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PREVIEW

**SALVE REGINA UNIVERSITY**

**TECHNOLOGY AS PUBLIC EDUCATION:  
DETERMINING JUST WAGES IN A TEACHER  
LABOR CONTRACT**

**A DISSERTATION SUBMITTED TO  
THE FACULTY OF THE DOCTORAL PROGRAM  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
DEPARTMENT OF HUMANITIES**

**BY**

**ROY ROYCE TWADDLE**

**NEWPORT, RHODE ISLAND**

**February, 1999**

PREVIEW

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GRADUATE SCHOOL

The dissertation of Roy Royce Twaddle titled "Technology as Public Education: Determining Just Wages in a Teacher Labor Contract" submitted to the Humanities Department in partial fulfillment of the requirements of the degree of Doctor of Philosophy in the Graduate School of Salve Regina University has been read and approved by the committee:

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## ABSTRACT

Based upon the thesis that public education represents a technology of human maturation essential to an advanced technological society, this study examines one controversial aspect of the teaching system: the public teacher labor contract. More specifically, this inquiry applies the social concept of the just wage to the contractual labor agreement in a specific public school district.

The financial settlement, which represents about two-thirds of such agreements, is often the most difficult aspect of these contract negotiations. Money and benefit issues can be highly charged with emotion, leading to bitter deadlocks and teacher strikes. Consequently, two key questions will be addressed: Can adjustments to the existing negotiating process obviate these disputes so detrimental to public education? Is the existing process influenced by a technological mind-set that subtly suppresses or enhances different views of fair compensation when citizens negotiate with public school teachers to educate their children?

Through contract analysis and document reviews, the study examines the essential factors determining a just wage. This contract analysis is based on a close study of the differences between two successive and recently negotiated teacher contracts. The analysis focuses on specific contract provisions when economic variables have been separated from other issues. Economic variables are the monetary rewards and collateral or fringe benefits that are direct or indirect forms of compensation included in a just wage. Documents that help to clarify the economic variables are official memoranda, letters, educational policies, and reports of contract negotiations published by the news media.

The most recent teacher contract is then assessed from three perspectives of fairness to determine how, why, and to what extent the public



education system—as an advanced technology—promotes or obstructs the determination of a just wage. Six ethical criteria for a just wage are applied to the assessment, which take into account teacher expectations, area standards of living, local labor supply, the community's financial ability to pay, and concern for the common good.

PREVIEW

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## LIST OF ABBREVIATIONS

BA	Bachelor of Arts
BEP	Basic Education Program
CAGS	Certificate of Advanced Graduate Studies
DOC	Doctorate
FAC	Facilities Advisory Committee
HEW	Health, Education, and Welfare
HS	High School
LOA	Leave of Absence
MA	Master of Arts
MS	Middle School
NEA	National Education Association
NEASC	New England Association of Schools and Colleges
NESDEC	New England School Development Council
PSC	Portsmouth School Committee
RIDE	Rhode Island Department of Education
RIASA	Rhode Island Association of School Administrators
TNC	Transnational Corporation
VIS	Volunteers-In-Schools

## CHAPTER ONE

### INTRODUCTION

Prior to the mid-twentieth century, the organization of American primary and secondary public education was largely a local affair. The formal schooling of children was conducted according to the customs and traditions of communities or townships. Learning facilities were provided to the measure of their capacity to raise funding and other resources. From the earliest colonial days, the little community-supported primary school was a staple of American life. By the end of the nineteenth century, however, public schooling had become partly institutionalized with state standards and advanced courses. School teaching was accepted as an accredited profession, thanks to pedagogical advocates like Horace Mann, Calvin Stowe, and Barnas Sears. Although the one-room schoolhouse as a symbol of community self-reliance and independence was fast disappearing, local community control remained a dominant factor in the conduct of public education.

During the social turmoil of the 1960s, however, there were calls for radical reform in education. One response to the various inequities noted among school districts was the demand for greater centralization and tight government control. Rather than a local responsibility, public education was transformed into a national concern. Instead of diverse in control, it grew increasingly centralized. During the last one hundred years "the number of school districts fell from over one hundred thousand . . . to fewer than sixteen thousand," thus weakening the

influence of communities and townships over the education of their children (Cochran 1996, 322). This impressive centralization, as well as other significant changes in American public education, may be clearly illustrated at the local school district level.

