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From "Gangs of Hooligans" to "Captains and Generals" of the Industrial Army: The Windsor Walkerville Technical School, 1923-1973

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I. Introduction

Specialized public schools which cater to populations traditionally not served well in regular secondary schools are a growing trend in Ontario. Three of the most recent schools that have been opened, or are in the discussion phase are: a school for LGBTQ youth, an Afro-centric school, and a school for low-income students.[1] Much like stand–alone technical schools, the intention behind these schools, is to offer educational space that caters more to "their" needs. In a case study of a stand-alone vocational school in Ontario from 1960 to 2006.[2] Sheryl Freeman found that "vocational schools carried inherent contradictions in which these institutions served both as agents of equality and as perpetrators of social reproduction."[3] Freeman notes that current Canadian policy trends that seek to cater to diversity seem to be extending the lives of these stand-alone vocational schools and justifying their differentiated yet second-class status as a necessity both for the system and the students. Although technical schools are fading slowly from public secondary education, understanding these separate educational spaces has very real application for current-day issues.

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Once technical secondary schools took root in the urban educational landscape of Ontario, they fundamentally changed the overall purpose and function of the provincial education system. Robert Stamp, arguably the preeminent scholar of the history of technical education in Ontario, explained the effect that technical secondary schools had on the provincial education system in the following way:

Schools must now serve [students] all alike in preparing them for occupations they are to follow. Now the school was to function less as the great equalizer and more as the great selector, selecting the most talented for the higher level jobs, and selecting from the rest those destined for office and factory employment...The academic high school would provide the captains and generals for the twentieth-century society, while the vocational courses would prepare the infantry troops for the industrial army.[4]

The Windsor Walkerville Technical School, founded in 1923, (hereafter, WWTS, later called W.D. Lowe Technical High School, WDLTS) did not fit this description. WWTS had a reputation for transforming "gangs of hooligans"[5] into the "captains and generals"[6] of the industrial towns in the Border City region, now Windsor, Ontario. Local and historical context, however, plays a large role in perceptions and expectations of technical secondary education. The stringent entrance examinations required to gain acceptance into high schools in the early decades of the twentieth century may not have been perceived as being the "great equalizer" described by Stamp. Within the context of a growing industrial town in the early twentieth century, options beyond elementary school that offered marketable skills would have been welcomed.[7] The dominance of the automobile industry and specialized parts manufacturing in small machine shops in the local area, helped to insure that WWTS was not considered any less valuable than traditional high schools or even collegiate institutes. Former principal Aitcheson remembered WDLTS as holding an esteemed position in the community:

A Lowe grad had an edge on the graduate of any other school when applying for a job in the trades anywhere in Ontario. And the boys knew it. They had a sense of pride in their school, which sometimes descended to snobbery. I recall lecturing the boys in

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assembly one day for their lordly and patronizing attitude toward students of mere high schools.[8]

The "edge" provided by WDLTS is supported in the literature as well. In all of the extensive data that Robert Stamp refers to in his work[9] it is WWTS that had concrete empirical evidence of an economic advantage, since students learned valued skills that were given preferential treatment in the local economy and job market:

Merchant [Ontario's director of technical education] ...echoed the call for the organization of education to provide better trained workers for the industries and trades. Whether the results lived up to the initial hopes is difficult to document. Merchant's successor as director of technical education [D.A. Campbell] admitted in 1927 that some schools are unable as yet to furnish concrete evidence that the purpose is being attained. The only example that D.A. Campbell could cite was the Ford Motor Company's policy of accepting into its tool-making department only graduates of Windsor Walkerville Technical School.[10]

In fact many local production shops related to the auto industry looked to WWTS to provide apprentices.[11] What made WWTS/WDLTS so successful? This question has perplexed me for many years. Growing up in Windsor, Ontario, in the late 1970s and early 1980s, I often heard stories about how excellent WDLTS was. Some of the school's accolades included having the highest departmental scores in the city in 1966[12], founding the Alpha Kai Omega fraternity in 1929 which later was recognized by the Canadian Junior Football League Hall of Fame,[13] and hosting the largest cadet corps (no. 1112) in the nation which later became the 1112 Royal Canadian Army Cadet Corps Tecumseh Windsor Regiment.[14] The stories, however, were always tempered with the sorrowful reflection that it had been closed as a technical school in 1973.[15] As a student at a vocational school, I was amazed at the pride and loyalty that the graduates of this school shared. I wished I had the same feelings about my own school, whose reputation was that it was for those students who could not succeed in regular high schools. I thought something had gone terribly wrong, but what?

After attending university and becoming a certified teacher, I found myself back in a vocational secondary school in the fall of 2002. The experience of teaching in a vocational high school stirred my interest in educational history. I began reading about the history of technical education in Ontario because I noticed similarities between the vocational school I taught in and the one I attended as a student. Much like the school I had attended twenty years earlier, the population of students at the school where I taught came primarily from poor neighbourhoods and they were often second, and third, generation vocational students. Further, most shop classrooms reflected gender divisions in labour. This similarity to my own experience, combined with the stories of WWTS/WDLTS which stood in stark contrast to my personal experience, prompted me to begin reading about the history of stand-alone technical schools in Ontario.

