

Chapter II

REVIEW OF THE LITERATURE

Introduction

Practical or vocational education was not invented in the United States in 1917 by Prosser or Dewey, but has been known and advocated from at least the Reformation / Renaissance. Comenius is cited as the earliest known example of the modern era and some examples of his precepts are listed. Some of the more notable or striking events which occurred in the period between the end of the American Civil War (1865) and the enactment of Smith-Hughes (1917) are listed to help the reviewer sense the social, cultural, economic and political environment which existed and to provide specific instances and examples of the extensive unrest, turbulence, and tumult of that period. These events were also chosen to rationalize and justify the identification of the three fundamental VOTE stakeholder groups, their overt or explicit goals, objectives and expectations and to provide justification and rationalization for the attributed or implicit VOTE goals, objectives and expectations of those groups. Sources of primarily economic data from the end of the Second World War to the present such as wage rates by educational attainment, Dow Jones Averages, commodity crop prices, treasury and corporate bond yields, Consumer Price Indexes [CPI] and Producer Price Indexes [PPI] are briefly discussed. The inter-relationship of these data with VOTE is discussed in depth in chapter four.

Review

Despite common perception, the concept of “education” as a preparation for life and not as an initiation into esoteric lore which identified the cognizant as a member of an

elite, was not an American invention by John Dewey or even Charles Prosser. Rather it has existed from at least the very troubled and violent period in Europe during which then new social-political-economic structure of national-mercantilism gradually over-laid and displaced the older medieval-manorialism¹ as the dominant economic / political / social / cultural structure and organization. John Amos Comenius (1592-1670) in many ways personifies this period of violent and turbulent transition. *From his time to the present, unsettled conditions seem to have promoted an interest in "education" by many of those adversely affected by the changes.* To very briefly contextualize his writings, Comenius was the leader of a small Protestant group that regarded John Hus as their founder located in the province of Moravia which is located for the most part in the present Czech Republic. The "Thirty Years War," one of the last great European "Wars of Religion" (which later analysis showed was waged more because of political and economic factors than theological disputations) was fought in this region during his lifetime by a number of outside forces. Those wars devastated and depopulated Moravia and the surrounding regions, and in the end, Comenius and the surviving members of his community were forced to seek asylum in Poland. Comenius was an extremely well educated man, and was one of the first writers on the education of children. He also published one of the first picture books for children, a teachers' handbook, and one of the first elementary Latin textbooks designed for instruction rather than simply using one or more of the classical Latin texts by noted Roman authors² as an example and model. It is strange that

¹ A work of fiction *El Ingenioso Hidalgo Don Quixote de la Mancha* by Spanish novelist Miguel de Saavedra Cervantes in 1615 gives considerable insight into the tensions and desonances generated by the accretion and co-existence of profit and patriotism onto chivalry and personal honor.

² For example: Livy, Pliny, Cicero, and Seneca.

Comenius is more widely known in Europe than the United States, given his positions on education, which seem to anticipate Dewey, Lendeman and other educational reformers by 250 years by stressing free compulsory universal education, contextualization, life long learning and constructivism, as indicated in the following quotations from his work *Didactica Magna*³ (The Great Didactic) published in 1649.

- “Not only the children of the rich or of the powerful only, but of all alike, boys and girls, both noble and ignoble, rich and poor, in all cities and towns, villages and hamlets, should be sent to school.”
- “Education is indeed necessary for all, and this is evident if we consider the different degrees of ability. No one doubts that those who are stupid need instruction that they may shake off their natural dullness. But in reality those who are clever need it far more, since an active mind, if not occupied with useful things, will busy itself with what is useless, curious and pernicious.”
- “The proper education of the young does not consist in stuffing their heads with a mass of words, sentences, and ideas dragged together out of various authors, but in opening up their understanding to the outer world, so that a living stream may flow from their own minds, just as leaves, flowers, and fruit spring from the bud on a tree.”
- “If we examine ourselves, we see that our faculties grow in such a manner that what goes before paves the way for what comes after.”