The Portsmouth public school district, a suburban school system in the state of Rhode Island, provides a particularly useful example of public education under the new form of institutionalized pedagogy. This model is apt because Rhode Island's 360-year history of populist democracy suggests a traditional resistance to institutionalization on a national scale. Something of that contrarian political tradition is preserved today through contentious town meetings, home rule charters, and voter initiative ordinances. So strong was the original populist sentiment that Rhode Island was the last state to ratify the national Constitution (1790), and it was the only state to require a popular vote for this ratification.

The state's educational history has a similar heritage of local control and self-sufficiency. One of the oldest (circa 1716) one-room schools in the nation still stands in the town of Portsmouth, where it is painstakingly preserved by community volunteers. By 1870 there were eight small school districts in Portsmouth staffed by local teachers, and they were so situated that students walked no more than two miles to attend classes (Garman 1978, 10, 28). After World War II, however, the growing student population brought calls for greater economies through school consolidation--in line with proposals by the authorities who controlled federal and state subsidies. In 1964, the first large-scale, public school was opened in Portsmouth. By 1985, the single-district school system as it exists today had displaced the last of the community schools--although enrollment in the four elementary schools is still based on proximity to students' homes. During this period the number of national school districts had declined



about 84%, almost equal to Portsmouth's 87%.

Bucking the federal trend, Portsmouth citizens continued to press for greater autonomy in setting educational policies. Concerned about the erosion of political control and facing economic pressures to regionalize public education, Portsmouth's local government aggressively lobbied the state legislature and was granted a home rule charter in 1972. By the late 1980's, however, Rhode Island not only reduced the number of school districts, but it issued a basic education program in an attempt to consolidate all school regulations with federal and state educational laws under centralized supervision.

Portsmouth's school situation must be seen today in the context of state education. A representative of the Rhode Island Department of Education recently said that Rhode Island has a two-billion dollar public education system made up of 36 school districts, 324 public schools, approximately 8,200 full-time certified teachers, and over 146,600 pupils. The Portsmouth public school district is composed of four elementary schools (grades K-4), one middle school (grades 5-8), and one high school (grades 9-12). Most of the schools were built after 1960, and they serve a population of about 2,700 pupils in a relatively affluent suburban setting of approximately 17,000 residents. Besides these public school students, about 400 Portsmouth students are engaged in home-schooling programs or are enrolled in thirteen private schools. Four of these thirteen private schools are located in Portsmouth, including three schools with grades K-8 and one high school teaching grades 9-12. Finally, the Newport County Career and Technical Center, located at Rogers High School in nearby Newport, accepts several Portsmouth pupils on a full or half-time basis.

The Portsmouth school district typifies the small suburban educational structure that is increasingly homogenized into a standard system endlessly

duplicated in similar communities across the country. As an organized system based on theoretical principles and intended to produce specific results, such a school system may be described in an accepted sense of the phrase as an operative technology, the thesis of this study, developed more definitively in Chapter Three and confirmed in the later chapters. As one facet of our advanced technological society with profound social consequences, this organized system deserves searching critical analysis. As educator Neil Postman observes, a technology must be evaluated objectively "so that it always appears somewhat strange, never inevitable, never natural" (1993, 185).

It is important to emphasize that this study is not geared toward a general condemnation of public education. The purpose is not to show that educational government is ineffective, that teacher unions are of little benefit, that public educators are largely self-serving, or that public office-holders are generally ignorant or, at best, ill-informed. This is neither the assumption nor the intent. American social institutions, science-based or otherwise, are essential to the complex matrix that holds civil society together. Among other positive contributions, public education is one of the world's first and most enduring social experiments in the universal and fully available education of children. It is also an historically important institution to acculturate immigrants.

