified two major objections to the inclusion of manual training in schools arising from diametrically opposite positions. One view held that manual training was too materialistic and had a practical tendency. It was vocational preparation for a working class job, whereas education should be idealistic and cultural. The other view saw manual training as having no practical use and no vocational value. Manual training was not sufficiently technical to teach students a “trade” and justify its inclusion in the school curriculum. The commissioners stressed that since manual training’s inception in 1900 psychology had disproved both objections and shown that it had both practical and cultural value.

Manual training was not supported in rural districts and it was thought that country people only saw the practical or vocational value, which they could provide themselves on the farm. It appeared that rural people did not appreciate the cultural value of manual training. They also noted that teachers and educational leaders offered resistance to the inclusion of manual training presumably because they saw it as lowering the status of schools from idealistic and cultural to vocational.

In 1925 there were 521 government-assisted schools in the province but only 83 manual training centres and 75 manual training instructors (P.S.R. 1926). Putman and Weir blamed the shortage of instructors on the manual training teachers themselves for demanding good tools and factory made benches which made the establishment of a “shop” too expensive for many communities. They thought that hand made benches would have been just as servicable, but did not define who they imagined would make them.
Putman and Weir considered the classes were too long, being spread over a whole morning or afternoon. The classes were for only 20 boys which meant only 40 boys per day could be accommodated. They recommended that four classes per day of one-and-a-half hours length should be made standard. Much of the poor planning that they saw was due to poor preparation of manual training instructors.

Putman and Weir severely criticised instructors who gave endless blackboard notes, a practice that bored the students and reduced their interest in the practical work. Manual Training was being presented in formal fashion with students being assigned 30 models, for example, a practice dove-tail joint, to be completed over the three years during which they studied manual training. The previous 25 years of manual training were based on Sloyd which had come from Sweden via England, and the “repetitive exercises” methodology and formal fashion of presentation were reinforced by the two Manual Training organizers, Harry Dunnell and John Kyle, both of whom emigrated from England. W.S.Ellis (Ellis, 1900) had noted that in the Pratt Institute, and in other schools in the U.S.A., the repetitive exercises had been rejected and manual training students worked towards a finished project.

Putman and Weir saw that arrangement as very progressive and promoted it in their survey. The theory behind the formal teaching of Sloyd in British Columbia was, “When you have learned, then you may do” but they considered that “Learn to know by doing” was a better basis for manual training (Putman-Weir, 1925, p.98). They thought that the work was very disappointing and put full blame on the formality of the methods. I consider that Putman’s and Weir’s perspectives with regard to manual training
methodology signified a change of direction from a European, and distinctly British, interpretation towards an American version of the course work.

The theory of formal discipline is being carried beyond all reason. The work is systematized to death (Putman-Weir, 1925, p.98)

The commissioners observed that manual training seemed to have no connection with the main body of the schools and that principals were not accepting any responsibility for the content, neither theoretical nor physical, of the manual training classrooms. They also noted that government inspectors only visited the classes occasionally and the predominant understanding of the courses was that they were “technical” and not “educational.” The other teachers really had no understanding of the purpose of handwork in education and until that situation was changed manual training would continue to be seen as some sort of “abnormal growth” on the main school, with, of course, no cultural value (Putman-Weir, 1925, p.99).

As progressive educators and “new liberals,” Putman and Weir made political proposals for education finance. At the time of their Survey the cost of schooling was borne by owners of real estate. People who did not own property but nevertheless earned a respectable income did not bear any of the cost of education. The commissioners recommended that an income tax be introduced to cover educational finances. Everyone over 18 would be taxed, if working, and in this fashion they would repay some of the advantages gained through their education. They clarified their advocacy of income tax by claiming it as a socialist undertaking.

Nominally few of us call ourselves socialists. In actual fact we are moving rapidly in the direction of socializing a great many undertakings (Putman-Weir, 1925, p.200).
Later in their survey they discussed Technical and Vocational Education stressing that all education has both cultural and vocational aspects, and that neither intelligence nor culture could be separated from handicraft or manual training.