³ Available: <http://www.moravian.edu/misc/docs/comenius.htm>

- “If we acknowledge that no expense should be spared in order to give one youth a through education, what can we say when the gate is opened to the universal education for all?”
- “The pupil should understand that what he learns is not taken out of some Utopia or borrowed from Platonic ideas, but is one of the facts which surround us, and that a fitting acquaintance with it will be of great service in his life.”
- “If, in each hour, a man should learn a single fragment of some branch of knowledge, a single rule of some mechanical art, a single pleasing story or proverb (the acquisition of which would require no effort), what a vast stock of learning he might lay by. Seneca is therefore right when he says: “Life is long if we know how to use it.” It is consequently of importance that we understand the art of making the best uses of our lives.”

CONTEXT AND CONDITIONS LEADING TO THE SMITH-HUGHES ACT OF 1917

The time in America between the Civil War (1861-1865) and World War I (1914-1918, American participation 1917-1918) was exceptionally unstable. Partially because of the radical shift in economic and socio-political power caused by the civil war, but also due to the upheavals in social, economic and political norms generally attributed to the inter-related phenomena of large-scale industrialization, massive immigration and internal migration of both skilled and low-cost labor which not only supported but also drove industrialization and urbanization. While it is difficult to quantitatively assess the amount or degree of stress on societies or culture widely separated in time that result from rapid change, clearly American society in this period experienced stresses comparable to those

of the reformation and disappearance of feudalism. While the overall changes in world-view may not have been as great, the speed with which these changes occurred was much greater, typically in a single generation. As encapsulated by Wirth in his book Education in the technological society (1980)

“Industrialized America was a society in which powerful organizations emerged with nationwide constituents. In the rough-and-tumble of the post-Civil War period, the threat of social chaos often loomed large. In the absence of the ability of any one group to dominate policy, the tendency grew for rivals to join in appeals to the federal government for actions which might advance mutual interests.” [p21]

To provide specifics for the above statement and help establish the context in which the enabling legislation for the establishment of federally funded VOTE was first enacted, that is the Smith-Hughes Act of 1917, a few of the more notable events between the end of the Civil War and the enactment are listed below. This is not to suggest that these events somehow “caused” the enactment, but rather they are provided to help the reviewer “recreate” that environment. From a multi-perspective or post-modern viewpoint, it should also be noted that individuals from differing socio-economic or ethnic backgrounds most likely had very different perceptions and feelings about what these events “meant.” The following events have been selected to demonstrate that America in this period was indeed turbulent, bellicose, aggressive, expansionist, and deeply divided. It is also worth noting how similar these events are to current concerns and problems. This is by no means an exhaustive or extensive list but only a few of the more notable events⁴ which appear to have had some influence that occurred in this period. The events were chosen to support the identification of primary VOTE stakeholder or interest groups, and

to justify their sometimes implied or attributed expectations, motives and expected outcomes. An appreciation of this historical / evolutionary economic backdrop is an integral component in the economic analysis of the viability of VOTE. The events emphasize just how extraordinary was the creation of a consensus by Charles Prosser among the groups affected, and their cooperation to obtain the passage of any legislation, or indeed the implementation of any coordinated inter-group activities at any level.

- 1866 -- The United States forces the removal of French troops from Mexico and prevents the establishment of a Mexican government controlled by France
- 1867 -- Alaska purchased from Russia
- 1867 -- More than half of all U.S. working people are employed on farms.
- 1867 -- The New York State Legislature votes to establish a free public school system.
- 1867 -- Midway Islands in the Pacific are taken in the name of the United States August 28 by Capt. William Reynolds of the U.S.S. Lackawanna.
- 1869 -- The first U.S. plow with a moldboard entirely of chilled steel is patented by James Oliver who has established the Oliver Chilled Plow Works.
- 1869 -- Wall Street has its first "Black Friday" September 24, ruining small speculators. Financiers Jay Gould, James Fisk, and other freebooters including President Grant's brother-in-law try to corner the gold market, driving the price up to \$162 per ounce by noon, and are on their way to destroying half

⁴ Unless otherwise indicated all events are from The People's Chronology contained on the MicroSoft CD ROM bookshelf 1994.

the banks and businesses in New York when Secretary of the Treasury George Boutwell begins selling government gold, bringing the price down to \$133 inside 15 minutes.