This study seeks to address the nature and impact of educational systems that seem increasingly detached from human influence and, as a consequence, may threaten the cohesiveness and safety of American society. An ethical examination of public education as a technology reveals a further characteristic. Such awareness often serves to enhance citizen empowerment through liberation from otherwise hidden factors of control that bring on unintended consequences.

### Public Education as Technology

That the United States is an advanced technological society is a fundamental assumption of this study. Technological products (e. g., automobiles, televisions, computers, telephones) are common household possessions. Heart by-pass surgery is a daily procedure. Human cloning has become a matter of social and ethical concern. Americans landed on the moon and transmitted an image of the earth that inspired the perception of the global village, one of the more powerful symbols of advanced technological society. From political opinion to consumer preference, therefore, information technology influences the broad outlines of American social behavior.

The pervasiveness of advanced technology has led Ludwig von Bertalanffy to observe that the interactions between technology and society have become so complex that they can no longer be explained by classic cause-and-effect analysis, but require "approaches of a . . . generalist or inter-disciplinary nature" (1968, xx). In reference to education, for example, in the days of small community schools, problems with a child's ability to learn seldom went beyond the teacher, a parent, or clergyman. Today, as a consequence of science-based technology, such pupil difficulties often lead to diagnoses that may find causes as diverse as dysfunctional families or biological genes. In the absence of a clear explanation of a child's weakness, parents may rely on specialists like guidance counselors to tell them what should be done. This is only a common example of the countless ways that the technological system of educational programs, methods, goals, standards, and regulations impacts on young children, their families, and the community. While this study focuses on the question of faculty compensation, it is important to see this problem in the context of an education technology—a view currently accepted by social theorists.

Neil Postman claims that Americans invented the modern form of public education. He sees the school in operation as a mechanism and concludes that it represents a type of technology (1993, 183, 74, 185). He further observes that ". . . nowhere do you find more enthusiasm for the god of Technology [sic] than among educators" (1995, 38). Postman's views are not only congenial to this study's thesis but they are in certain respects pivotal, for example, the veiled determinism of print or language-based technologies. Postman's expertise in the use of language and symbols to explain human behavior will be called on throughout this study, and perhaps most importantly in elucidating the teacher contract analysis in Chapter Five.

Other commentators, such as Lewis Mumford, have pointed out that 19th-century Prussia first implemented the scientific school system that later became the foundation of public education in several countries, including the United States (1978, 103). The Prussian system was specifically designed to impose schooling to "create an artificial national consensus" of government support (Gatto 1995, xvi). According to one interpretation of this view, American public education provides a technique of mass socialization, including the training of workers for industry. Thus, schooling "is a technology" that controls the "natural processes" of educating (Hamilton 1989, 297-85). This attitude is prevalent in the schools. For example, during the accrediting process for Portsmouth High School (discussed in Chapter Three) the accreditation report criticized the school for being *academically* oriented to the detriment of non-college-bound students (NEASC 1996, 20). In his discussion of industry, John Kenneth Galbraith has observed that "educated manpower is now the decisive factor of production, and [industry] must rely on the State [sic] for a sufficient quantity thereof" (1986, 353).

Early in this same study, Galbraith defined technology as "the systematic

application of scientific or other organized knowledge to practical tasks" (1986, 11). This definition was particularly appropriate not only because it was advanced by a well-known economist, but because it was markedly similar to the technologically oriented, social vision of John Dewey, who is considered "the leading 20th century thinker on public education" (Carter 1994, 173). Dewey advocated not only using public education as a technology to control social relationships, but as a leader of American pragmatism, an experimental approach to philosophy (Gutek 1988, 83). He looked forward to a

. . . great scientific revolution . . . when men collectively and cooperatively organize their knowledge for application to achieve and make secure social values; when they systematically use scientific procedures for the control of human relationships and the direction of the social effects of our vast technological machinery (1932, 419-20).

The close correlation of the respective theories and perspectives of these social thinkers—Dewey's social pragmatism and Galbraith's social economics—will be important in the study of equitable teacher contracts.