Manual Training is to have a place on the school programme for boys, not to make them carpenters or shipbuilders or metal-workers, but because it will, more fully than any other school experience yet discovered by educators, develop in them certain purposes, skills, and attitudes necessary for complete living. (Putman-Weir, 1925, p.337)

It was imperative that the value of all school training be based on its cultural value and, they argued, school students receive cultural values from courses widely understood to be vocational, such as manual training, which they could not obtain from any other source. The “cultural” or “vocational” designation tended to emanate from the perceptions of the “regular” teachers and administrators who, they considered, had no understanding of the worth of manual training. They therefore recommended that manual training teachers be given the same professional training as regular teachers, and then be required to obtain technical expertise for the manual training courses in a further year of special study. They were so opposed to the Sloyd methods that they also recommended all traces of formal discipline must be discarded.

The commissioners thought that John Kyle was competent to direct and organize Manual Training for both middle and high schools. However they strongly disagreed with Kyle’s opinion that satisfactory manual training teachers may be acquired by trying to train “carpenters or other skilled mechanics” (Putman-Weir, 1925, p. 338). In such cases there would be too much emphasis on “technique” and not enough on “culture.” The individual growth of the students would be merely supplementary to rigidly-learned skills. The
process of giving instruction would be more important than the activities of the children themselves. Manual training teachers should be selected from Normal School students to complete the extra one year “manual training teacher” technical courses. An added advantage of this system was that such young men would be cheap for school boards to hire as they would be qualified to teach other subjects as well as Manual Training.

Putman and Weir considered that in the 1925 industrial environment it was impossible to give a specific vocational training to students that would qualify them for a permanent occupation. They thought that some preparatory vocational courses should be given in the middle schools, consisting of grade 7 to grade 9 students, as about fifty percent would become wage-earners after grade 9. The teachers and principals must be guided by a vocational liaison officer who was to be familiar with the needs of employers for workers. This recommendation of the commissioners seems to be in contradiction to their previously announced emphasis on the cultural value of education. It is however congruent with Putman’s “practical idealism,” his transition from classical idealism towards pragmatism.

Although Weir and Putman are known as “progressive educators,” socially and politically they were liberal democrats and religious Protestants. Their Hegelian idealism and Froebellian / Pestalozian progressivism was coloured by social efficiency demonstrated by the use of psychological measurements or intelligence testing. They advocated for schools that eliminated differences in students and tried to make everyone “normal.” Although recognising that a minority would proceed to university they promoted vocational training for the rest of the students who would have to leave school
at fifteen. For the few elite students, those destined for university, they discouraged any
diversity and promoted social similarities that had the effect of reinforcing the existing
power structure based in industrial capitalism. Their use of intelligence testing and
streaming in the middle schools had the effect of reproducing the industrial aristocracy and
exacerbating existing class differences. I argue that Putman and Weir were mainly
interested in training school children to fit into the current social system. Neither of them
appeared to question the deficiencies of the type of social democracy allowed for by
Capitalism. Putman’s and Weir’s beliefs and research were based on a shared paradigm, an accepted pattern of industrial and social structure.

Manual Training in British Columbia after Putman-Weir

In the 1925-26 Public School Report John Kyle wrote, what could be considered
to be, a defensive report on Technical Education in the province. The Putman-Weir
survey had been critical of Manual Training presentation, and Kyle made reference, on
numerous occasions, to the “critics,” but never specifically to either Putman or Weir. He
defended the procedures that had been criticised by Putman and Weir and eventually
completed his report with the quotation from p. 337 of the survey cited above.

Students in rural schools made larger projects because projects were selected that
were practical and applicable to use on the farms (P.S.R., 1926). The rural schools
appeared to be freer with respect to choice of projects but Kyle stressed that even urban
school students were being permitted to make projects of increasing size. Putman and

48 The term “paradigm” in this context has the specific meaning as defined in “The Structure of Scientific
Revolutions” (Kuhn, 1970, p. 10).
Weir had referred to “models” in the “Sloyd” understanding of the term, but Kyle emphasized that “model” was synonymous with “project” in British Columbia and a “model” might refer to a table or bookshelf. In his previous report, made during the survey and prior to its publication, Kyle had observed that what was being achieved was a middle road between a “hard and fast mechanical list of models” and the “absolute freedom” of making whatever a pupil desired (P.S.R., 1925). Kyle argued that there were many positive points about a student working on a project until it was absolutely finished and therefore city schools had “no need to apologise” for producing projects that were smaller and better finished than those made in rural schools. It was imperative, Kyle believed, that the work in grades VI, VI1 and VI11 be of a “serious nature” and the building of frivolous toys be left to the student’s own time at home.