The literature on technical secondary education in Ontario began with Robert Stamp, who laid the groundwork for understanding how technical education emerged in a larger set of changes in the educational landscape in the early twentieth century.[16] Beginning in the 1960s, revisionist historians critiqued technical education as a way to segregate students according to social class.[17] In this same time period, feminist historians also critiqued specific courses and departments often found in technical schools, such as domestic science and commercial studies, as a way to limit the academic opportunities of female students.[18] Current trends in the literature include analysis of the individual agency of students who attend technical schools and the power students have to challenge educational structures.[19]

An historical analysis of a technical school such as WWTS/WDLTS from the perspective of a vocational student and teacher contributes to the existing literature in that it offers insight into the impact that some changes have had on this type of educational institution over time in Windsor, Ontario, Canada. This understanding sheds light on the contradictory findings noted by Freeman.[20] The history of technical education can inform policy makers in education, but a more complete understanding of how technical schools have changed over time is required. In conducting this research, I hope not only to resolve my own personal questions, but also to contribute to the body of literature on technical education which seeks to understand the ongoing social class and gender divisions that are seemingly inherent in stand-alone technical secondary schools. This research should also offer critical questions for future research on schools intended to serve specialized populations of students who are marginalized in regular secondary schools.

This study utilizes a range of sources including technical school board minutes, architectural drawings, news articles from the *Border Cities Star* (later the *Windsor Star*), photographs, local publications on the history of Windsor and Walkerville, community archives including school yearbooks, pamphlets, reunion publications and scrapbooks, local correspondence and by-laws from the municipal archives, a private publication from the Valliant Corporation, government documents including reports and legislation, and relevant secondary sources. All of these sources will be used to outline the historical factors that have shaped WWTS/WDLTS.

The Windsor Walkerville Technical School opened its doors to students in 1923. The school offered a variety of technical, pre-vocational, and commercial courses in addition to basic academic

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studies. The official purpose of the school was dictated by provincial and federal guidelines that stated that technical schools were intended to entice students not otherwise inclined to go beyond the fourth book (grade 8), and prepare students for work in various industries and business, not university. As such, provincial and federal guidelines also dictated that the courses offered at technical high schools should reflect the local economic needs of their communities. The students of WWTS went above and beyond basic expectations and were prepared to enter a variety of small production shops that made specialized parts for the auto industry. It was a school that had a reputation for turning out not only highly skilled workers but also community leaders. Eugene Durocher (the last principal of WDLTS) is quoted in the Principal's Message in the 1972 yearbook as having "become keenly sensitive to the expressions of pride and loyalty which the name W.D. Lowe evokes. This of course is not surprising since so many Lowe graduates hold key positions in the industrial and commercial life of Windsor."[21] Soon after these words were published WDLTS closed its doors as a technical school in 1973 to become a composite school, marking the end of an era in Windsor's educational system and economy. This paper will focus on the context in which WWTS was established, and how that context influenced the structures and practices of the school.

II. Historical Context

The emergence of technical and vocational high schools in the early twentieth century was part of a larger "new education movement" which represented a philosophical and practical shift from rote textbook-based learning towards education that promised to develop the mental, moral, and physical aspects of students, rather than just the academic.[22] The invention of public schools became part of a larger context in which four critical developments occurred in North America: 1) industrialization and urbanization; 2) responsibility taken for social welfare 3) institutionalization of social problems; and 4) redefinition of the family.[23] These four critical developments are central to schools because of the new role education played in what was traditionally the domain of the family. Schools took on responsibility for a portion of the social welfare and regulation of a large number of children using a method that was factory-like in its approach. Discipline and compliance were common features in large and growing classrooms.[24]

As an institution serving youth, schools were expected to address social problems through regulation and containment.[25] In the context of industrialization and schooling which now included students bound for workplaces other than the traditional professions, part of that regulation and containment had specific meaning for youth destined for manual labour. Youth were viewed as capital or valuable raw materials to be made usable by the state via high schools.[26] While prominent officials like Edgerton Ryerson were concerned about the effect that corporal punishment would have on appropriately socialized citizens,[27] those students destined for industrial work could have been viewed as most benefiting from physical discipline. Popular acceptance of the new education movement went hand in hand with acceptance of capitalism, and the differentiated school system became a miniature version of the social order.[28] Modern schooling was a project of cultural imperialism because it strived to be an efficient vehicle through which children of the poor and of racial and ethnic minorities could move from traditional to capitalist hierarchies.[29]

Since school in its traditional format would not have been the most practical option for some young men, technical schools may have had particular appeal for working class male youth. Further, labour populations were at the center of great public uneasiness just prior to federal legislation that fully supported technical and vocational high schools. High postwar unemployment was aggravated by returning soldiers, and the Winnipeg General Strike attested to the need for drastic measures.[30] In many families in which children were expected to contribute to the family income yet fell short of those expectations in the context of the Depression, part of the appeal of school for male youth was the social reinforcement they received for meeting ideal male gender roles via athletics and cadet training.[31] It was a time of defining new conceptions of social reality.[32] The proliferation of deskilled jobs in factories left those destined for employment within factory production seeking social status and personal fulfillment through extracurricular activities and education.

Mass production placed an increasing reliance on industrial machines and produced a new working-class hierarchy: Some men worked alongside machines, some men had skill enough to fix and maintain machines, some men could make tools and machines, and still others could design and invent new machines.[33] Those involved in the design and creation of machines were the new working-class elite, the new self-made-men in industrial capitalism. The emerging definitions of the new social reality at the Windsor Walkerville Technical School offered opportunities to rise within this new hierarchy, which was no doubt highly attractive to many students. In this local context, social reinforcement for male youth was achieved through the technical curriculum, extracurricular activities, and strict discipline of the school. In the broader historical context and in the local economy of Windsor, WWTS would have been an attractive school option for many working class youth.

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III. The Windsor (and Border Cities[34]) Context

The previous section suggested that the local economy in Windsor was a major reason why WWTS appealed strongly to male working-class youth. This section describes the historical context in Windsor to understand the role of the local economy. Windsor's position adjacent to Detroit, Michigan in the United States is the first important feature in understanding the local economy of the nineteenth century and early twentieth century.