Galbraith popularized the concept of the technostructure, the corporate conglomerate evolving into a modern prototype of ruthless technology that "delivers up citizens bound to a kind of destiny that is beyond their control . . ." (Ellul 1990, 87). Generations of people have experienced the economic and ethical pressures of social structures that consume resources while constructing increasingly complex, interlocking relationships with other components of technological society. As will be demonstrated, one of those basic components is American public education.

Large-scale technology (or, the technostructure), as described by Galbraith and others, is successful in the modern world not only through sheer size and pervasiveness, but by science-based techniques to divide and subdivide operations. Bertalanffy's term for this process was "differentiation," a principle

from embryology that describes how a general system becomes increasingly specialized (1968, 211). The factory assembly-line was an obvious example of this development, but the same principle applies to many organized systems and professions that function as an aggregate of diverse specialists operating at different levels.

The technostructure concept has apparently extended its influence to the American public school district. For example, at its origin American public education was carried out in an intimate setting—a small, local schoolhouse operating independently of federal or state control and answerable to the local authorities. Through the technological principle of task division and the application of science-based techniques, the operations originally performed at the simple schoolhouse have been divided and subdivided to reach a level of specialization evident in the modern, multi-building school district where a dozen or more grade levels are apportioned among elementary, middle, and high schools. They are all subject to district, state, and national regulation or supervision. They are serviced by a comprehensive public transportation system, and they are paid for by federal, state, and local governments.

#### Characteristics of Technology

While it is recognized that the transformation of the one-room schoolhouse to the complex school district was dictated largely by expanding school populations and more sophisticated educational programs, thoughtful commentators point out certain flaws inherent in any technological system. In describing the characteristics of large-scale technology, Galbraith noted the emergence of six consequences:

- An increasing span of time separates the beginning from the completion of any

task.

- There is an increase in the capital committed to production, aside from that occasioned by increased output.
- With greater technology, the commitment of time and money tends to be made ever more inflexibly to the performance of specific tasks.
- Technology requires specialized manpower to perform the tasks.
- Beyond equipment or machinery, massive and complex business organizations are the tangible manifestation of advanced technology.
- The necessity for planning is increased, not diminished (1986, 12-15).

For the purposes of this study, these technological consequences were adopted as the objective criteria to ascertain the extent to which public education has been transformed into an operative technology. The Portsmouth public school system will serve as an illustration of the technological predispositions of modern public education. This school system will be particularly relevant in examining the concept of the just wage through an ethical assessment of the contractual labor agreement negotiated in the Portsmouth public school district in 1996 for the school years 1997 through 2000.

### Technological Aspects of the School System

In line with the negative schema of technological effects as noted by Galbraith, the following correspondences can be identified in respect to American school districts in general and the Portsmouth educational structure in particular.

#### Increase in School Time.

As science-based techniques are brought to bear upon practical tasks, greater complexity is revealed. In other words, the closer one analyzes a program, the more steps one finds to perform and the longer the task takes to



complete. In the field of education, the more research reveals about how children learn, the longer it may take to carry out a program of instruction. A parallel tendency can affect time schedules when test results are not satisfactory. In place of improving the quality or effectiveness of instruction, which may be contentious issues, the inclination is generally to extend the time allotted to learning as the only practical solution. The complication of school schedules is clearly manifest in the increase in grade levels, the length of the instructional year, and expanding courses or programs that go beyond (and sometimes replace) the essential disciplines. These schedule extensions may not, however, lead to any pronounced improvement in student learning.

#### Increase in Production Costs

When science-based techniques suggest more tasks to be performed, more people are hired, more resources are required, and capital expenditure rises. Output may not necessarily increase. In the field of public education, production capital may be expressed nominally as the local school district's annual operating budget. This investment represents the resources consumed by the aggregate activity of teachers, administrators, and support personnel—including the cost of labor-saving equipment like computer-based, information processing systems. Output is often regarded as average pupil enrollment, rather than the exact number of pupils advancing from grade-to-grade or graduating with a diploma. This generally accepted way to express the relationship between production capital and output in public education is merely the ratio between the local school district's annual operating budget and average pupil enrollment during the school year. However misleading as to quality of education, the result is known as the cost per pupil.