The “critics” had made reference to the length of Manual Training classes suggesting that they may be halved in length thus accommodating twice the number of students. A 1 1/2 hour class would encourage the students to be more focussed on their work and their application to be more intense. This was being accomplished already, Kyle thought, by dividing the 3 hour classes into classroom theory and shop practice. Putman and Weir had critised this formal structure of seriously disciplined classroom procedures with too much chalkboard and theoretical work, but Kyle obviously valued it. He understood that shorter periods were recommended to accomodate intermediate grades whose manual training was being neglected. Kyle considered that this was a good reason, but he worried that the “present high standard of manual instruction” would be reduced. The freedom of choice of projects that he perceived existed would definitely be lessened
by shorter lessons and, he thought, smaller projects would become the standard. School
classes in manual training would become much more uniform and standardised.

Technical courses, courses that were organised around specific industrial trade
training, were available at four high schools by the time of the 1926 report. Kyle
commented that “this must be considered as the merest beginning in vocational
training” (P.S.R., 1926, p. 59). However, he thought that too much time and energy was
devoted to the small percentage of students who were planning an academic route after
school. Not enough of the school curriculum was being directed at students who were
going to “take part in industrial life.”

The grants for technical vocational courses from the Dominion Director of
Technical Education, grants originally promoted by the Royal Commission on Industrial
Training and Technical Education chaired by J.W. Robertson, might have been
discontinued if more emphasis had not been given to the technical courses. The
Vancouver and New Westminster High Schools that were teaching technical courses were
doing well but Kyle considered that they were still dividing their attention too widely
between academic and vocational courses. They should concentrate on vocational courses
instead of assuming the role of a composite high school.

Up to the present time undue consideration has been given to the small percentage
of students who desire to proceed to Victoria College by the academic route. The
real education of the greater percentage of students who are going to take part in
industrial life is still neglected (P.S.R., 1926, p. 59).

John Kyle energetically promoted vocational courses in high schools and in doing so he
helped create a stratified British Columbia School System. a statification based on the
relationships to the means of production of wealth. Kyle was specific when referring to the
students for whom vocationally motivated home economics or manual training were suitable. The government had introduced a “minimum wage” and it was the job of the schools to train students to be suitable to earn the minimum wage. The vocational courses Kyle advocated were specifically designed for those low income workers (P.S.R., 1926, p. 60). While he had acknowledged that all courses had vocational content and intent, he nevertheless designated “shop” courses, home economics and commercial courses as specific vocational courses. Employers were hesitating to hire untrained boys and girls because, Kyle believed, of the minimum wage. Kyle considered that it was the task of the publicly operated school system to train students to justifiably earn minimum wages while producing profits for private employers. Within the parameters of this dominant paradigm Kyle promoted not only correspondence courses and vocational courses at night school, but also the establishment of a specific Vocational School in Vancouver that had been recommended by Putman and Weir.

During 1926 the first Junior High School was established at Penticton and more quickly followed. The new Junior High Schools brought a change of name and a variety of disciplines to the previously named Manual Training. At elementary school the course in woodwork remained Manual Training but at the junior high school the courses became known as Industrial Arts and included woodwork, metal work, electrical wiring and home mechanics. Construction had become an integral part of the Manual Training curriculum at High Schools and Kyle revelled in the fact that many Manual Training shops, and even Community Centres, had been built entirely by Manual Training pupils. Manual Training had definitely become a training course for workers.
Kyle thought the teachers of manual training were eager to improve their standard of teaching. He saw, as a natural progression, that elementary teachers would improve their skills to become junior high school teachers, junior high school teachers would improve their knowledge to become high school teachers and would eventually improve their qualifications to become instructors at technical or vocational school. There was, in John Kyle’s perceptions, a direct line from manual training to vocational school. Manual Training had become, in Putman’s and Weir’s words, a pre-vocational course. Kyle stressed that the new Technical School in Vancouver must not become a technical high school but must concentrate on providing “finishing” vocational courses. The Technical School would cater for students with no intent of attending university, whereas the technical courses at composite high schools would be designed for students interested in pursuing science courses at university. He argued for recognition of technical courses by universities as part of their selection requirements.