- 1870 -- Only two Americans in 100 of 17 years and older are high school graduates, a figure that will rise to 76 percent by 1970. Sixty-seven percent of children between 5 and 17 are students, a figure that will rise to 78 percent by 1920 and to 87 percent by 1975.
- 1874 -- The U.S. public high school system wins support from the Supreme Court which rules against a citizen of Kalamazoo, Mich., who had brought suit to prevent collection of additional taxes. The court upholds the city's right to establish a high school and to levy new taxes to support the school.
- 1874 -- A meeting of the unemployed held in New York's Tompkins Square January 13 to bring public attention to widespread poverty following last year's Wall Street collapse brings a charge by mounted police: hundreds are injured.
- 1883 -- An Owasco, N.Y., cannery installs the first successful pea-podder machine, replacing 600 employees.
- 1883 -- The first fully automatic machine gun is invented by American-born English engineer Hiram Stevens Maxim, 43, whose Maxim/Vickers gun will be adopted in 1889 by the British army and thereafter by every other major army. Maxim's gun is an advance over the 1861 Gatling gun in that the recoil energy

of each bullet is employed to eject the spent cartridge, insert the new round, and fire it.

- 1884 -- Chinese farm workers account for half of California's agricultural labor force, up from 10 percent in 1870. The Chinese have raised dikes at the mouths of the San Joaquin and Sacramento Rivers and are reclaiming millions of acres of rich farm lands.
- 1884 -- Congress establishes a Bureau of Labor in the Department of the Interior as severe coal strikes occur in Pennsylvania and Ohio.
- 1886 -- The Haymarket Massacre at Chicago gives the U.S. labor movement its first martyrs and marks the beginnings of May Day as a worldwide revolutionary memorial day. Chicago police fire into a crowd of strikers May 1, killing four and wounding many others. The 17-year-old Knights of Labor organization holds a peaceful rally May 4 in Haymarket Square to protest the shooting, someone throws a small bomb that knocks down 60 policemen, killing one and mortally wounding six others, the police fire into the crowd, and the workers sustain three times as many casualties as the police.
- 1886 -- Labor agitation for an 8-hour day and better working conditions makes this the peak year for strikes in 19th-century America. Some 610,000 U.S. workers go out on strike, and monetary losses exceed \$33.5 million.
- 1887 -- The Hatch Act voted by Congress March 2 authorizes the establishment of agricultural experiment stations in all states having land-grant colleges.

- 1889 -- Kansas and Nebraska farmers pay 18 to 24 percent interest rates on loans, with rates sometimes going as high as 40 percent. Local brokers and then local loan companies secure funds from eastern investors and take healthy cuts for themselves.
- 1890 -- From 75 to 90 percent of all Kansas farms are mortgaged at interest rates averaging 9 percent. Banks have foreclosed on roughly one-third of all farm mortgages in the state in the past decade, as drought prevented farmers from producing enough to keep up interest payments on loans taken out to buy farm machinery and seed.
- 1890 -- Railroad-related accidents kill 10,000 Americans and seriously injure 80,000.
- 1890 -- A second Morrill act passed by Congress August 30 supplements the 1862 law, establishing experiment stations, extension services, and agricultural research programs to aid U.S. farmers.
- 1890 -- Alfred Thayer Mahan publishes “The Influence of Sea Power Upon History, 1660–1783”
- 1891 -- The papal encyclical *Rerum Novarum* issued May 15 by Leo XIII (Giacchino Pecci) points out that employers have important moral duties as members of the possessing class and that one of society’s first duties is to improve the position of the workers.

