

Setting Standards in the West: C. B. Conway, Science, and School Reform in British Columbia, 1938–1974

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C. B. Conway headed the British Columbia Department of Education's Division of Tests, Standards, and Research from the late 1930s to the mid-1970s. Through Conway and his research bureau, the department began to modernize its pedagogical foundations by embracing the scientific measurement movement that had been transforming education in the United States since the early 1900s. But more than this, Conway's career provides a vantage point from which to see larger changes within educational government from the implementation of the so-called progressive reforms in the late 1930s, couched in rationalism and science, to the neoprogressive reforms of the early 1970s, that were increasingly defined in political terms.

C. B. Conway a dirigé la division des examens, des normes et de la recherche du ministère de l'Éducation de la Colombie-Britannique de la fin des années 30 au milieu des années 70. Grâce à M. Conway et à son bureau de recherche, le ministère a commencé à moderniser ses principes pédagogiques en adhérant au mouvement en faveur des mesures scientifiques, lequel transforme l'éducation aux États-Unis depuis le début des années 1900. La carrière de M. Conway constitue en outre un excellent filon pour analyser des changements plus vastes ayant trait aux politiques éducatives: de l'implantation, à la fin des années 30, des réformes dites progressives faisant appel au rationalisme et à la science jusqu'aux réformes néoprogressives du début des années 70, lesquelles ont été de plus en plus définies en termes politiques.

From its earliest beginnings public schooling in British Columbia has been characterized by its highly centralized system of administration.¹ The history of provincial education, as a result, has been intertwined in many important respects with the history of the government's Department of Education. Over the past two decades, an emerging body of historical scholarship has begun to explore the centralized character of school leadership in British Columbia, the nature of the government's administrative structures, the careers of prominent men and women who staffed the government's education bureau, and relationships that have existed over time among provincial education officers, teachers, and local school officials.²

As part of this broader enquiry into such questions, this article examines the career of C. B. Conway, an education officer who served in the British Columbia Department of Education from 1938 to 1974. Although Conway's role in educational government is indisputably less significant than that of his mentor, Chief Inspector of Schools H. B. King, or, indeed, that of Minister of Education George Weir, his ultimate superior, he remains, nevertheless, an important and unique figure in the history of the government's education office because of his pioneering work in educational research.

Conway's appointment was first announced early in 1939 by Superintendent of Education S. J. Willis, when Conway, formerly an instructor in statistics at the Ontario College of Education, was "given headquarters in Victoria and assigned to the Bureau of Educational Research."³ Until October 1946, however, the "bureau" consisted of no more than Conway and his desk. Although Conway was accorded the rank of school inspector, this designation was never intended to be more than a flag of convenience. Conway was hired specifically to head the province's educational research unit, the first of its kind in school departments across Canada. Aside from whatever national significance it had, the bureau's creation clearly marked a turning point in provincial school history. Through Conway and his research bureau, the Department of Education began to modernize its pedagogical foundations by formally embracing the "scientific measurement movement" that had been transforming educational thought and practice in the United States for almost three decades.

Conway's great value, to King and Weir, was as an agent of modernization. His statistical expertise and experience in developing standardized and other forms of tests promised the beginnings of a more rational and enlightened system for evaluating and managing the performance of provincial schools. His recruitment also promised to solve more immediate problems. Government's senior education officers believed that Conway's appointment would help them provide schooling more efficiently, and, at the same time, maintain the government's long-standing presence in provincial classrooms through improved forms of testing and assessment.

Conway's career is interesting, however, for reasons apart from his role in establishing provincial tests and measurements. His position as the province's chief educational statistician for nearly four decades serves as a useful vantage point from which to view the changing character of school reform through the twentieth century's middle decades, as it was transformed from an undertaking couched in rationalism and science, in the late 1930s, to something increasingly defined in political terms by the time he retired in the mid-1970s.

TO TRAIN MEN FOR SERVICE

Like many B.C. school leaders in the era before World War II, Clifford Bruce Conway, later "Cliff," or sometimes "C. B." to his colleagues, was not a native

British Columbian. Conway was born in Miniota, Manitoba in 1909 and, after attending elementary and secondary schools in Miniota, entered the University of Manitoba in Winnipeg with the aid of an Isbister Scholarship, graduating with a Bachelor of Science degree in 1928. While at university, he was active in intercollegiate competition as a member of the university's rifle team and joined the Royal Officer Training Corps cavalry unit, where he was commissioned as a lieutenant. He enlisted in the Winnipeg Grenadiers in 1928, but was "struck off strength" the following year when he left Canada to enter the University of Minnesota. At Minnesota, he earned a Master's degree in biochemistry with the help of a Fleishmann Fellowship in 1931. Although he found summer employment as a "trouble-shooting chemist" for the Commander Larabee Milling Corporation in the American midwest, as well as the National Research Council in Canada, financial reasons prevented him from completing a doctoral degree in chemistry.

Like others of his generation, Conway's career was shaped by the Great Depression. Unable to find full-time work as a chemist in the United States, he returned to Canada and enrolled in the Ontario College of Education in 1932 to obtain a teaching credential. For the next three years, he taught science in Toronto city schools "on a temporary basis" while working towards a doctorate in pedagogy at the University of Toronto, which he received in 1937. His dissertation examined children's hearing abilities in Toronto schools and was the first study, Conway later pointed out with pride, to construct and use an audiometer to test hearing in Canada. The subject of children's hearing no doubt captured Conway's interest, suffering from a hearing loss as he did.⁴

At Toronto, he met Peter Sandiford, a former graduate student of Edward Lee Thorndike at Teachers College, Columbia, and head of the university's Department of Educational Research. Sandiford enjoyed considerable national and international prominence as an educational researcher—and was especially well regarded in British Columbia for directing the comprehensive testing program that provided much of the "scientific" foundation for Putman and Weir's 1925 survey of provincial schools.⁵ As a research assistant and instructor in educational statistics, Conway earned Sandiford's respect and support, both of which would shortly prove instrumental to his career.⁶

Events leading to Conway's appointment began on 12 July 1938, when King, known for his insistence upon the honorific "Major" instead of Doctor in recognition of his service during the Great War, reminded Weir that the "practical abolition" of high school entrance examinations and the newly adopted principle of high school accreditation made necessary "a more scientific way of evaluating the measurable work of the schools."⁷ King further advised his political master that the province should establish a "Bureau of Measurements" similar to one operated by the Vancouver School Board since 1928. To support his proposal, King added: "For many years the inspectors have used tests, mostly American made, not always appropriate to B.C. schools, and this testing has had not any

planned objective. Tests should be based upon our own curriculum and should be used for a definite purpose.”⁸

Choosing to ignore the severe financial restraints imposed on government throughout the 1930s to explain why such a bureau had not yet been created, King suggested that the real “difficulty” lay in finding someone suitable to direct such a unit. With typical immodesty, King reported: “While I think it is something I have been trained for myself, if I assumed such a position I could do nothing else. Moreover, I have no desire for the position, though I am much interested in the educational use of properly-made tests.”⁹ Arguing that it was “a position for a young man,” King thereupon recommended Conway, an individual half his age, with whom he had recently been impressed at an American Association for the Advancement of Science conference for his “extremely thorough knowledge of statistical method as applied to educational measurement.”¹⁰ “I was led to enquire more about Dr. Conway,” King recounted, “and was convinced that he is the man we require to have charge of Tests and Measurements in this province.”¹¹ “There is no person in Canada better qualified,” King concluded, “except one or two who already draw higher salaries than the provincial government would likely pay.” Weir proved interested and, less than a month later, on 9 August 1938, Conway received a formal offer of employment from the minister.¹²