Windsor's geographic location made it an important gateway between Canada and the United States, and as such, transportation routes were important in this economy. In addition to having the most paved roadways in North America[35], Windsor also marks the point of entry for all main trunk lines. A railway tunnel running under the Detroit River was opened in 1910, assisting the commercial and economic growth of the entire mid-west. This first decade of the 20th century was also the golden age of the trolley car and the excursion steamer. Ferry services for both trains and automobiles between Detroit and Windsor added to the transportation landscape[36]. A remarkable feat of engineering by William Livingstone created the Livingstone Channel which opened the lower Detroit River up for large ship navigation in 1912.[37] In the span of less than two decades, the Border Cities became a hub of manufacturing for the automotive industry in Canada. In 1903 the Ford Motor Company was incorporated in Detroit, Michigan, and by the following year, a Canadian branch plant had been established in a small wagon works on the Windsor waterfront. When the U.S. automotive industry established production plants in the Border Cities, population growth followed with attendant economic and social changes.

As the automobile industry bloomed in Windsor, it attracted people to the area. Windsor's population grew from 16,147 in 1909 to 22,077 in 1913.[38] Approximately 1,500 men were employed by the Ford Motor Company. The major automobile plants in operation were the Studebaker Company, General Motors, and the Chrysler Corporation. By 1908, Model T production was in full swing, and by 1913, assembly line techniques were being used[39]. Ford's assembly line production made cars more accessible than ever before. Assembly-line production required a new kind of talent and skill that builders in Windsor had to learn. The stereotype of assembly-line production as a well-planned and finely-honed machine was hardly the reality in the early days. The first site of assembly was a makeshift wagon works owned by Gordon McGregor. The early days of automobile assembly in Windsor are described in the following quotes:

It was a struggle, but McGregor assembled cars one-by-one with chassis and other parts ferried from Detroit, and then relayed by horse and wagon to the factory. Wrong parts were often shipped or lost, forcing McGregor to lose time.[40]

Even as production increased, the pace of activity could seem casual. In 1907 when Robert Conklin, an implements dealer from Kingsville, Ontario, dropped in unexpectedly to buy a car from Gordon McGregor, everyone in the office was at lunch. To kill time, he wandered through the adjacent shed where a few Ford cars of the B, C, K and N class were in the process of manufacture, but there was no one there either. When McGregor finally did return, Conklin ordered a Model N.[41]

The reliance on Detroit for specialized parts production was a critical problem for early assembly efforts in the Border Cities, but gaining the skills and knowledge needed to achieve independence from their parent plants in the United States was a challenge that would have to be overcome. The situation is described best in the book *Windsor 1892-1992: A Centennial Celebration*.[42] In this illustrated history, Windsor is described as lacking technical superiority in its manufacturing processes as compared to Detroit. In the early years of industrial growth, the region was protected to a degree with national policies which encouraged investment in new manufacturing for Canadian markets.

American entrepreneurs sensed opportunities in penetrating the Canadian Market. Windsor branch plants could operate at a price advantage within the Canadian market, using U.S. technology, management direction from the Detroit parent plant and many component parts produced there…The problem of such an industrial gestation is that it was not completely based on indigenous capital; consequently, a portion of the profits was repatriated to the U.S. It was not based on home-grown technology either, and therefore research, development and product innovation did not occur here. This meant that Windsor was unable to achieve a high-level technical work force comparable to that of Michigan.[43]

As the industry expanded, more parts were made in Windsor, and "by the 1920s many new manufacturers had joined in making parts and products for Ford here in the Border Cities instead of bringing in most of the parts from Detroit."[44] Ford Motor Company had taken the effort to report to the Technical School Board that they were experiencing difficulty getting trained die-makers, and had taken to training tool makers themselves in the art of die-making.[45] Slowly, small production shops also began to emerge. These small machine shops were the creative lifeblood of the assembly lines, providing innovative fine tuning to designs of the cars as models evolved and changed. Canada's commitment to technical education had changed too, putting much-needed funding in place for technical secondary schools. It was perfect timing for

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the Border Cities, which had a need for the local building and support of home-grown technical skill.

In the first two decades of the twentieth century the citizens of the Border Cities were witness to a whirlwind of change, brought about by technical innovation and skill. The skills, however, were taking on new forms. New assembly line production demanded knowledge of machines used in assembly, as well as specialized parts production. Early efforts such as the establishment of Windsor Machine in 1923 in response to the needs of the growing auto industry by providing jigs and fixtures for the Ford model T would help make manufacturing and assembly more independent from the U.S.[46] The new demands for skilled labour had a direct impact on education, which gave rise to a demand for technical education. As assembly line production was fine tuned and Windsor realized its reliance on Detroit for the technical skills needed to make specialized parts, technical education became a local issue. This local struggle for technical skill is important for understanding WWTS and the role it would play in the local economy.

The small production plants and tool-making departments at Ford Motor Company extended the life of the apprenticeship system in Windsor. Windsor had identified technical education as a way to supply small production shops' and tool departments' need for apprentices, while most other urban centres saw job training relocated from the factory or shop floor to the school.[47] Employers and students were aware that those with technical skill and business knowledge became part an emerging working class elite, but graduates from technical programs still required apprenticeship training in small production sites. These apprenticeships were highly valuable and sought after. For instance, George Dixon, a tool maker in the Canadian Ford plant in 1906, "earned the incredibly high wage of 35 cents an hour because of his skill making front axles. The average worker made 17 cents at a time when a good meal with a beer cost 20 cents and a hotel room cost 12 dollars a month."[48]

Letters from small production shops were published in the first WWTS yearbook in 1924-1925 attest to the new role the school played in the economy, particularly for the small production sites that were emerging:

We now have in our employ three boys who are graduates of your school, and we do not think we can say more than that in future we intend to make your school our source of supply for apprentices. Your boys have a good knowledge of shop practice, as well as being courteous and attentive to their work, which we feel is the result of their school training.[49]

Another letter that appeared in the same yearbook states the type of work that a graduate might get after completing an apprenticeship:

We have as you know about twenty boys as apprentices in our various tool rooms and the result of their training, we believe, has been eminently satisfactory. These boys come to us at the receptive age – they are pretty well along in mathematics and are ambitious and eager to master the running and operations of the various machines with an unpadded appetite for whatever knowledge may come their way. After two years experience with us we consider that these boys equal qualified tool makers who apply to us for work.[50]

There are 11 more letters like these in the 1924-1925 yearbooks. This tradition of supplying well-trained apprentices to the local small production sites that produced specialized parts for the auto industry (and eventually to a variety of industries worldwide) continued for the duration of time that the school remained open. For instance, Mike Solcz Sr., a graduate of WDLTS and founder of a multinational manufacturing firm, Valiant Corporation, attests to this role. After graduating, Mike Solcz Sr. took an interest in the new and emerging industry of plastic mold design:

Fresh out of High School he was able to hone his skills at Windsor's Knickleson Tool and Die. 'I believe I was the first apprentice hired there,' said Mike Sr. 'I already had a job lined up at International Tools Ltd. (ITL) run by Peter Hedgewick (also a graduate of WDLTS), and was going to start there at 35 cents an hour. I also went to Knickleson and spoke to them. They said they would start me off at 50 cents an hour. It didn't take me long to call ITL and offer my regrets, I was only 18' [years old].[51]

With strong support from local industry, especially the Ford Motor Company, the school enjoyed privileges and prestige that served as incentive to students. Publishing all of these letters in the first yearbook served to let students know about the role that technical education played in creating the industrial self-made man. Once the province had established funding for technical education, it allowed Windsor to develop the kind of education needed to thrive in the local economy.

IV. A Vision for Technical Education

At the suggestion of F.P. Gavin a principal at the Windsor Collegiate Institute in 1913, the Windsor school board began to entertain the idea of introducing technical education. With the support of the province, which had already passed both the Industrial Education Act[52] and the Adolescent Attendance Act[53], Windsor was well suited to meet the changing educational needs of the community. As early as 1913, the Windsor School Board established an advisory committee headed by F.P. Gavin to investigate the possibility of offering "industrial night classes" for both men and women at the collegiate institute where Gavin was principal.[54]

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Once the popularity of industrial evening classes was established, it paved the way for city-wide support of a new technical wing in the Windsor Collegiate Institute to accommodate day pupils.[55] The technical wing of the school was opened to students in 1917 with evening classes continuing as usual. After several years of offering night school, Gavin developed strong opinions about adolescents staying in school rather than working. He wanted to provide alternatives for adolescents in the community, but felt that day classes in particular would address the underlying problems at hand.

In the spring of 1917 Gavin presented his vision for "industrial training" in the *Border Cities Star*.[56] Gavin was deeply concerned about boys who left school in their early teens in order to work. This trend was seen as a serious defect in the social system and a waste of a national resource. Boys who were not properly supervised by the state were considered dangerous and likely to wind up in "gangs of hooligans" and would suffer from "physical degeneracy" and a "deterioration of character" which would render them "handicapped by immaturity."[57] Gavin placed the blame for these "disastrous" results squarely on the shoulders of those who employed child labour without furnishing them with the conditions for growth and training. Gavin saw employers of young boys as receiving a subsidy from the nation, while at the same time, creating a cost for the nation's educational system, since night classes were a corrective measure for the problem created. Thus, child labour had both an economic and a social cost. Gavin had seen these effects via the attendance at the night school. It was his experience in evening industrial classes that provided evidence for his argument in favour of day classes catering to young men who needed to be in school rather than prematurely in the work place. In closing, Gavin states that these boys needed industrial day classes and under the Industrial Education Act of Ontario such accommodations could be offered.

To take this point one step further, an article by George A Courtenay, Chairman and Secretary of the Technical Advisory Board, appeared on the same page of the paper to discuss the type of education needed in the community.[58] This article stated that while Windsor had not yet enforced the Adolescent Attendance Act, some educators advocated a by-law to enforce attendance by those students who would otherwise drop out of school in the third and fourth classes. Courtenay cited London, Ontario, as a town where the Adolescent Attendance Act was put to use and hence was able to establish not only technical classes but to build Ontario's first specially designed technical school. A technical school was Courtney's desire for Windsor as well. Courtenay believed that nothing short of a "Trade School" equipped with "lathes, drills and other machines" would entice the so-called "motor minded" boy to stay in school beyond the fourth book, or after finishing elementary school.

As Gidney and Millar point out, in the first three decades of the twentieth century it was not at all uncommon for many students to end their education without going to high school. Across Canada, "the average length of schooling extended from just under seven years in 1911, to eight years in 1921, eight and half years in 1931, and by 1941, ten years."[59] Without a doubt technical, commercial, and manual training programs would have contributed to the increase in years that students attended school. In Windsor, Ontario, however, it helped that assembly line production was being established and small production shops were proving lucrative as necessary support for the growing automotive industry. To compete with skilled production in Detroit, Windsor had to quickly adapt to the industrial needs of branch plants and prove that home-grown skill could supply parts and labour more effectively and efficiently than U.S. labour even in the presence of easy cross-border access to suppliers.