- 1892 -- A wave of strikes for higher wages in the United States is touched off by higher prices that have resulted from last year's poor crops. New York's first Labor Day parade September 5 brings out 30,000 marchers.
- 1892 -- "American workmen are subjected to peril of life and limb as great as a soldier in time of war," says President Harrison.
- 1893 -- A survey of Brooklyn, N.Y., schools reveals that 18 classes have 90 to 100 students each, while one classroom is jammed with 158.
- 1893 -- The Pullman Palace Car Co. reduces wages by one-fourth, obliging workers to labor for almost nothing while charging them full rents in company housing at Pullman, Ill., and charging inflated prices at company food store.
- 1893 -- Kelly's Industrial Army marches on Washington, D.C., 1,500 strong to demand relief which is not forthcoming from Congress. Led by "General" Charles T. Kelly, the army of unemployed workers from California arrives for the most part via boxcar.
- 1894 -- Pullman Palace Car workers strike May 1 to protest wage cuts, and a general strike of western rail-roads begins June 26 as Eugene V. Debs orders his railway workers to boycott Pullman. U.S. troops enter Chicago in July to enforce federal laws in the Pullman strike. A federal grand jury indicts Debs for interfering with the mails and with interstate commerce.
- 1896 -- William Jennings Bryan proclaims "You shall not press down upon the brow of labor this crown of thorns, you shall not crucify mankind upon a cross of gold,"

- 1897 -- Hawaii annexed by the US
- 1898 -- The US battleship Maine blows up in Cuba. The Spanish American war fought and America gains control of Cuba, Guam, Puerto Rico and the Philippines. More U.S. troops in the Spanish-American War die from eating contaminated meat than from battle wounds. The deaths raise a public outcry for reform of the meat-packing industry.
- 1898 -- John W. Gates becomes president of American Steel & Wire, which has a virtual monopoly in barbed wire. He has established his own barbed wire company at St. Louis and negotiated a series of mergers and consolidations.
- 1898 -- National Biscuit Co. is formed by a consolidation of New York Biscuit, American Biscuit and Manufacturing, United States Baking, and United States Biscuit . Adolphus W. Green heads the new company, whose 114 bakeries comprise 90 percent of all major U.S. commercial bakeries.
- 1898 -- Virden, Ill., coal mine operators attempt to break a strike by importing 200 nonunion black workers, an action that provokes violence: 14 miners are killed and 25 wounded in the October 12 Mt. Olive massacre that brings demands for a union.
- 1899 - The American Sugar Refining trust has almost a 100 percent monopoly in the U.S. industry.
- 1899 -- E. I. du Pont de Nemours is incorporated in Delaware and now controls 90 percent of U.S. blasting powder production and 95 percent of U.S. gunpowder production.

- 1900 - Hills Bros. in San Francisco begins packing roast ground coffee in vacuum tins to begin a new era in coffee marketing. It is the beginning of the end for the coffee roasting shops common now in every town and the coffee mill seen in almost every U.S. kitchen.
- 1901 -- The Industrial Commission hears a government witness testify that a steam sheller can shell a bushel of corn in 1.5 minutes versus 100 minutes for the same job done by hand and that a wheat combine can do in 4 minutes what it would take a man 160 minutes to reap, bind, and thresh by hand.
- 1901 -- United States Steel Co. is created by J. P. Morgan, who underwrites a successful public offering of stock in the world's first \$1 billion corporation
- 1901 -- American Can Co. is created by a merger of 175 U.S. can makers engineered by W. H. Moore and Indiana banker Daniel Reid. The Can Trust turns out 90 percent of U.S. tin-plated steel cans.
- 1902 -- United States Steel Co. has two-thirds of U.S. steel-making capacity.
- 1902 -- Smuggler-Union mine manager Arthur Collins is assassinated November 19 in his home at Telluride, Colo., following settlement of a violent strike against the mine by the Western Federation of Miners. Four hundred national guardsmen will go into Telluride next year to suppress the WFM.
- 1902 -- United Mine Workers leader John Mitchell leads his 147,000 anthracite coal workers out of the pits May 12 to begin a 5-month strike that cripples the United States. Mine operators and railroad presidents have rejected an invitation from Mitchell to attend a conference, they continue to oppose

unionization, and George F. Baker of Philadelphia and Reading Coal & Iron says July 17, “The rights and interests of the laboring man will be protected and cared for—not by the labor agitators, but by the Christian men to who God in His infinite wisdom has given the control of the property interests of this country. . .”