Upon receipt of Weir’s letter, Conway submitted his academic credentials, and references from the University of Toronto’s Sandiford, as well as from Dean J. G. Althouse and Maxwell Cameron of the Ontario College of Education, where he now taught.¹³ Soon after, Weir responded by offering him “a permanent civil service appointment” with the rank of “inspector of schools.”¹⁴ To induce Conway to leave teaching, Weir sought to reassure him of the permanency of the research position in a letter of 29 August:

No official can be given a guarantee that his services may not be discontinued because of a change in government. I couldn’t promise that a new government will always act wisely. However, during the present century no official of the Department of Education has been deprived of his position, with one exception nearly twenty years ago. Educational positions have been regarded as outside politics.¹⁵

Moreover, Weir continued, referring to the effects of the depression on the government’s financial condition, “your position is not likely to be affected by economy measures, as this position itself should be a measure of economy.”¹⁶ Finally, Weir counselled, “you will not be expected to change things overnight. You naturally will need time to get your bearings. You may count upon all the assistance which you will need in doing so, and also upon plenty of technical assistance.”¹⁷ As Conway later recalled, he had accepted the job of “an inspector without an inspectorate, my chief duties being assistance to teachers in general, the supervision of matriculation examinations in June, the teaching of courses at summer school [and] the investigation of doubtful schools.”¹⁸

When Weir visited Toronto in late September 1938, he settled arrangements with Conway and the appointment was formally confirmed in a cabinet meeting on 25 October.¹⁹ A week later, King wrote to Conway to express his satisfaction at the way things had turned out and to extoll the pleasures of life in British Columbia. "You may be interested to know," he remarked, celebrating the west coast climate, "that the skies here are still blue, and as I look out from my window the waters of the Gulf of Georgia are shining in the afternoon sun."²⁰ "I think you will find educational thought in British Columbia advanced and progressive," King boasted in another correspondence.²¹ To this, he added: "You needn't have any hesitation about coming. Dean Althouse will be sorry to lose you, but he accepts it as a function of his college to train men for service."²²

SCHOOL REFORM THROUGH SCIENCE

Compared to large urban school systems and the faculties of leading universities in the United States, the state of knowledge about scientific research into schooling was generally slow to develop in British Columbia. In the United States, educational efforts to construct a science of pedagogy began in the normal schools of the mid-nineteenth century, and by the 1880s such leading educational figures as William Payne, President of Peabody Normal College, had concluded that "the ideal teacher must be a man of science in the same sense that the reputable physician is a man of science."²³ By the turn of the twentieth century, interest in the science of pedagogy and, in particular, in educational measurement had become widespread among educational scholars, largely through the psychological research and writing of such figures as James McKeen Cattell, William James, Thorndike, and Charles Terman.²⁴ Thorndike's first course in educational statistics at Columbia's Teachers College in 1902, and Henry Goddard's adoption of Simon and Binet's scale to measure intelligence in 1908, spurred an enormous interest in measuring mental capacity or, as Sandiford later described it, "an orgy of intelligence testing."²⁵

Measurements of intelligence were paralleled by other developments. In the years before the Great War, achievement tests were developed for virtually every subject in American schools. Among the most popular of these were Thorndike's handwriting scale, Hillegas's test for English composition, Ayres's spelling test, and Curtis's test for arithmetic. In one year alone, 1916, 450,000 copies of the Curtis test were distributed to teachers and administrators in forty-two states.²⁶

Meanwhile, the "scientific measurement movement," as it came to be called, was becoming institutionalized. Efforts to secure greater cooperation between school officers and the professors constructing standardized tests led to the establishment of research bureaus, or "bureaus of research and efficiency," as they were then known, at centres for higher learning, or in state education departments. Research bureaus were organized, for example, at the University of Oklahoma in 1913, at Indiana University, Kansas State Normal School, and Iowa

State University in 1914, and at the University of Minnesota and the Wisconsin State Department of Public Instruction in 1915 and 1916, respectively. Between the years 1921 and 1922, twenty-six such bureaus were founded to attempt, in the words of one bureau director, “the Herculean task of substituting fact for opinion in school practice.”²⁷ Aside from housing the growing test-construction fraternity, the research bureaus also served to promote the hundreds of state and city school surveys conducted in the decade before the “Great Crash” of October 1929. The popularity of such surveys prompted Stanford’s Ellwood Cubberly to remark in 1924 that the “survey movement has rapidly developed into an important form of educational engineering.”²⁸

In retrospect, it is not surprising that British Columbia should be the first province in Canada to feature an educational research bureau both at municipal and provincial levels, or that Conway would become the first director of a provincial research branch. Circumstances leading to these developments began in 1924 when the provincial government, under pressure from the British Columbia Teachers’ Federation, initiated a survey of provincial schools, headed by Ottawa School Inspector Harold Putman, and George Weir, recently appointed as the University of British Columbia’s first professor of education. The two men selected Peter Sandiford to carry out what was, at that time, the most comprehensive program of intelligence and achievement testing to be undertaken in Canadian schools—a program involving some seventeen thousand pupils.²⁹ Sandiford, whose ties to mental measurement reached back to Columbia’s Teachers College, proved to be one of the principal intellectual conduits for the largely American ideas about “progressive education” that flowed into British Columbia education through Putman and Weir’s report. From his scholastic pulpit at the University of Toronto, Sandiford preached the doctrine of mental measurement, which he learned first-hand at Columbia as one of Thorndike’s graduate students, to a new generation of educational acolytes, among them Conway.

Putman and Weir’s articulation of progressive ideas, although never fully understood or applied by British Columbia teachers, nevertheless did set the educational agenda inside the Department of Education over the following two decades—an agenda that would eventually lead to Conway’s recruitment in 1938. They did so, first, by recommending that the program of standardized measurement, orchestrated by Sandiford, become a permanent feature of provincial education.³⁰ Introduction of intelligence measurements and standardized testing would also help reform other educational practices, Putman and Weir believed, notably the system of provincial examinations that regulated teachers’ and pupils’ lives beyond elementary grades. In line with growing community pressure, in Vancouver and elsewhere, to promote greater numbers of pupils to the senior grades, they depicted high school examinations, the “departmentals” as they were known, as an anachronism, or a “Moloch” to whom students were needlessly sacrificed.³¹ Provincial examinations, they contended, were an “out-growth of an educational system essentially Prussian, rather than British, in

spirit,” as well as “a hopelessly ineffective method of achieving that system’s aims.”³² “If the traditional written examinations were an accurate test of intelligence or educational achievement,” they argued, “a strong defence for retaining them as an integral part of the provincial school system could be offered.”³³ As evidence that this was not so, they pointed to wild fluctuations in annual failure rates, as well as to Thorndike’s findings on the subjectivity of marking.³⁴

Putman and Weir’s criticisms of departmental exams aggravated difficulties the Department of Education already faced. Apart from public pressure to promote more youngsters into high school, and the increasing clamour of local authorities for control over such promotions, professional resistance to old-fashioned methods of inspection was also growing inside teacher ranks, within the scholarly community, and even within the provincial inspectorate itself.³⁵ These developments did not augur well for the department. If the government’s traditional instruments to control school standards were diminished, officials wondered, what would take their place?