The great amount of shop-work in technical courses, which develops effectively the initiative, ingenuity, industry, taste, skill, and self-expression of a student, should surely count for something in admission to the university. (P.S.R., 1927, p. 56)

Kyle also had a vision of high schools of the future and thought of them as providing technical courses, academic courses, home economics courses and commercial courses. The future high school would be a composite high school which “with its parallel courses will do a great deal to prove the foolishness of the idea that one course is inferior to another” (P.S.R., 1927, p. 56). If Kyle had to mention the idea that “one course is inferior to another” in his report, it is highly probable that that understanding was widely
held. He did not explain how having the variety of courses in the one composite high school would "prove the foolishness of the idea."

The historical idealistic basis of manual training, its foundations in Canada and in British Columbia and the change of manual training into a vocational course, both nationally and provincially, have now been covered. To illustrate the manifestations of these changes I have chosen to examine the beginnings of a new course in an industrial mining town on Vancouver Island, Cumberland. I have chosen Cumberland because it has a vivid social and industrial history and because I teach Technology Education, the recent metamorphosis of manual training, in Cumberland as only the fourth "manual training" teacher since its introduction in 1927.

**Manual Training in the Comox Valley**

Manual Training spread to most high schools and the new educational arrangement of junior high schools became more common during the years 1927 until 1930. In 1927 Manual Training was established in the Comox Valley with two facilities, one in Cumberland and one in Courtenay, but only one teacher, Ted Blackmore, who would teach for half the time in a basement room under the elementary school in Cumberland and the other half in Courtenay Central elementary school. Manual Training was only added to the schools "after considerable discussion and, at times, heated dispute" (Isenor, 1981, p.168), a major question being "whether anyone needed such educational frills at all" (p.168). Little is known of Ted Blackmore and his name did not appear on the school staff lists of the years that he taught in the Comox Valley.
A manual training class is a function of its school environment, which is in turn a function of the social and industrial structure in which it is situated. The students, parents, teachers and project work are products of the social and industrial milieu, and a brief portrait of these factors will put the manual training inauguration into its social context.

The first white settlers came to the Comox Valley in 1862 and built the first school in 1870, the year in which Comox School District was first mentioned in the Public School Reports. The Courtenay and Comox area settlers on the east side of the Courtenay river were mainly farmers. A saw mill developed on the west bank of the Courtenay river but no industrial work ever started in the community.

In 1869 a group of men discovered coal on the west side of the river in the area which is now Cumberland, but did not have enough capital to develop the mines and sold the land in 1883 to Robert Dunsmuir, a Scottish born coal mine owner from Nanaimo. Dunsmuir's company had been granted control of all Vancouver Island coal when it undertook to build the Vancouver Island railroad which eventually reached the Union Bay wharf in 1889. Between 1883 and 1889 several mines were opened, about 50 homes were built for the miners, and the community was called Union.

Union Mines school opened in 1889 for 61 pupils with an average attendance of 31, but by 1896 it had grown to 206 students with 184 attending on average. In 1893 Dunsmuir designated 100 acres of his mines lease land east of Union to be developed as a townsite as there were 350 to 400 miners employed by that time. A separate area, west of Union, was assigned to the Chinese workers' community and kept apart because of anti-oriental worker policies and, of course, different cultural expectations. In 1890 Japanese
workers had been brought to Union and they established a completely separate living area, but all children attended the same elementary school. The new community east of Union was incorporated in 1897 and called Cumberland. In 1898 an 8 room school was built by a James Carthew who also built Beaufort House, the home of the manager of the Dunsmuir mines. Beaufort House was on a hill overlooking Union and is now the site of the present Cumberland Junior School. The first high school in the Comox Valley was started in Cumberland in 1903 and began in a top floor room of the elementary school.