V. Distinguished Features of WWTS/WDLTS

During the fifty-year period in which WWTS/WDLTS functioned as a stand-alone technical school, it rallied passionate support from its students and the surrounding community. On three separate occasions the school declared itself an "all-boys school," only to have the number of girls in attendance rise again. Regardless of the gender balance, the reputation of WWTS/WDLTS was that of a tough school that served the community's promising young men best. In the words of a former teacher Pat McManus, it was a school where it was "acceptable to lose a game, but never a fight."[60] The school balanced the roughest stereotyped working-class masculinities with a style of discipline that allowed traditional school structures to coexist alongside shop classrooms. Specific historic, economic, educational, and social elements created a context that made WWTS possible. Some of the features that played prominent roles in the school include: WWTS's links to the local economy, the strict discipline at the school, the large physical presence of cadet training, the assistance of federal funding from 1919-1970, and high academic standards. Each one the features listed will be discussed in the following 3 sections, followed by a final section which will revisit the research question at hand, and discuss the application of the results of this research to current trends in education.

VI. WWTS/WDLTS Reflected the Local Economy

The Department of Education in Ontario required a city or town interested in offering technical

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education to request a government-conducted survey of the industries in the region as a prerequisite for approval and funding. As stated in 1919 by Minister of Education, H.J. Cody, "each school meets the industrial needs of the community as effectually as circumstances will permit."[61] The survey was a way to insure that the technical education offered met the needs of the community. The results of the survey would determine not only the type of courses offered, but also the scale to which they would be offered. A common obstacle for many smaller towns wanting technical education was having too small a student population to warrant building a separate school.[62] This concern was especially pressing when there was already a select group of potential students in mind, along with the type of courses most likely to entice them to attend school. In the case of the Border Cities, that select group was "motor-minded boys" who would only be enticed by courses involving "lathes, drills, and other necessary machines."[63] Night classes had been popular in Windsor since they were first offered in 1913, and the advisory committee had been advocating for a technical school for day classes since 1917. Federal legislation passed in 1919 finally presented the opportunity to acquire support for a day school. Immediately, the advisory committee began taking the first steps necessary to enact a grand plan for a large stand-alone secondary school for the entire Border Cities region, which included Ford City, Walkerville, Windsor, Sandwich and Ojibwa.[64]

At the initiative of the Technical Advisory Committee in Windsor, a commission was created. This commission included representatives of both public and Catholic separate school boards from each town.[65] After the first meeting, the commission agreed to contact the Ministry of Education to conduct a survey to determine the extent of the region's need for technical education because the federal government expected the technical school's curriculum to reflect the needs of the local economy.[66]. They requested that the Department of Education in Ontario complete a survey to determine the type and number of industries in the region. The Department of Education sent W.F. Merchant to consult with the commission about the survey, an initial step in the process of getting provincial approval for a new technical school. Merchant opened discussions with the commission by observing that having one school serve five separate towns set a new precedent. The only other case of a jointly-run technical school was the Berlin (now Kitchener) and Waterloo Technical School. That joint venture required provincial legislation to allow both towns to pass bylaws that in turn allowed for a joint technical school board between the two municipalities. The Border Cities could fashion their bylaw in the same way, and new provincial legislation would have to be passed, but it was possible. The results of the survey were presented in the minutes in very general terms. There were 75 different types of manufacturing in the region, with the majority of people (over 6,000) employed in Windsor and Walkerville.

If a city could support a stand-alone technical school, the array of potential courses a school could offer was diverse and wide-ranging, depending on these local surveys. In many Ontario stand-alone technical schools, the options included programs and courses such as: architecture; machine drawing and design; art and design; printing and bookbinding; chemistry and geology; commercial work; industrial shop work, which might include pattern making, auto mechanics, electrical wiring, carpentry, and construction; domestic science, including courses in cooking, home management, hygiene, and dietetics; domestic arts, which could include millinery, costume design, dressmaking, textiles, history of costumes; and in a few cases, agriculture.[67]

WWTS/WDLTS boasted some of the finest shops in Ontario. The foundry, the physical testing laboratory, the metal fabrication shop, and the building materials shop were longstanding features that were unique in Ontario.[68] These shops, which reflected the local economy, made the course offerings at WWTS/WDLTS more diverse than other stand-alone technical schools. As local programming at technical schools faded after 1960 curricula became more aligned with categories of standard basic skills for apprenticeships defined in the red seal trades,[69] or by Colleges of Applied Arts and Technology. The 1962 Roberts Plan expanded technology and trades programs in the high schools, transforming programming that responded to local economic needs into standard programming determined by a stream of study that locked a student into a future location of generic work, college or university programs.[70] Technology and trade options were included for all students regardless of whether they were staying in school for the three, four, or five-year programs but they were disconnected to local labour needs.[71]

The presence of the Red Seal Program, and applied post secondary institutions influenced the curriculum for secondary technical education. The reorganized programming of the time would put technical curriculum at WDLTS out of touch with the local economy at the centre of North America's highest concentration of tool and mould shops. By this time Windsor's small production shops had expanded from strictly automotive parts production to a diverse array of products such as computer castings, infant car seats, and medicine bottles.[72] Within a generation after the reorganization of education under the "Roberts Plan" local pioneers of small production shops like Peter Hedgewick, owner of International Tool & Die, found it difficult to find employees willing to learn the trade to his standards.

Peter Hedgewick was the self-proclaimed grandfather of Windsor's mould industry. After graduating from WWTS he completed an apprenticeship

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at Windsor Tool & Die. With a business plan to make moulds for plastic products, he started a one-man operation that grew into a publicly-traded company employing 1,200 people. Hedgewick trained all his apprentices in all aspects of the business, which equipped them to start their own shops. Hedgewick's training was key to Windsor's innovative and creative local economy. The variety and volume of skilled workers who knew how production worked from beginning to end and could adapt their knowledge to changing demands, made for a diverse and strong local economy. In 1984 when Hedgewick announced his retirement, he said that he "couldn't get anyone to run the place, when I left, everything fell apart, so I sold it out," closing a chapter in the history of local manufacturing in Windsor. [73] The backdrop of this story is that the type of education that gave rise to talent like Hedgewick's no longer existed.