Putman and Weir’s answer to this question lay in proposing a rigorous program of standardized testing for the province, as well as the adoption of new views about school supervision and standards by the department itself. They proposed dividing the management of the educational kingdom into two parts—ceding responsibility for school supervision to local officials, and retaining for government the authority to assess the overall effectiveness and efficiency of the system through its inspectorate, as it had in the past, as well as through the use of standardized assessments.³⁶ They further proposed creating a chief inspector’s office to “conduct experimental studies in education, including the preparation of objective tests,” and to “undertake the highly important technical work” necessary to the system’s efficiency, but for which the provincial superintendent seemingly had little time.³⁷ As they envisioned it, the chief inspector’s office would work cooperatively with a “bureau of measurements,” which Putman and Weir likewise proposed establishing in Vancouver, the province’s largest system and one troubled, like those in many cities of the time, by enormous problems to do with pupil classification and sorting.³⁸

The Department of Education proved slow to act and, with the onset of the Great Depression in 1929, the issue of whether to appoint a chief inspector for such purposes was shelved for more than a decade. The Vancouver School Board, however, was quicker to respond and, in January 1928, three years after publication of Putman and Weir’s survey, a “Bureau of Measurements” was opened under the direction of Robert Straight, a former high school principal.³⁹ But the Vancouver’s bureau’s fortunes declined sharply during the first four years of the depression. Staff were dismissed, and Straight was reassigned to a half-time position as school inspector in 1932. However, with Weir’s appointment as the new education minister in 1933, standardized testing was once again considered a priority in Victoria and, assisted by the province, the bureau

resumed its work. This was not simply a case of *largesse* on the part of provincial authorities: the Vancouver bureau acted as the supplier of standardized achievement and intelligence tests to inspectors and school boards in other parts of the province, and served the department in other measurement capacities until the early 1950s.⁴⁰ In Vancouver alone, the bureau administered group intelligence tests to as many as one-third of the city's pupils each year. But, despite the "infinite amount of service" it sought to provide, many of the province's children, particularly in rural areas, were still untested as the depression decade neared its end.⁴¹ This was the state of educational measurement in 1939 when Conway arrived in British Columbia.

TESTING, TESTING

At the time of Conway's appointment, the Department of Education was a remarkably small organization considering the size of the system, its highly centralized character, and the fact that many of the smallest decisions about schooling were still closely vetted by government staff in the provincial capital. Apart from two dozen provincial inspectors who patrolled the schools across a vast hinterland of some 360,000 square miles, government staff at headquarters in Victoria numbered fewer than a dozen officers in 1938.⁴² Among their tasks were those of overseeing an educational system of some 120,000 pupils, more than 4,000 teachers, and nearly 1,200 schools, of which 60 percent had but one teacher and 80 percent no more than two.⁴³ Apart from the system's size and the relatively small number of departmental personnel, the tasks of setting policies and standards for this system, as well as enforcing local compliance with these policies and standards, were continuing to prove difficult, especially in light of the financial shortages that had plagued schools, and the department itself, throughout the depression years.

But the department had made some progress, despite the province's precarious economic state. With the assistance of government inspectors, rural school districts were amalgamated into larger, more manageable, and financially efficient units in the Peace River region in 1934, as well as in Matsqui, Sumas, and Abbotsford in 1936. Under King's direction, in 1936 broad curricular revisions were initiated along progressive lines for elementary, junior high, and senior high subjects, which led to the development of "integrated" subjects—notably social studies and general science.⁴⁴ King had succeeded, too, in reducing the emphasis on examinations. In 1938, he introduced an accrediting system which freed many Grade 12 pupils from the dreaded "departmentals." From now on, only pupils writing for scholarships, those who had failed to be "recommended" by their school, or those who attended non-accredited schools were obliged to sit exams.

Conway's first tasks in Victoria involved following up Putman and Weir's work, specifically by preparing, in June 1939, a "Report on the Junior and Senior

Matriculation Examinations.” This he did, in his words, “with no regular clerical assistance and no budget,” although he was helped by King, whose title had changed in 1939 from the minister’s technical adviser to “Chief Inspector of Schools.”⁴⁵ Conway’s work, in large part, was initially designed to address enormous fluctuations in percentages of failures from year to year and across subjects. Three studies commissioned by the department between 1935 and 1939 had concluded that the numbers of pupils who failed the matriculation exams had to be contained “within reasonable limits.”⁴⁶ These exams, Conway later observed, were completely in need of reform at this time:

Such examinations had the authority of Holy Writ. If a pupil obtained 50 marks he passed. If he obtained 49, he had the privilege of writing a supplemental. The pupils prayed, on the last night before the exam, that the examination wouldn’t be hard. If it was, they didn’t think of criticizing the authorities. After all, they could remember a lot of hours when they could have studied, but hadn’t, so there was a kind of divine justice in their failure. Most teachers and principals didn’t criticize the examinations either, even though the standards fluctuated widely from year to year. They just made sure that none but their very best students became candidates so that their school would have a high degree of passes.⁴⁷

After extensively revising these exams during his first two years, Conway later recalled proudly: “by 1941–42, the British Columbia matriculation examinations had reached a level of validity and reliability . . . never . . . equaled in any other Canadian province.”⁴⁸ What the department had decided, with his assistance, was in effect a radical redefinition of standards: instead of setting standards “in terms of raw scores or percentage marks,” standards were now defined “in terms of percentages of students” who would pass or fail.⁴⁹ By 1951, the department was setting the “failure rate” for students writing exams in all “university entrance subjects” at a “constant 15%.”⁵⁰ Within a year of his arrival, Conway also administered the first province-wide surveys of reading and grammar since Sandiford’s efforts in 1924, and produced objective tests in arithmetic and general science, as well as French and Latin vocabulary.⁵¹

With the coming of war in 1939, the department “lent” Conway on a part-time basis to the armed forces. Ineligible for active service due to a minor medical problem, Conway assisted the Canadian Army’s “M-Test” program.⁵² His experience marking tens of thousands of officers’ and recruits’ test papers by hand, “under army security regulations,” eventually led to the development of “chain scoring” systems and scoring keys. These he later employed in the department to streamline marking procedures for thousands of matriculation examinations and millions of test survey papers.⁵³

In addition to his regular duties, Conway was appointed as Director of the Summer School of Education in 1941, a position he held until 1946. The department viewed summer courses in education as essential in upgrading teaching as

a profession, and as a way of ensuring that the 20 percent of the province's teaching force trained outside British Columbia met provincial standards. In 1944, an American professor described Conway's summer session as "the best organized in North America," a compliment Conway recounted in a letter to his deputy minister some twenty years later.⁵⁴ While in this position, Conway developed the first provincial course for training kindergarten teachers, and undertook a recalculation of the province's teacher salary schedule—the basic document governing teachers' remuneration.

War's end in 1945 led to Willis's and King's retirements, and Weir again became education minister when the liberal government resumed power after four years of coalition rule. The department was now headed by Colonel F. T. Fairey, as deputy minister, assisted by H. L. Campbell, who had been promoted to chief inspector. Evidence that statistical research was destined to play a larger role in British Columbia education was soon apparent. Following publication of Max Cameron's *Commission of Inquiry into Educational Finance* report—a report which resulted in consolidating British Columbia's 650 school districts into 74, Conway headed the government's interdepartmental team responsible for implementing the proposed changes.⁵⁵ As he later wrote, implementing the Cameron report required extraordinary effort in "establishing new boundaries for all the consolidated school districts and determining the assessment in each one, setting up a new method of calculating grants," and reclassifying teacher certificates.⁵⁶ After completing this work, Conway was called to assist the 1947–48 McLean Commission on interprovincial migration, for which he estimated the "probable costs of education and classroom requirements" that such migration would bring about in British Columbia.⁵⁷ During his work on the McLean study, Conway helped pioneer the use of family allowance transfers as a means of tracking interprovincial migration, a method adopted soon after by the Education Division of Statistics Canada and the Census Bureau, and later by a royal commission of education.⁵⁸