The children who attended Cumberland schools were the children of miners. Before 1901 many accidents had occurred in the mines and they were considered very prone to explosive gas accumulation. Electric lighting and headlamps were used and arcing from damaged wiring was a serious possibility. In 1901 a major fire caused heavy smoke which suffocated 64 men. The children in the school were able to see the smoke but did not know whose father was dead. 20 white men were killed, nine of whom were the fathers of a total of 29 children. All their names, marriage status and children were listed but 9 Japanese miners and 35 Chinese miners killed were not named. An inquest found that the management was free of blame in the accident.

In 1910 Dunsmuir sold his mines to Canadian Collieries (Dunsmuir) Ltd. who were equally anti-union, repressive and exploitive. The strike of 1912, because of the poor work conditions, was supported by the Chinese workers until 120 armed special policemen were brought into Cumberland, and sent into Chinatown to support strike breakers. The Chinese miners returned to work. 200 Italian miners were ordered to go to work or leave Cumberland and most of them left. A few white miners crossed picket lines
and were labelled "scabs," a label that has stuck with their children and grandchildren to the present day. Eventually, in the summer of 1913, violence broke out in Cumberland, Joe Naylor, the union president was arrested, and 450 soldiers were sent to Cumberland to suppress the miners. The war in 1914 and lack of union money signalled the end of the strike but more explosions and more deaths followed when, in 1922, 18 men were killed and in 1923, 33 miners were killed. Ginger Goodwin was a miner and organizer who was murdered for his activities helping mining workers to unionize.

The mining industry and the community in general needed the logging industry, the second major employer in the Comox Valley. Housing, railway ties, bridges, pit-props, and many other necessities needed Lumber, and the Comox Valley was well supplied with very large trees, mainly Douglas Fir and Cedar, some as large as 3 metres in diameter. Logging was important for Cumberland as men could turn to logging if mines were closed or they did not wish to work in the mines. It was common for boys of 14 years of age to help their fathers in logging. Most of the hills around Cumberland were logged for use in the mines.

This was the society which, by 1930, had had schools for sixty years but did not include manual training until 27 years after its introduction into Canada. E.W.E.(Ted) Blackmore taught manual training in Cumberland and Courtenay from September 1927 until June 1929. He was succeeded by Arthur Tilbe in the 1929-30 school year and a portrait of Tilbe is a suitable conclusion to this chapter.
Arthur Tilbe: a Cumberland “shop” teacher

Arthur Tilbe\(^49\) began his apprenticeship at age fifteen in a furniture shop in Vancouver where eighteen craftsmen, all from Europe, practiced their trade. After seven years building fine furniture for a living Art took one of the crash courses to train craftsmen as school teachers arranged by John Kyle. He obtained a job working for two Vancouver Island school districts, Courtenay and Cumberland, and moved with his wife to Courtenay. He started teaching in September 1929 with three days in Cumberland and two in Courtenay. Both shops were located in the basements of their respective schools and were equipped with a bare minimum of basic hand tools. His manual training courses began with grade six students learning elementary woodworking skills using the hand tools to make simple introductory projects.

The starting wage in 1929 was $1500 per year and that rose to $1600 by Tilbe’s third year, but then the depression started affecting the area. As the economic climate deteriorated, the minister of education, Joshua Hinchcliffe, suggested that as Manual Training was only a frill it would be permissible to drop it from the curriculum in order to save money. In Cumberland there was no question that Manual Training should be kept, but in Courtenay the school board called a public meeting in the parish hall to discuss whether the course should be continued or abolished. The chairman of the meeting presented a petition of 180-20 voters in favor of retention of Manual Training but it was challenged by Ben Hughes, a reporter for the Comox Argus newspaper, on the grounds that all people on the petition were not ratepayers. A thorough examination of the list

\(^{49}\)All material for the section on Arthur Tilbe was drawn from a taped interview with Tilbe conducted by Bryson Whyte, Joe Wallace and Phil MacLaren for the archival collection of the Comox Valley Technology Education Association
showed that only one person was not eligible to vote. Having silenced Mr. Hughes, the chairman proceeded to explain to the audience that financial savings would be negligible if the course was dropped and that the benefits gained from boys studying Manual Training favoured its retention. The mayor of Courtenay thought that individuals should pay for education that was over and above the necessities, but he was also a strong advocate of free religious training in schools. A plebiscite was held in the community and both manual training and home economics were eliminated from the curriculum of Courtenay Central School in order to save money (Plebiscite, 1934). At the next school board elections there was a contest between a candidate who favoured Manual Training and one who wanted it left out of the schools. The candidate who wanted Manual training won a seat on the school board and it was reinstated. A further result of the depression was a reduction in Tilbe’s salary by 25%, and later another 10%, until his wage was $1080 per year.