VII. Strict Discipline

Physical discipline at WWTS/WDLTS was imposed on students not only by teachers and principals, but also by cadet trainers. Cadet corps participation came with expectations of obedience and self-discipline. Cadet training legitimated violence as a way to maintain order and control, but also valorized those who accepted physical discipline. Corporal punishment was accepted as a way to develop self-discipline, and was not merely consented to, but glorified as a means by which many male students at WWTS/WDLTS could achieve the status of "captains and generals" of the industrial army. No one modelled this understanding of discipline more clearly than W.D. Lowe himself. Lowe was the first principal of the school and remained principal for 22 years before he died. He was remembered as a:

> Strict (but fair) disciplinarian...His blue eyes were keen, searching and penetrating. I don't think anyone would care to lie to him about anything. He was a humanitarian. He cared about us – the students, and what happened to us. He expected much from us and we were inspired to live up to his expectations. We all I am sure remember him well in assembly on Wednesday mornings – up there on stage...leading us in the national anthem...when 750 voices were raised in unison to sing God save the King...we sang with gusto, abandon and feeling! We had no other choice. Mr. Lowe was up there facing us, expecting us to sing. We sang![74]

Physical discipline as a way to correct and improve student behaviour became part of the culture of the school. At the fiftieth anniversary of the school, members of the Class of '26 sang the school song with enthusiasm:

Proudly we now take our stand,
For the school we love;
To uphold her honoured name.
We will ever strive.
By our efforts to maintain
Victory over all,
We will fight with all our might
For Lowe Vocational[75]

In the record of events for the 50th anniversary, Vi Conosevitch Campbell recalled that WDLTS was a place "where we sung the anthem with gusto – or else."[76] The lyrics of the school song reflect the cultural attitude toward violence as a necessary and proud tradition. This attitude would have been supported by the long tradition of cadet training at the school.

A large part of the disciplined culture of the school was the cadet corps, which brought an honour code to the school. The official code of honour of the cadet corps 1112 stated that each cadet would...aspire to become a citizen of the highest integrity in my community. I shall strive for success in my studies, to be considerate of all persons and their property, and to achieve the highest physical, mental, spiritual and moral standards as a citizen of Canada."[77]

Cadet corps had been well established in many schools throughout Canada by the time WWTS opened. "In 1898, Ontario promised to grant fifty dollars to any school board that had a cadet corps of at least twenty-five boys. Ottawa integrated the cadets into the militia system with the 1904 Militia Act which allowed Ottawa to provide cadet corps with arms."[78] Government support for cadet corps in schools was not only about imperialism, or the practical training it might provide for future conscripts or army recruits, but also about making boys into men.[79] The decision to implement a cadet corps at WWTS could very well have been a reflection of the common belief that rifle training would improve a boy's health, strengthen his moral fibre, and add to their professional, industrial, or labour value when they attained manhood and entered into the serious business of their lives.[80] Thus, rifle training would have been an attractive feature for a technical secondary school seeking to reform so-called "gangs of hooligans."

On December 29, 1923, number 1112, the Windsor Walkerville Technical School Cadet Corps, was formed.[81] By 1928 it grew to Western Ontario's largest cadet corps, winning its first of many Western Ontario Cadet Corps Championships.[82] By the 1962-63 school year WDLTS had the largest cadet corps in the nation.[83] The longstanding tradition of male-only cadet corps came to an official end on July 30, 1975, when Canadian parliament amended the Militia Act by changing the word "boys" to "persons," thereby permitting girls to become members of the Royal Canadian Army Cadets.[84] WDLTS, however, had already admitted a female student to its ranks in 1963.[85] More than 10 years before the legislation changed, the rough and tumble boys at the school had welcomed one brave

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girl into the cadet corps' military band and highlighting her achievement in the yearbook.

The cadets didn't always practice the self discipline that was expected of them, though. John Bruggerman, or "Bruggy" as he was known then, recalled that even though WWTS had the largest cadet corps in the nation, they were still no match for Principal Lowe. Bruggy was a part of that cadet corps and remembers that:

One time we were supposed to march to Landspeary Park. We marched down Elsmere [Ave.], over to Erie [Street] and were supposed to go up Parent Avenue. Instead, the whole platoon turned down and we went to the Capital Theatre. On the Monday, Mr. Lowe called us all in and whipped the whole damn 40 of us.[86]

The discipline at WWTS was strict (as it was in many schools at the time), but so were the expectations for boys who had been a many years earlier, considered dangerous "gangs of hooligans" in the local press by F.P. Gavin.[87] A public display of disobedience like the one described by John Bruggerman had to be dealt with severely; it would have been expected. A principal who did not dispense corporal punishment for blatant defiance would have been considered weak.[88] The fact that this publically defiant group of male cadets was from a technical school particularly made corporal punishment a given. Recent research by Paul Axelrod suggests that a long history of discipline that employed corporal punishment to build durable soldiers.[89] Even in coeducational contexts, corporal punishment was profoundly gendered. Most recipients of corporal punishment were boys.[90] Further, the schools where corporal punishment was most likely to occur were technical and vocational schools.[91]

Given these findings, a group of 40 male cadets from a technical school participating in an publicly orchestrated effort to skip school to go to the movies would have left no doubt about the mode of punishment in the mind of Principal Lowe. Indeed, a technical school whose student body always consisted of more male students, and boasted the largest cadet corps in Canada would have fit the bill for an accepting environment for corporal punishment.