CONWAY'S DIVISION

Conway's status within the Department of Education, at least in the formal sense, was boosted in 1947 when H. L. Campbell was charged with reorganizing the government's education office. Campbell created several new divisions, among them a "Division of Tests, Standards and Research," of which Conway was appointed director.⁵⁹ The new division boasted two permanent staff members to assist the former "one-man bureau," as well as a cohort of temporary employees. At the height of "the testing season" in late June and July, some ten to twenty college students were employed as markers, a departmental tradition that reached back to the years before the Great War. From 1947 to 1948, the division administered some seventy-seven thousand achievement tests in general mathematics,

general science, handwriting, language arts, reading, and spelling: during the same period, aptitude tests were given to more than fifty-six thousand pupils. Test results, Conway reported, revealed “a tremendous range in terms of grade levels in every subject and every grade that has been tested,” a finding not altogether surprising given the cumulative effects of the depression, the war, and postwar immigration on provincial schools.⁶⁰

In the decade after the war, Conway’s reputation as one of the country’s best educational statisticians became firmly established. In 1954, Dominion Statistician Herbert Marshall encouraged him to apply for the head position in the Dominion Bureau’s Educational Statistics Division.⁶¹ Later, Conway reported that his branch had been described in a 1957 *Review of Educational Research* as “perhaps the biggest and best known” educational research unit in Canada.⁶² So, too, did Conway and his staff receive indirect accolades from the Director of Examinations at Cambridge University who wrote: “British Columbia is one of the few places in the world where they know the true difference between examinations and tests.”⁶³

As British Columbia’s school system expanded rapidly in the two decades after the end of World War II, so did the work of Conway’s division. From 1947 to 1967, the number of pupils in the system more than tripled from 137,827 to 445,228; the number of teachers rose by a factor of three and a half, from 4,883 to 17,457; and, the number of schools increased one and a half times, from 953 to 1,429. Despite these enormous increases in enrollments, and the vast scale on which test surveys were now being carried out, few increases were made to Conway’s permanent staff and only minimum relief was provided through advances in automation.⁶⁴ Increased high school retention swelled the number of departmental examination papers written by students from non-accredited schools and scholarship candidates from just under thirty thousand, in 1957, to a peak of nearly eighty thousand, in 1965. Under Conway’s direction, almost one hundred province-wide surveys were conducted and one and one-half million pupils tested during this “age of survey testing” in British Columbia, with over sixty-three million test items marked during the years 1961 to 1965 alone, most of them by hand.⁶⁵

Although they did some experimentation with machine-assisted scoring, Conway and his staff found that hand scoring afforded greater flexibility in constructing and greater accuracy in marking tests. Such advantages generally outweighed the costs of hiring as many as forty-two temporary markers during the marking “season.”⁶⁶ A computer with punch cards was introduced, however, to convert matriculation examination scores for scaling in 1961, and a more powerful “360-30” machine was used to forecast enrollments and to assist in scaling marks after 1966.⁶⁷ During these years the number of full-time employees increased slightly, from three to four in 1951–52, and to six with the division’s reorganization in March 1968 as the “Research and Standards Branch.”

Forecasting enrollments became an increasingly important part of Conway's research work during the 1950s and 1960s—an assignment conditioned by various factors, including the massive post-war growth of the school-age population, enormously increased levels of retention in high school grades, and a steady stream of immigration from other provinces. Social changes were never easy for Conway to quantify. Nevertheless, forecasting became an increasingly essential part of the branch's duties. As Conway put it: "education had become 'compulsory' to about age 18, not because of legal requirements, but because of social and parental pressure."⁶⁸ Likewise, pupil retention rates for elementary students who continued on to enter into Grade 12 had climbed from around 32 percent in 1932 to somewhere between 85 and 92 percent in 1970.⁶⁹

A more onerous problem for Conway was estimating the extent of interprovincial migration and, specifically, calculating the educational costs of "young adult immigrants." Even with tracking "family mobility" through addresses on "baby bonus" cheques, Conway remained dismayed by the "long-term unpredictability [of the information]."⁷⁰ Conway's apprehension in the 1960s about immigration's impact on provincial finances was not always shared by departmental colleagues or school trustees, who did not seem to share his alarm that the annual compound growth rate for British Columbia in the years 1961–66 exceeded similar measurements for California, South America, and Asia.⁷¹

AN INDEPENDENT VOICE

In many respects, Conway, like many of his colleagues, saw himself as "one of the department's men." Loyalty to the educational civil service and, indeed, the idea of service itself, were important to him, as they were to other educational officers of his generation. Like most education officers who had staffed the government's bureau to this time, Conway was an unrepentant centralist. The "state," he believed to the end of his career, should determine educational goals, the curriculum to be taught, standards to be met, teacher certification requirements, and levels of school finance. Permissiveness on the part of the state in curriculum, he remarked, led schools to the "verge of chaos."⁷²

But Conway was also a scientist with an independent cast of mind; moreover, he had never considered the department as a corporate body that spoke with a singular voice but, rather, as a collection of individual civil servants.⁷³ From his earliest days in government, he made plain his emphasis on scientific rigour and objectively reporting results. "All the results must be reported," he wrote, "whether they are favourable or unfavourable, and whether they agree with preconceived opinions of the outcome of the research or not."⁷⁴ This insistence on impartiality often lent his columns in the department's annual reports a uniquely critical tone. Discouraging test results were reported publicly and frequently stood in contrast to the optimistic tone offered by other senior officers, who for instance, celebrated "an important educational advance" or claimed

“steady yet significant progress towards the ever-advancing ideal.”⁷⁵ Campbell, who became his deputy minister, recalled Conway “was blissfully unaware that his judgment was poor. Everything he wrote was perfectly true but why give fuel to our opponents? It would have been nice sometimes if he had given some signs of hope for improvement.”⁷⁶ Perhaps smarting from Campbell “blue pencilling” his reports, Conway explained his sometimes “negative” tone in the department’s 1955–56 annual report, stating: “it has always been considered one of the duties of the division to ‘view with alarm’ any unfortunate trends that could be detected. That does not mean, of course, that only weaknesses were being sought, or that any weakness that has been found is a criticism of the whole system of education.”⁷⁷

One controversial issue Conway felt would benefit from greater publicity and discussion was the question of “scaling” senior matriculation and university entrance-examination results. After several studies in the late 1930s, the department’s board of examiners decided to resort to scaling, a procedure by which raw scores were assigned new values, according to their competitive rank, along a curve of predetermined scores. Scaling was still, however, only undertaken “behind closed doors” and when the failure rate threatened to exceed 25 or 30 percent or if, as Conway and his research assistant, Ellen Brown, put it, “there was grave danger of physical violence being done to the persons” who set the exam questions.⁷⁸ If an examination proved too easy and nearly everybody passed, the raw scores were treated as sacred, “for any interference with a mark of 50 was either embezzlement or theft.”⁷⁹ As Conway pointed out, scaling only became necessary because of the tradition of an arbitrary and predetermined pass score of fifty points out of a possible one hundred, standards the British Columbia public found “understandable.” He conceded that both scaled scores and any fixed percentage of passes were also inevitably arbitrary, though potentially more stable and reasonable.⁸⁰ Despite such attempts to explain scaling, the public continued to perceive it, in Conway’s words, as “someone in the Department playing God.”⁸¹

When the task of scaling the 1951 examination results fell suddenly to the Department of Education following Robert Straight’s illness and retirement from Vancouver’s Bureau of Measurements, Conway set about tearing down the old scaling system with a reformer’s zeal. Convinced that numerical standards, although arbitrary, could still be made more “fair,” he initiated a program of scholastic aptitude testing from 1953 through 1955 to measure the academic abilities of students who selected different courses and subjects. Results confirmed his suspicion that “weaker students tended to choose the ‘easier’ subjects [such as Biology 91] and brighter students the ‘harder’ ones [for example, Physics 92].”⁸² Perceiving a lack of justice in a system where greater numbers of more capable students were failing because they had chosen difficult courses, he set the lowest failure rates for “harder” or “selective” courses, and the highest

for “easier” or “non-selective” courses.⁸³ Thus legitimized, scaling became a departmental policy and was routinized in the seasonal rhythm of work.