- 1903 -- National Cash Register’s J. H. Patterson gives his executive Thomas John Watson, 29, a budget of \$1 million to start a company that will pose as a rival to NCR but will actually take control of the U.S. used cash-register business.
- 1903 -- American Brass Co. is created by a merger of U.S. copper companies that include the Guggenheim family’s American Smelting and Refining, United Copper (controlled by Montana mine operator Frederick Augustus Heinze, 34), and Amalgamated Copper (controlled by Standard Oil’s H. H. Rogers and Anaconda’s Marcus Daly).
- 1903 -- Private citizens with the connivance of the U. S. government engineer a revolution to seize control of the Isthmus of Panama from Columbia to construct the Panama Canal.
- 1905 -- International workers of the World (IWW) founded.
- 1906 -- E. I. du Pont de Nemours has bought up or otherwise absorbed the other members of the 34-year-old Gunpowder Trade Association (Powder Trust) and has a near-monopoly in the U.S. powder industry. It produces 100

percent of the privately-made smokeless powder and from 60 to 70 percent of five other kinds of explosives.

- 1906 -- Corn Products Refining Co. is created by Standard Oil director E. T. Bedford whose “gluten trust” controls 90 percent of U.S. corn refining capacity. The company’s Karo syrup will soon be a household name.
- 1909 -- U.S. Marines oust Nicaragua’s president.
- 1909 -- Bakelite, developed by Belgian-American chemist Leo Hendrik Baekeland, 46, is the world’s first polymer.
- 1910 -- Seventy percent of U.S. bread is baked at home, down from 80 percent in 1890.
- 1910 -- The average U.S. workingman earns less than \$15 per week, working hours range from 54 to 60 hours, and there is wide irregularity of employment.
- 1912 -- U.S. Marines land in Honduras in February, in Cuba 4 months later, and in Nicaragua in August to protect American interests.
- 1913 -- A sensational report published February 28 by the House Committee on Banking and Currency, chaired by U.S. congressman Arsene P. Pujo (D-Louisiana), exposes the “money trust” that controls U.S. financial power.
- 1913 -- The United States has 40 percent of world industrial production, up from 20 percent in 1860.
- 1913 -- Sixteenth Amendment to the U. S. Constitution ratified permitting a national income tax, and the Federal Reserve Board established.

- 1913 -- The average British worker still earns less than £1 per week (\$5 in U.S. currency) while American workers average more than \$2 per day.
- 1913 -- The United Mine Workers strike Colorado Fuel and Iron to protest policies of the company controlled by Standard Oil's John D. Rockefeller; two mines are set afire, 27 strikers are killed. The Ludlow massacre April 20 climaxes a struggle by Colorado coal miners struggling for recognition of their United Mine Workers union. A battle with state militia near Trinidad ends with 21 dead including two women and 11 children caught in tents that have been set ablaze, angry strikers take possession of the Colorado coal fields, and they do not yield until federal troops with artillery support move in June 1.
- 1914 -- The Smith-Lever Act passed by Congress May 8 provides for agricultural extension services by USDA county agents working through the land-grant colleges established under the 1890 Morrill Act.
- 1914 -- Threats of labor troubles in early January have led Henry Ford to offer workers a minimum wage of \$5 per day—more than twice the average U.S. wage and more than the average English worker earns in a week.
- 1915 -- The Wealth and Income of the People of the United States by economist Wilford Isbell King points out the increasing concentration of income in the hands of the few, an indication of the need for a graduated income tax (see 1913). In 1910, King observed, the richest 1.6 percent of U.S. families received 19 percent of the national income, up from 10.8 percent in 1890. While the richest 2 percent of the population received 20.4 percent of

the national income and averaged \$3,386 per capita in income, the poorest 65 percent received 38.6 percent and averaged \$197.