Throughout these years in the Comox Valley, Arthur Tilbe attended a summer school in Vancouver to gain his teaching credentials. The initial “crash course” he took, after his time in furniture construction, allowed him to teach on a special certificate. It was compulsory that he continue his education to become a fully credentialled teacher and Tilbe attended every summer for seven or eight years. His parents still lived in Vancouver and he boarded with them at no cost.

In his early days at Cumberland Tilbe had designed a new general shop in which he taught both woodwork and metalwork. He would use local woods to save money and students did not have to pay for materials for the mandatory training projects. He concentrated on practicing basic joinery in the beginning stages so that all of his students
were skilled at common wood joints and sizing. This practice of teaching utilitarian woodwork skills had pre-vocational or life-skills intentions. Woodwork had been Arthur Tilbe's occupation and he brought the fine skills and understandings from his work fellows, the European craftsmen. His purpose in teaching was to produce skilled craftspersons who would enjoy constructing fine projects. After the initial training items were produced boys would choose their own projects to build and either supply their own wood or buy it from a supplier. As Tilbe had learned to work with hand-tools he considered them to be the only true way to judge a person’s skills and his students used mainly hand tools for all their work. As Putman and Weir had suggested Tilbe spent a great deal of time building basic machinery to improve his shop. He built, for example, a table saw, a wood lathe, a hand-cranked bandsaw and a drill-press.

Tilbe taught woodwork, metalwork and drafting to classes consisting of all boys. On several afternoons per week during one period students would be brought from the Tsolum Consolidated School about eight miles north of Courtenay. This school eventually was equipped with its own shop and an industrial arts teacher. Often boys would be in the shops for three hours at a time and after class the students would brush off the tables and put the tools away. One boy was in charge of tools so that none were ever lost. Floor clean-up was the janitor's responsibility at the end of the day. Arthur Tilbe did not do any extra-curricular activities because he had boys in the shop every afternoon after school, and he had to do all repairs and maintenance himself. He thought that industrial arts were useful for all boys as a practical life skill, but considered academic classes to be applicable to only a few.
Not long before he finished his teaching career, he designed and witnessed the building of a new shop in Courtenay. In May 1941 a separate three-story building was opened several blocks west of Courtenay Central School. It housed modern heating equipment in the basement, industrial arts on the second floor and home economics on the third floor, and was considered to be the best general shop on Vancouver Island. The new shops offered courses at Junior High School level and allowed high school pupils to receive five credits per year towards high school graduation. Farm mechanics was taught and a Preparatory War Training Course in metalwork could have been offered (Industrial Arts Building, 1941). Arthur Tilbe left teaching in 1945 and opened a combined lumber yard and cabinet shop where Bryson Whyte, a former student of his since 1937, worked building cabinets.

This chapter has shown the effects of the Putman-Weir survey and the leadership of Jack Kyle on the growth of manual training centres in Vancouver until the first centres were in operation in the Comox Valley. By stressing vocational education through technical classes at high schools Kyle encouraged the same perceptions of the skills related to manual training. Manual training became a pre-vocational course at the elementary schools and the new Junior High Schools and lost its cultural and idealistic educational function.

Putman and Weir were enigmas. They started their intellectual lives as Hegelian idealists and progressive educators but politics, industrialism and eventually pragmatism changed their perspectives to practical idealism. Their survey contains idealistic views on manual training stressing the educational and cultural functions but utilitarianism and
pragmatism directed their intentions to the promotion of vocationalism through technical
classes. As the technical courses at high schools used the same tools and processes as
manual training and the former were promoted as vocational courses, manual training
acquired a vocational label by association, and lost its educational and cultural value.

Cumberland and Arthur Tilbe were physical examples that reinforced the
vocational or "life-skill" perceptions of industrial arts as it became with the advent of
Junior High Schools. Tilbe did not mention any connection of industrial arts with general
cultural or educational purposes and I conclude that any of the original intentions of
Froebel had been forgotten or replaced.
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