CHANGES IN THE EDUCATIONAL GUARD

By the mid-1960s, the best of Conway’s career was behind him. Never again would his research enjoy the influence on departmental policy, or on measurement practices in schools, that it had from the eve of World War II to the publication of the 1960 royal commission report on schools.⁸⁴ Conway’s declining influence on educational thought and practice in the province, however, owed more to developments inside the department and to the political and social changes transforming British Columbia’s educational life in the late 1960s and early 1970s than it did to the quality of his research, or his professional interests and energies in mid-life.

Changes to come were first manifested in 1966, when Deputy Minister Neil Perry, the only “outsider” to hold a senior educational post in government, initiated a half-hearted effort to bolster and refocus the department’s research unit. This led, in 1968, to the removal of the word “Tests” from the title of the former “Division of Tests and Standards” and the insertion of “Research.” But to Conway, it was still “business as usual,” and he said as much in the next annual report by observing that “the branch has not greatly changed its emphasis or direction.”⁸⁵ Although Perry continued to ruminate about the exact role the department should play in educational research, he did little to clarify “what the division ought to look like on a permanent basis.”⁸⁶ In a letter obviously intended to assuage Conway’s fears about a major reorganization, Perry praised Conway’s efforts and concluded by saying, “I think we can promise you more excitement . . . over the next few years.”

Perry’s promise proved prophetic. The tranquillity that had long characterized the offices of the government’s education bureau was disrupted by forces largely unforeseen by the province’s school leaders. What has been termed the “Imperial Age of School Administration” was ending and, after a century of quiet, the Department of Education was about to enter a period of high drama, at least for an office of government historically apolitical and removed from public view.⁸⁷ Part of the disquietude was internal. The department was, by the late 1960s, an aging unit of government that had done little to renew itself since 1945. In line with tradition, the department’s officers continued to be “hand picked” from “the field” by the chief inspector or provincial superintendent. Individuals recruited to headquarters were usually men who had served as principals of large secondary schools and, later, as inspectors. In a few cases, they were individuals, usually district superintendents, who were “in trouble” with their school boards, or were otherwise unpopular in their own communities. Such appointments generally suggested that the department valued seniority and service among the

ranks rather than new ideas or new blood. Educational government, in effect, had become a “closed shop” where older officers selected younger officers much like themselves—and where advancement increasingly became a matter of “waiting one’s turn.” With remarkably little guidance from ministers who held the portfolio during the 1960s, or from the premier’s office—except in determining budget estimates—and with little direction from within, the department was operating much of the time without an explicit agenda, save for “more of the same.”

Important new educational initiatives, however, were forthcoming from the side of the department that dealt with the post-secondary sector. Creation of two new universities in 1962—the University of Victoria and Simon Fraser University—together with a blueprint for a community college system, suggested that government’s energies were increasingly directed towards meeting public demands for access to higher learning, and away from schools. By mid-decade, first-year enrollments at the province’s three universities exceeded the number of the preceding year’s high school graduates in the “university program,” reflecting changing social assumptions about the importance of university, as well as the “rights” of young people to attend such institutions.⁸⁸ Faced with pressure to “open up” the universities, and with rising costs in marking, tabulating, and scaling ever-increasing numbers of departmental exams, the government decided, in 1967, to reduce the number of provincial exams pupils were required to write. From now on, final standings would be based on averaging the marks awarded by schools and those earned on the “departmentals.”⁸⁹ Pupils seeking scholarships “were required to write exams only in their two best subjects,” instead of the previous requirement of exams in English and three other subjects.⁹⁰ As a result, “the rug [was] suddenly pulled,” as Conway put it, from beneath the department’s finely tuned scaling system.⁹¹

Appalled at these developments, Conway spoke pointedly about the “Erosion of Standards” at the department’s 1967 annual conference. Recent American developments, he claimed, argued solidly for state control over standards and for retaining provincial exams. “Erosion is rarely deliberate,” he warned, “it is usually the result of ignorance, laziness, or unwillingness to look ahead.”⁹² Conway thereupon cited a study his division had undertaken the previous year, which found that teachers in accredited schools assigned grades to marginal students one letter grade higher, on average, than those obtained on the provincial exams. In non-accredited schools, the average difference was found to be two letter grades.⁹³ What this meant, simply, Conway believed, was that teachers could not be counted on to evaluate pupils accurately.

Justified though he might have been, Conway’s view was no longer politically correct. It reflected neither the political realities confronting government, nor the professional discourse of the day, heralding access and equity, teacher professionalism, and local control. Added to this, his timing was poor. A year earlier,

in 1966, one Vancouver school trustee had complained to the press that “the Department of Education can’t be depended on for educational research because there are too many bottlenecks there,” adding that “it’s up to the larger districts in the province—with the Department’s blessing—to seek progress in this field.”⁹⁴ The call to expand educational research in the province and, indeed, to democratize it, was soon taken up by others, including Simon Fraser Chancellor Gordon Shrum, and British Columbia Teachers’ Federation President Bob Buzza.⁹⁵ Other voices followed, not the least of which were those of professors in the province’s three faculties of education who were desirous of increased opportunities for research and ever watchful for new sources of funding. The message was clear. A new age, and one that saw itself in the midst of extraordinary change, wanted new and broader kinds of research, not simply into the measurement of learning but into the entire institution of schooling itself.

In response to such demands, the Educational Research Institute of British Columbia (ERIBC) was established in 1968, its operating costs underwritten in large part by the Department of Education. With ERIBC’s creation, and the enormous expansion of educational study at the universities, the department’s long-standing monopoly over research in schools came to an end—and with it Conway’s influence.

EPILOGUE FOR A CAREER

The Social Credit Government’s defeat in 1972, a regime “well into its dotage,” and the election of Dave Barrett’s New Democratic Party (NDP) provided the epilogue to Conway’s career.⁹⁶ Shortly after the new government took office, Deputy Minister Joe Phillipson announced that the department was planning to discontinue the “departmental” exams written by non-recommended students, a decision made earlier by Donald Brothers, minister of education in the outgoing Social Credit Government. These would be “replaced by a new program of survey testing designed to provide schools with valid and reliable information in respect of Provincial standards.”⁹⁷ In honouring the new government’s promise to “open up the shop,” as one senior official put it, the new policy makers obviously did not share Conway’s fears concerning “erosion.”

The NDP’s general distrust of the civil service was evident within the education department. Former Opposition Critic for Education, now Minister Eileen Dailly, was quick to move aside the department’s senior staff in favour of outside appointments.⁹⁸ Jack Fleming replaced Joe Phillipson, and John Bremer, a self-styled “egalitarian progressive” known for his “school without walls” experiment in Philadelphia, was selected as the government’s commissioner to chart a new educational course. Government’s intention, at least at the outset, was clear. Instead of focussing the system on “the superintendent, the principal, and the teacher,” as in the past, the NDP had promised throughout their

campaign to centre the system around “the teacher, the parent, and the child.”⁹⁹ Bremer’s appointment, however, proved to be a political mistake, and ended with his dismissal by Premier Dave Barrett during a television interview. Caught unaware, and obviously embarrassed at this event, Dailly looked for other ways to define the government’s educational agenda. For the next two years, she commissioned study after study, but still the government seemed unprepared to act in education, other than to assess the feasibility of things. Dailly defended her reluctance by saying: “We waited many, many years for a change. We don’t intend to rush into it under pressure and then find out we haven’t been able to implement some of the very high hopes and expectations out there.”¹⁰⁰

Still searching for direction in spring 1974, Dailly announced the creation of a new “Research and Development Division,” headed by Stanley Knight, “to assist in the development of changes in education.” Her public announcement that she was “rather amazed that the Department of Education has been the only department of government which has not had a fully-developed research division” was both inaccurate and deeply wounding to Conway.¹⁰¹ He sent a six-page letter of protest to Dailly’s deputy minister, Jack Fleming. “I think we have been hiding our light under a bushel,” the letter began, whereupon Conway listed a full page of “firsts” his former division, now a branch, had achieved in the field of educational measurement. To this, he appended a page and a half of publications credited to the branch.¹⁰²