- 1916 -- A San Francisco Preparedness Parade July 22 is disrupted by a bomb explosion that kills 9 and wounds 40. Labor leader Thomas J. Mooney, 34, is accused along with Warren K. Billings, 22, of having planted the bomb, both protest their innocence, Mooney is convicted and condemned to death, Billings is given life imprisonment.
- 1916 -- Britain's refusal to permit U.S. imports of German knitting needles needed in U.S. mills has drawn a sharp protest from Washington in May, and Washington protests again when the London Official Gazette blacklists some 30 U.S. firms under the British Trading with the Enemy Act of July 18.
- 1916 -- Ireland's Easter rebellion beginning April 24 lasts a week but has little popular support. Former British consular official Roger Casement has had no success in raising a brigade of Irish war prisoners in Germany, a U-boat has landed him April 20 to support the Irish Republican Brotherhood led by Patrick Henry Pearse, but German aid fails to materialize. While 150,000 Irish volunteers fight for the king in Flanders, some 2,000 rebels rise at Dublin, police arrest the rebel leaders. People hiss them but they become martyrs when convicted of treason and hanged August 3.
- 1917 -- Berlin notifies Washington January 31 that unrestricted submarine warfare will begin the next day, the United States severs relations with Germany February 3. The United States declares war on Germany April 6.

- 1917 -- Smith-Hughes act enacted into law.

At least from the time that Charles Prosser was able to create the coalition of industry, farmers, unions, feminists and governmental agencies which resulted in the passage of the first federal vocational education act in 1917, one of the most fundamental and basic assumptions supporting VOTE was that all groups and the nation as a whole would benefit from its existence and operation, although probably not to the same extent at all times for everyone involved. *It appears that a fundamental, although tacit and implicit possibly subliminal, assumption among all these groups was that as the perceived “problems” were directly caused by a lack of (or incorrect) “education,” thus “education” with its multitude of nuances and meanings was to be the tool or mechanism by which their objectives was to be obtained.*

However as stated by Gregson⁵: “To gain greater insight it is helpful to recognize two opposing perspectives emerged in the late 1800s and have contributed to the current discourse. One view has been labeled as instrumental because it contends that the purpose of schooling is to increase social and economic efficiency . This view was espoused by two leading educators at the turn of the century, Snedden, then the Commissioner of Education for the Commonwealth of Massachusetts, and Charles Prosser, who later became Executive Director of the National Society for the Promotion of Industrial Education (NSPIE), became leading advocates of secondary vocational education as trade

⁵ Paraphrased from “The school-to-work movement and youth apprenticeship in the U.S.: Educational reform and democratic renewal?” Journal of Industrial Teacher Education, 32(3), 7-29 Available: <http://borg.lib.vt.edu/ejournals/JITE/v32n3/Gregson.html>

training . Impressed with the research and writings of Frederick W. Taylor⁶, Snedden adapted Taylor's theories on scientific management to schooling in an attempt to better meet the needs of industry.”

While the “Social Efficiency” model has largely fallen into disrepute with most current researchers it is well to remember that in the last years of the Twentieth century the best predictors of both occupational choice and social/economic status for a student remain the occupation and status of the same gender parent. It is also well to remember that for many, if not most, people at the time Smith-Hughes was enacted, the choice was not between vocational and traditional academic education but rather between vocational education and no education at all. Charles Prosser, “Chief of Staff” for the National Society for the Promotion of Industrial Education [NSPIE] explicitly identified three basic economic sectors with an implicit fourth which VOTE, as defined in Smith-Hughes, was expected to positively impact. (Cuban 48) These were:

- Agriculture;
- Trade and Industry;
- Home Economics; and implicitly
- Government

The division of VOTE interest or stakeholder groups is more meaningful by the following functional categories rather than by specific economic sector. The reviewer is cautioned that it is now difficult to separate the goals, objectives and expectations which