Although corporal punishment officially ended in 2003, it did not disappear from classroom practice without debate. Corporal punishment was a long-accepted method for dealing with behaviours deemed not acceptable in schools. Sadistic and cruel uses of punishment were unacceptable, but rule-bound, formulaic, and carefully recorded application of physical discipline was considered reasonable and potentially rehabilitative.[92] Violence was also tolerated to a degree amongst the boys as an acceptable way to solve problems and also seems to be credited with this rehabilitative function.

In an article from *The Walkerville Times,* former principal, "Scrubby" Aitcheson recalled the school in the following way:

It was a tough school where threats of "knuckle sandwiches" (sometimes brought to realization in nearby alley ways) were the order of the day. But a school with a province-wide reputation for excellence in the trades ... [and] strict discipline was part of the explanation. [The strap] could be applied for such infractions as the use of profanity. And several sharp raps on the cranium, administered by the teacher's knuckles, were the accepted method of attracting the attention of a daydreaming lad. [93]

But discipline was already waning. An edict from on high called for teachers to surrender their classroom straps. Nearly 100 per cent did. Nearly. A Board of Education mogul appeared at the class room door of Pat McManus, who taught at Lowe for [36] years, to demand that he surrender his strap."Take it away from me," replied six-foot, three-inch Pat. The strap stayed.[94]

The stand Pat McManus took was not isolated. Many teachers resisted the pressure to give up the use of corporal punishment in their classrooms. For teachers in the context of the highest incidence of corporal punishment – boys in vocational schools, the strap may have been understood as the only correction "hooligans" understand and respect. Without it, the task of transforming WWTS students into "captains and generals" of the industrial army may have been perceived as the only effective means. In light of recent research on all-boy classrooms in Windsor, Ontario, which found that boy-only environments exacerbate male violence and reinforce dominant constructions of masculinity, it is clear that at WWTS/WDLTS, male violence was perceived to be a factor in achieving student success in the classroom and workplace. And as Blake points out, once a practice is linked to masculinity, change is hard to legislate.[95] Culture like that at WWTS/WDLTS which associate male violence with elite working class success are hard to dismantle unless we can, in the words of Christopher Grieg, approach education for boys in a way that "respects different forms of masculinity and encourages boys to confront and challenge the realities of privilege, power and violence in their lives."[96] Unfortunately, when a particular type of masculinity is perceived to be as less powerful and privileged than masculinities that intersect with a middle class status, violence takes on a more important role in the construction of masculinities. In a working-class context, violence is therefore, much more difficult to give up, challenge or confront. Add to this scenario slashed funding and decreased academic standards for technical education and violence in working class masculinities takes on even more importance.

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VIII. Changed Funding for Technical Schools

After funding technical high schools for 48 years, the federal government suddenly announced that it was withdrawing from all cost-shared educational programs. This announcement was made at a federal provincial conference in the fall of 1966. The federal government explained that they wanted to redirect their efforts to supporting adult education. Minister of Manpower and Immigration, Jean Marchland stated, "We propose to take 100% financial responsibility for the adult, for the person who has left school and earned his living and now needs retraining or further training."[97] This reasoning should sound familiar: it is the exact reverse of the reason provided by F. P. Gavin in the *Border Cities Star* 50 years earlier for supporting secondary-level education as opposed to adult retraining. Gavin recognized that providing educational support to youth was a preventative measure while technical night school for adults was a corrective one. It would seem in this move back to retraining adults, the federal government reversed all of the gains made in communities like Windsor and insured the dismantling of the means by which those gains were made.

In this same announcement, the government stated that an incentive for further construction of technical schools and programs would be offered; the federal monies would be withdrawn altogether in 1970. In fact, this incentive generated a building spree which resulted in 278 new vocational schools and 55 additions to existing high schools between 1961 and 1966.[98] Under this incentive the Windsor school board built 2 more vocational high schools, Shawnee Vocational School (which I attended), and Hands Vocational School (where I taught). Neither of these schools would see a fraction of the same funding that WWTS/WDLTS had for tools and equipment in shops. Instead these schools sought funding by introducing specialized programs such as vocational departments dedicated solely to special education for students with intellectual disabilities. It is only at this point in the history of technical education that we see national support for what was suggested by research conducted on the Central Technical School in London, Ontario. Goodson and Dowbiggan suggest that educational reforms which purported to create a diversity of options for a new diverse group of students "would have the effect of perpetuating and legitimating class differences, that is, exploiting the capacity of educational systems to invest in social distinctions with cultural meanings."[99] Hence the support for the building of new stand-alone vocational high schools that would be from their founding, underequipped, underfunded, and markedly associated to academic inability. This shift in funding left little room for schools such as WDLTS to retain any semblance of the pride and honour they had generated in the past.

IX. Academic Expectations

When WWTS opened its doors to students, its principal, W.D. Lowe, provided an overview of the school in the local press. The new principal explained:

The technical school ranks as a high school. The textbooks are similar to those used in the high schools, the courses of study on the academic side are much the same, and there is the same requirement for entrance. The technical school, however, in addition to affording a general education, will give training in vocations to those girls and boys who will find their employment on leaving school in business, in industry, or in the home.[100]

Announcements like the one that described the standards of WWTS in comparison with other high schools were commonly accepted in other towns that offered technical education at the time. Gidney and Millar explain that during the interwar years, vocational schools "were in the business of completing the general education of adolescents, and the provincial programs prescribed for the vocational schools which always included a substantial academic component, with standards and course content similar to those in the academic program."[101] Even though matriculation exams, or exams required for entrance into university, were not given at technical schools, entrance exams and departmental exams given between grades insured that students at stand-alone technical schools knew where they stood along-side other high schools and students in an atmosphere that favoured academic study and standard examination procedures. Even as exams slowly began to fall out of favour in the 1930s, many schools continued to use standard testing as a way to demonstrate public accountability. In Windsor, departmental exams were conducted well into the 1960s, and WDLTS was able to boast the highest scores in the city in 1966.[102]