Conway was certainly not alone in his concern, in what would be his last year before retirement. The NDP’s election had already created serious rifts between the department’s “old” and “new” guard, and communications were poor throughout the senior ranks. The “old guard” felt increasingly frustrated in what they could do, believing themselves to be mistrusted because they lacked the correct political will. By late autumn 1974, however, both factions found themselves in agreement on one thing — that the minister’s appointment of Knight’s research unit was even more disastrous than the Bremer fiasco two years earlier. Department members “old” and “new” recoiled in horror at the level of social activism the new “R and D” unit, to borrow the language of the day, was allegedly expounding: apparently they alone had taken seriously the minister’s call for dramatic change. By early 1975, the minister’s patience with this “rogue” unit was wearing thin and, after one last effort to sort things out, she dismissed all members of the “R and D” group. Possibly by way of apology, or acknowledgement for long service, Conway’s final contribution to the department’s annual report in the summer of 1975 was a specially featured retrospective, celebrating the history and accomplishments of his division.¹⁰³

In its own way, Conway’s story is something of a morality play for school reformers. As a young man, Conway had greatly cherished his image as a scientific reformer and a challenger of educational orthodoxy. But in his final years, he found himself recast in the role of yesterday’s reformer turned today’s

conservative. Not surprisingly, he saw himself increasingly consigned to the sidelines of government as both his career and the heady “three-year decade” of the NDP’s term drew to a close. He no longer “fitted in.” His commitment to scientific rigour, pragmatism, and intellectual integrity appeared old-fashioned and incompatible with new-style “research and development.” Science, in his view, had been usurped by the politics of popularity. As if this were not enough, Conway’s sense of thrift, rooted in the depression of the 1930s, was offended by what he perceived to be inefficient specialization and “empire building” as the Research and Standards Branch was enlarged and then split into separate “learning assessment” and “data services” divisions.

Embittered at the turn of events, he characterized Fleming, a representative of the “new” faction running the department, as “hiring . . . people to make studies we’ve already done, or something that couldn’t be done,” seeking “the Holy Grail, the one perfect method, the one final solution.”¹⁰⁴ The new leadership’s guiding principle seemed to be “if only we spend enough and appoint enough committees to discuss things enough, all the unintelligent will become intelligent, all the ignorant will become wise, [and] all the unhappy will become happy.”¹⁰⁵ Earlier “measurement movement” ideals of centrally controlled, carefully determined standards aimed at educational and financial accountability, in which Conway’s belief never wavered, were ideals temporarily out of season. Ironically, a decade later, as educational bureaucrats sought to assuage mounting public demands for greater accountability, emphasis on strict quantitative assessment would again be in fashion within the civil service. In any event, a handwritten note, likely sketched out by Conway as remarks to be given at his retirement dinner in December 1974, reflected his disenchantment with life in government during his final years of service:

You know there’s something fundamentally wrong with this type of celebration. Year after year you hold a fellow down, you cut his budget, you underpay him, you frustrate him at every turn, you tie him up in red tape, you make it as difficult as possible for him to operate. Then, suddenly, when he is about to be put out to pasture, you say, “Good old Joe,” what a wonderful workhorse he has been, what a wonderful contribution he has made to education. Let’s give him an extra bag of oats tonight, or a gold watch, before we push him out of the barn and close the door on him.

I’ve attended a whole lot of farewells, retirement parties, and resignation parties. The resignation parties were the worst, there was a tension in the air, sometimes the secretaries were almost in tears, obviously there had been disagreement and dissension, and there stood the resigner telling everyone how happy he had been in the job, how cooperative everyone had been, especially the minister of education, who had given him permission to telephone Ottawa three times in the past four years.¹⁰⁶

Conway’s expression of frustration and regret represented the final punctuation mark in a career otherwise so distinguished. His retirement in Victoria was brief

and marred by ill health: he never realized his dream of gardening for long and uninterrupted days. Conway died in October 1977, shortly before his sixty-eighth birthday and less than three years after he left government service.

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NOTES

- ¹ F. H. Johnson, *A History of Public Education in British Columbia* (Vancouver: University of British Columbia, 1964), 88.
- ² See, for example, John Calam, "Teaching the Teachers: Establishment and Early Years of the B.C. Provincial Normal Schools," in *Schools in the West*, ed. Nancy M. Sheehan, J. Donald Wilson, and David C. Jones (Calgary, Alta.: Detselig Enterprises, 1986), 75–98; A. H. Child, "Herbert B. King: Administrative Idealist," in *Profiles of Canadian Educators*, ed. Robert S. Patterson, John W. Chalmers, and John W. Friesen (Toronto: D. C. Heath Canada, 1974), 308–27; Jean Mann, "G. M. Weir and H. B. King: Progressive Education or Education for the Progressive State?" in *Schooling and Society in 20th Century British Columbia*, ed. J. Donald Wilson and David C. Jones (Calgary, Alta.: Detselig Enterprises, 1980), 91–118; Thomas Fleming, "'Our Boys in the Field': School Inspectors, Superintendents, and the Changing Character of School Leadership in British Columbia," in *Schools in the West*, 285–304; Thomas Fleming, "In the Imperial Age and After: Patterns of British Columbia School Leadership and the Institution of the Superintendency, 1849–1988," *BC Studies* 81 (spring 1989): 50–76; Thomas Fleming, Carolyn Smyly, and Julie White, "Lottie Bowron within Organizational Realities and Bases of Power: British Columbia, 1928–1934," *Journal of Educational Administration and Foundations* 5, no. 2 (1990): 7–31; and Valerie M. Giles, "Historical Evolution of the Office of Deputy Minister in British Columbia Educational Policymaking 1919–1945: The Career of Samuel John Willis" (Ph. D. diss., University of British Columbia, 1994).
- ³ British Columbia, *Annual Report of the Public Schools, 1939–40* (Victoria: King's Printer, 1939), p. H35 (hereafter, *ARPS*); *ARPS, 1973–74*, pp. D13–D16.
- ⁴ Conway's dissertation was published as *The Hearing Abilities of Children in Toronto Public Schools: Bulletin 9* (Toronto: Department of Educational Research, University of Toronto, 1937).
- ⁵ J. H. Putman and G. M. Weir, *Survey of the School System* (Victoria: King's Printer, 1925).
- ⁶ Conway had co-authored two research publications with Sandiford in 1935 and 1936: *The Validation of Test Items: Bulletin 3* (Toronto: Department of Educational Research, University of Toronto, 1935) and *Forecasting Teaching Ability: Bulletin 8* (Toronto: Department of Educational Research, University of Toronto, 1936). Unlike some members of the mental measurement fraternity in the 1920s and 1930s, Conway never appeared to be interested in eugenics. In King's outward correspondence, one mention of eugenics is made in a letter to Weir in which he advises

the minister that a former graduate of the University of British Columbia (hereafter, UBC), Dr. Gladys Schwesinger, then employed at the Eugenics Research Laboratory at the American Museum of Natural History, was unlikely to be interested in a position within the department. British Columbia Archives and Records Service (hereafter, BCARS), GR 452, Box 2, File 3, Letter 88.

⁷ Correspondence, H. B. King to G. M. Weir, 12 July 1938, BCARS, GR 452, Box 2, File 3, Letter 71.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

¹² Correspondence, G. M. Weir to C. B. Conway, 9 August 1938, C. B. Conway Personal Papers. Conway's Personal Papers consist of a file some 7.5 centimetres thick, including uncatalogued letters, personal notes, drafts of speeches, assorted curriculum vitae, and copies of articles Conway published during his career.

¹³ Max Cameron was a former colleague of Conway's at the Ontario College of Teachers before he joined UBC in 1939 as a professor of education. In 1939, Cameron and Conway co-authored *The Relation Between Matriculation Marks and the Achievement of Students in the Universities of Ontario* (Toronto: Research Report of the Department of Educational Research, University of Toronto, 1939). It is clear from a letter of H. B. King to M. A. Cameron, 29 March 1939, that King intended to nominate Cameron as his heir apparent to the position of Chief Inspector in the department. In this letter, he expresses regret that UBC "has stolen a march on me" and notes that he had been anticipating Cameron would "carry the mantle which I have been wearing." BCARS, GR 452, Box 1, File 8, Letter 269. Shortly after, Cameron played a seminal role in British Columbia's school district consolidation movement of the 1940s. See Maxwell A. Cameron, *Report of the Commission of Inquiry into Educational Finance* (Victoria: King's Printer, 1946).

¹⁴ Correspondence, G. M. Weir to C. B. Conway, 9 August 1938, C. B. Conway Personal Papers.

¹⁵ Ibid. The individual "deprived of his position" obviously refers to former Superintendent of Schools Alexander Robinson, who was summarily dismissed in 1919 after serving for nearly two decades as British Columbia's chief school officer.

¹⁶ Ibid.

¹⁷ Correspondence, G. M. Weir to C. B. Conway, 30 August 1938, C. B. Conway Personal Papers.

¹⁸ For a few months in the mid-1950s, Conway did, in fact, work temporarily as a school inspector for the Saanich school district in place of an ailing colleague. See "Historical Summary," p. 2, C. B. Conway Personal Papers.

¹⁹ Correspondence, S. J. Willis to C. B. Conway, 25 October 1938, C. B. Conway Personal Papers.

²⁰ Correspondence, H. B. King to C. B. Conway, 2 November 1938, C. B. Conway Personal Papers.

²¹ Correspondence, H. B. King to C. B. Conway, 31 August 1938, C. B. Conway Personal Papers.

²² Ibid.

²³ William H. Payne, *Contributions to the Science of Education* (New York: American Book Company, 1886), 10–18. Payne's contemporary, Columbia College President Frederick Barnard, likewise heralded the development of educational science in the United States, encouraged as he was by the pedagogical research conducted across the Atlantic by scholars at Edinburgh and Cambridge. See, for example: Frederick A. P. Barnard, "Education As A Science," excerpt from the *Annual Report for 1880–1881 of the President of Columbia College*. Text from *The Rise of a University: The Later Days of Old Columbia College*, ed. William F. Russell (New York: Columbia University Press, 1937), 289–97. In Canada, the scientific study of schooling has been traced to a Prince Edward Island school inspector, John Arbuckle, who in 1849 introduced a system of objective testing to rank schools in his charge and yield "authentic facts" and "reliable statistics." See C. E. Phillips, *The Development of Education in Canada* (Toronto: Gage and Company, 1957), 427.

- ²⁴ Roald F. Campbell, Thomas Fleming, L. Jackson Newell, and John Bennion, *A History of Thought and Practice in Educational Administration* (New York: Teachers College Press, 1987), 28–30.
- ²⁵ Peter Sandiford, “Democracy and Intelligence Tests,” *The School* 12 (May 1924): 703.
- ²⁶ Campbell, Fleming, Newell, and Bennion, *Thought and Practice in Educational Administration*, 31.
- ²⁷ George Melcher, “Studies by the Bureau of Research and Efficiency of Kansas City, Missouri,” in *Standards and Tests: Fifteenth Yearbook of the National Society for the Study of Education*, ed. Guy Montrose Whipple (Bloomington, Ill.: Public School Publishing Company, 1916), 120, quoted in Campbell, Fleming, Newell, and Bennion, *Thought and Practice in Educational Administration*, 41.
- ²⁸ Ellwood Cubberly, cited in Campbell, Fleming, Newell, and Bennion, *Thought and Practice in Educational Administration*, 40.
- ²⁹ Putman and Weir, *Survey of the School System*, 355.
- ³⁰ *Ibid.*, 37.
- ³¹ *Ibid.*, 259.
- ³² *Ibid.*, 259–64.
- ³³ *Ibid.*
- ³⁴ *Ibid.*
- ³⁵ Fleming, “Our Boys in the Field,” 296.
- ³⁶ Putman and Weir, *Survey of the School System*, 239–45.
- ³⁷ *Ibid.*, 347–48.
- ³⁸ *Ibid.*, 426.
- ³⁹ For more than 20 years, Straight was closely aligned with the B.C. Department of Education in his capacity as director of Vancouver’s Bureau of Measurements and as inspector of schools. Straight’s early enthusiasm for progressive education was reflected in his introduction of the “platoon system” to the city’s schools and in his pioneering use of the motion-picture projector in classrooms. Although his B.A. degree suggests he was not Conway’s academic equal, his experience and expertise in testing and standards, not to mention his philosophical outlook, was such that he was appointed by Chief Inspector of Schools H. B. King as a member of the British Columbia Advisory Committee for the then-powerful Canadian Council for Educational Research. In his later years, Straight renounced progressivism and urged a return to the fundamentals of reading, writing, and arithmetic. See Correspondence, H. B. King to M. E. LaZerte, 19 May 1939, BCARS, GR 452, Box 1, File 7, Letter 366; and “Robert Straight, City Educator Dies,” *The Vancouver Sun*, 1 February 1956, p. 3.
- ⁴⁰ *ARPS, 1934–35*, p. S54; *ARPS, 1935–36*, pp. H86–H88; *ARPS, 1937–38*, p. J51.
- ⁴¹ Correspondence, H. B. King to N. B. Manson, 5 October 1939, BCARS, GR 452, Box 1, File 3, Letter 663. In his letter to Manson, principal of the Alert Bay Superior School, King wrote: “I might point out in closing that almost all testing programs have been designed with the large city school in mind. Testing in the rural school is almost untouched. Yet nowhere is there a greater need for adequate testing.”
- ⁴² British Columbia Department of Education, *One Hundred Years: Education in British Columbia* (Victoria: Queen’s Printer, 1971), 96–109.
- ⁴³ *Ibid.*, 68–74.
- ⁴⁴ Child, “Herbert B. King: Administrative Idealist,” 317–18.
- ⁴⁵ C. B. Conway Personal Papers, “Historical Summary.”
- ⁴⁶ C. B. Conway, “Understandable Standards: The Scaling of University Entrance Examinations,” *Canadian Education* 11 (September 1956): 30.
- ⁴⁷ *Ibid.*, 28.
- ⁴⁸ *Ibid.*
- ⁴⁹ *Ibid.*, 31.