Under new policies for technical education after 1960, technical secondary schools became associated with students with intellectual and learning disabilities. This shift had the effect of widening the already existing divide between technical and regular high schools. In the absence of federal funding for technical education when new technical schools were being built, emerging funding sources for students with special needs served as a ready available resource for the new vocational schools. In some cases vocational schools became known as schools for "slow learners."[103] Gidney notes this shift in technical and vocational high schools status by stating that "at mid-century the term vocational school referred to one that taught craft skills to quite advanced levels and required a mix in each grade of shops and conventional academic courses. It was not a

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euphemism for a school serving 'slow learners'."[104] Freeman credits the new association of stand-alone technical schools with special education to the timing of the Roberts Plan, which emphasized "providing practical and useful education to that segment of the population whose strength lies in working with tangible things rather than abstract ideas."[105] Freeman explains that "there is nothing in the [Roberts] policy guidelines to suggest that the program should or would necessarily be housed in a segregated school. In most communities, enrolment would have warranted a separate facility."[106] And many facilities were ready and waiting, since the federal government had offered unprecedented amounts of money to build vocational schools under the Technical Vocational Training Assistance Act.[107] The combined changes to funding for technical education along with the reorganization of programming under the Roberts Plan ensured that the once separate but equal spaces of technical schools like WWTS/WDLTS became segregated spaces for students with intellectual disabilities, associating working class skill with sub-standard academic achievement. The tradition of high academic standards set at WDLTS from its inception in 1923 gave it some immunity to the devaluation of technical education in the province during its last decade. Inevitably though, the educational changes of the time threatened to sully the once-proud reputation and meaning of "Lowe Tech."

X. Conclusion

WWTS was established with a vision conceived by F.P. Gavin of remedying the social problem of boys entering the workplace at too early an age. Gavin saw that boys were often exploited by employers who would not furnish young workers with a proper education, creating a social problem for the city at large and wasting the resources of the nation. Once established, WWTS quickly built a reputation for providing skilled, hardworking, and willing apprentices to the Border Cities' growing automotive industry. In particular, it contributed significantly to the specialized parts production that distinguished the local economy from all others in North America. The WWTS's intimate connection to the local economy was a key factor in the school's documented success. The tradition of producing workers and leaders in the tool and die and mould-making industries launched the school far above the basic expectations of the provincial and federal authorities.

Just prior to WWTS's opening, W.D. Lowe outlined the curriculum in the local press. In this article, the school's purpose "according to provincial guidelines" was clearly laid out. The school was to prepare students for the workplace, not university. Students were informed that no effort would be made to prepare them for university matriculation. Further, students should not expect to gain expertise in just one area of study. WWTS would provide a well-rounded education for all, including basic study in academic, vocational, and pre-vocational courses. Those students, who had fully completed elementary school, could take a full range of academic, vocational, and commercial courses for four years, fully preparing them for various positions in business and industry and sometimes for university or further training such as teaching.

When the yearbooks were printed for the first graduating class, two university advertisements intended to recruit graduates of WWTS appeared. In 1927, one advertisement for the School of Practical Science in Toronto included the information that arithmetic, mechanical drawing, and shop work could substitute for Latin in the entrance requirements needed to get into the university.[108] Some of the girls who were graduating from the household sciences department moved on to get teaching certifications. In 1927 the Ford Motor Company established a policy that gave hiring priority to WWTS graduates in their tool and die departments. If the initial goal of the school was to transform "gangs of hooligans" into students who stayed in school a few years longer in order to gain more skills that would lead to better jobs, WWTS exceeded that goal right from the outset. Some might even say this school created the "captains and generals" of the community at the time, since its graduates included the likes of Peter Hedgewick and Mike Solcz, who went on to be leaders in the field of mold making for plastic products.

While technical schools like WWTS/WDLTS may not have been common across Ontario, the school was created with its communities needs in mind. The fact that WWTS/WDLTS made a lasting impression on its community and significant contributions to machine, tool and die, and mold making industries, makes it a noteworthy part of Windsor, Ontario's history and the history of technical education in the province. WWTS/WDLTS had at its disposal, though, many ingredients which vocational schools today do not. These ingredients include: funding for specialized equipment and cadet training, curriculum flexibility, strict discipline that included corporal punishment, and high academic expectations and standards. These are the very features credited in the local community for the schools success. As noted by Gidney and Millar in their latest book *How Schools Worked* technical programs were very expensive and as such were hard to implement in smaller towns and communities. Unfortunately, the funding that finally allowed many technical and vocational schools to be built was discontinued in 1970. Funding for cadet training was discontinued as well. Academic markers that had distinguished some technical programs were also discontinued and corporal punishment in schools had ceased. For better or worse the ingredients in the recipe

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for transforming "motor minded" boys of the Border Cities, was brought to an end.

The factors that brought WWTS into existence are gone, and technical schools have been transformed into spaces which segregate students. This lesson from the history of technical education has application to current trends of establishing separate educational spaces for specific populations not well served in regular public secondary schools. Even when a separate space is created with the very best of intentions, we must always ask one critical question: How does the separate educational space serve public educational institutions in general? In other words, by creating a separate space, are we supporting exclusionary practices in our high schools? While male WWTS/WDLTS students were successful in the local industrial economy, the school's success was limited to a select group of boys under specific historical conditions. Further, no policy, insight, rules, or regulation can predict or purposefully create that success for any group. Claims to this effect, are simply claims that a population of students is not successful in the existing structures of schools. Is it the responsibility of our education system and schools to identify the "hooligans"[109] and transform them, or to transform existing institutions which claims to offer a "well rounded education for all?"[110]

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13. Ibid. 114.
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