- ⁵⁰ C. B. Conway and Ellen Brown, "The Establishment of University Entrance Standards in Required and Optional Subjects," *Canadian Education* 11 (March 1956): 18.
- ⁵¹ *ARPS, 1973–74*, p. D13.
- ⁵² Correspondence, Lieutenant J. D. Griffin to C. B. Conway, 27 October 1941, C. B. Conway Personal Papers.
- ⁵³ *ARPS, 1973–74*, p. D13.
- ⁵⁴ Correspondence, C. B. Conway to G. Neil Perry, 22 March 1966, C. B. Conway Personal Papers.
- ⁵⁵ Maxwell A. Cameron, *A Report of the Commission of Inquiry into Educational Finance* (Victoria: King's Printer, 1946).
- ⁵⁶ C. B. Conway Personal Papers, "Curriculum Vitae."
- ⁵⁷ As Conway pointed out in 1974 in a summary of his career: "The McLean Commission's 1947/48 studies, which do not seem to be widely known, involved a study of the grant system set up in Saskatchewan and the costs of education in all the other provinces. Probable costs of education and classroom requirements were projected for British Columbia. . . . [and] although they seemed startling at the time, they never came up to the actual inflow to the Province that has taken place in the Province since 1948." See *ARPS, 1973–74*, p. D13.
- ⁵⁸ During his work assisting the 1988 British Columbia Royal Commission on Education in tracking family and student mobility, educational consultant Chuck Curteis used Conway's method to measure social movement within the province.
- ⁵⁹ Originally, in 1946, it was the "Division of Tests and Standards"; the word "Research" was added to the title in 1947.
- ⁶⁰ C. B. Conway, "Research and Testing in British Columbia," *Canadian Education* 4 (June 1949): 64.
- ⁶¹ Correspondence, C. B. Conway to Herbert Marshall, 10 February 1954, C. B. Conway Personal Papers.
- ⁶² Correspondence, C. B. Conway to J. R. Fleming, 17 May 1974, C. B. Conway Personal Papers.
- ⁶³ *Ibid.*
- ⁶⁴ C. B. Conway Personal Papers, "Curriculum Vitae." On a résumé which records 1967 as its final entry, Conway notes that the Division of Tests and Standards was the first branch in the Department of Education to use punch cards and machine scoring, that a computer was introduced in 1961, and that a system of photo-electric scoring was used in 1965.
- ⁶⁵ *ARPS, 1973–74*, p. D13.
- ⁶⁶ *ARPS, 1973–74*, p. D13; *ARPS, 1962–63*, p. W47.
- ⁶⁷ *ARPS, 1966–67*, p. F58; and *ARPS, 1968–69*, p. G68.
- ⁶⁸ C. B. Conway, *Pressure Points and Growing Pains in Beautiful B.C.: Informal Paper* (Toronto: Ontario Institute for Studies in Education, 1971), 7.
- ⁶⁹ *Ibid.*, 8. This was calculated as the percentage of "the average elementary-school cohort stream (successive Grades II to VI) who entered Grade 12."
- ⁷⁰ *Ibid.*, 3.
- ⁷¹ *Ibid.*, 1.
- ⁷² C. B. Conway, speech entitled "Erosion" (given at the Department of Education Conference, University of Victoria, March 1967), 1; C. B. Conway Personal Papers.
- ⁷³ C. B. Conway, untitled speech (to Victoria Normal School, 23 May 1956), C. B. Conway Personal Papers.
- ⁷⁴ C. B. Conway, "Research and Testing in British Columbia," 78.
- ⁷⁵ H. L. Campbell, in *ARPS, 1949–50*, p. O31.
- ⁷⁶ H. L. Campbell, interview by David Conway, Victoria, B.C., 25 November 1989.
- ⁷⁷ C. B. Conway, notes written just before his retirement in December 1974, C. B. Conway Personal Papers. See also *ARPS, 1955–56*, p. FF144.
- ⁷⁸ C. B. Conway and Ellen L. Brown, "The Establishment of University Entrance Standards," 17.
- ⁷⁹ C. B. Conway, "Understandable Standards," 32.

- ⁸⁰ Ibid.
- ⁸¹ Robert May, interview by David Conway, Victoria, B.C., 3 February 1990. May worked closely C. B. Conway during the early 1970s in the Research and Standards Branch.
- ⁸² C. B. Conway, "Understandable Standards," 32.
- ⁸³ Ibid., 38–39; see also C. B. Conway and Ellen L. Brown, "The Establishment of University Entrance Standards," 17–30.
- ⁸⁴ British Columbia, *Report of the Royal Commission on Education* (Victoria: Queen's Printer, 1960).
- ⁸⁵ *ARPS, 1967–68*, p. G67. Beginning in 1958, Conway conducted "a broad testing program and a study of kindergarten and non-kindergarten children to provide information that was incorporated into the Chant, Liersch, Walrod Commission's Report." See *ARPS, 1973–74*, p. D13. S. N. F. Chant, J. E. Liersch, and R. P. Walrod served as the commissioners for the 1960 royal commission on education. Chant was chairman of the group.
- ⁸⁶ Correspondence, G. Neil Perry to C. B. Conway, 24 March 1966, C. B. Conway Personal Papers.
- ⁸⁷ See Fleming, "In the Imperial Age and After."
- ⁸⁸ C. B. Conway, "Erosion," 7–8.
- ⁸⁹ Harry Evans in *ARPS, 1966–67*, p. F117.
- ⁹⁰ Ibid.
- ⁹¹ C. B. Conway, "Erosion," 9.
- ⁹² Ibid., 8.
- ⁹³ Ibid., 6–7.
- ⁹⁴ Vancouver School Trustee Fred Rowell, cited in "Research Bottlenecks under Fire," *The Province*, 23 November 1966, p. 2.
- ⁹⁵ "Education Research Gets Full-Time Head," *The Province*, 21 June 1968, p. 11.
- ⁹⁶ Stan Persky, *Son of Socred* (Vancouver: New Star Books, 1979), 138.
- ⁹⁷ Ibid., 13.
- ⁹⁸ In the years immediately prior to the NDP's election, the department was being run by Deputy Minister Joe Phillipson and his management committee of seven senior officers, known throughout the educational community as "Snow White and the Seven Dwarfs," and to themselves as "The Group of Seven," though none of them, Phillipson admitted, "could paint a picture." Their control over educational decision making and, indeed, their presence in provincial schooling was extraordinary at this time. The extent of their influence can be encapsulated in a single illustration. Gracing the walls of almost every school board office, and most principals' offices at this time, was a large mounted photograph of Phillipson and his senior staff, portraits of each individual arranged in a circle with the deputy top and centre. The photograph's significance, however, did not rest simply in the fact that portraits of these officers were overseeing, at least in a symbolic way, all local school operations. More important, perhaps, was the fact that no names were appended below any of the photographs. It was generally assumed throughout British Columbia's schools that the prominence of these men made any such notation unnecessary. Special thanks are owed to Bob Overgaard, principal of Sentinel School in West Vancouver, for pointing out the "real" significance of the photograph. Phillipson's remark is found in his address to the British Columbia Secretary-Treasurers' Association, Kelowna, 11 May 1971; C. B. Conway Personal Papers.
- ⁹⁹ Persky, *Son of Socred*, 138.
- ¹⁰⁰ Dailly, in *The Ubysey*, 25 October 1974, cited in Lorne J. Kavic and Garry Brian Nixon, *The 1200 Days, A Shattered Dream: Dave Barrett and the NDP in B.C. 1972–75* (Coquitlam, B.C.: Kaen Publishers, 1978), 172. As one department official at the time pointed out, Eileen Dailly was the only minister of education whose resignation was ever publicly demanded by the British Columbia Teachers' Federation. One senior civil servant of the day has also pointed out that Dailly's difficulties were largely due to the fact that the new government had undertaken no

preplanning in education prior to their assumption of power, and had spent little time deciding what they wanted to do during the transition between governments.

¹⁰¹ Eileen Dailly, speech (to the British Columbia School Trustees' Association, Penticton, B.C., 6 May 1974), as quoted in the Department of Education's *Inter-Departmental Information Bulletin*, No. 5, 14 May 1974, p. 1.

¹⁰² Correspondence, C. B. Conway to J. R. Fleming, 17 May 1974, C. B. Conway Personal Papers.

¹⁰³ *ARPS, 1973-74*, pp. D13-D16.

¹⁰⁴ Notes written just before Conway's retirement in December 1974, C. B. Conway Personal Papers.

¹⁰⁵ *Ibid.*

¹⁰⁶ Handwritten notes of a speech, C. B. Conway Personal Papers. It is not known for certain whether these remarks were ever given at Conway's retirement banquet; however, one educational civil servant who worked under Conway recalls hearing them on some occasion.

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