⁶ Taylor, Frederick Winslow (1856-1915) American inventor, engineer, and efficiency expert noted for his innovations in industrial engineering and management. While not intended as an *ad hominem* attack,

Charles Prosser used to promote and advance the coalition for Smith-Hughes from those goals, objectives and expectations that were pre-existing, nor can the priorities of these goals, objectives and expectations within the groups then existing now be determined. In view of the incidents and events listed above, and direct and explicit statements in the literature the “official” objectives, goals and expected outcomes of VOTE used by Charles Prosser to obtain the enactment of Smith-Hughes (1917) were:

- Government -- Although this period was characterized by the almost universal espousing of laissez-faire economics and free-for-all “states rights” politics, “government” at all levels as an independent self-perpetuating entity and the politicians had considerable self-interest in the assumed and perceived effects of VOTE. In modern terminology these included:
 - National Defense considerations specifically armament production
 - Other National Defense material considerations such as food, communications, transportation, and clothing
 - Economic independence by domestic production rather than import
 - Increased domestic economic activity by domestic production
 - Increased revenue by broadening the tax base, rather than by increasing rates which is always unpopular
 - Increasing citizen support for (or at least acceptance of) existing economic and social order

it is well to remember that Taylor had no pedagogical experience and is known to have suffered from severe depression and had at least one nervous collapse.

- Meeting the employers' needs for trained labor from domestic sources rather than through immigration both to avoid dilution of existing voting blocs and simple xenophobia

- The Wage Payers or Employers --
 - Adequate or at least an increased supply of trained labor
 - Increased profits by maximizing production and minimizing waste using existing plant and equipment because of improved employee qualifications and competence.
 - Increased profits through the introduction of new or improved technology and products made possible because of the availability of trained and educated employees
 - A workforce that "understood" the realities of industrial life and would support (or at least accept) it, thus minimizing labor unrest, sabotage and work stoppages.
 - A desire resulting from both self-interest and patriotism to have the American economy as independent as possible, and to produce goods better than, or at least as good as those produced anywhere. The intent was to minimize the need to import and maximize exports.

- Farmers, Ranchers (and other self employed entrepreneurs) --
 - Improved income and decreased work load as a result of not only their improved knowledge, skills, and methods, but also the (increased) availability and lower costs of new and improved seeds, cattle breeds

(products), machinery and equipment made possible by a better educated and trained urban workforce organized for mass production.

- An implicit or tacit expectation seems to have existed that a better educated and trained urban workforce would spend part of their increased earnings on more and better food (and other goods) thus increasing domestic consumption and raising prices
- The Wage Earners or Employees --
 - Improved incomes, improved working conditions, and decreased work loads as a result of their improved knowledge, skills, and methods (Working smarter not harder in the modern idiom.)
 - Increased employment opportunities because of new industries made possible by the existence of adequately skilled and educated labor
 - Improved social and economic status by advancing from “unskilled” to “skilled” labor
 - Pride in making American products better than, or at least as good as, any produced in the world
 - Pride in (appropriate) participative citizenship by more effectively taking part in activities to improve their community by improving their communications and organizational skills and knowledge of the world.
- The House-Wife --
 - Maximize their contribution to their family unit by improving the quality and quantity of their output such as sewing, baking and canning,

while minimizing out-of-pocket costs by improving their knowledge and skills

- Produce better citizens through increased knowledge of “correct” child rearing practices and providing the best possible home for their husband and children
- More effectively participate in activities to improve their community by improving their communications and organizational skills and knowledge of the world.

By no later than the early sixties, Home Economics had become obsolete because the amount of gain to the overall economy produced by unpaid or non-cash-income producing activities in the home such as canning, baking, and sewing of clothes had proportionally become very small. From a cultural perspective, it appears that the total benefits from outside cash employment were now perceived by most people to far exceed the total benefits of productive but non-income producing domestic activities.

Agriculture, as discussed in greater detail in the short evaluation of Ag-Ed has fragmented into two major subdivisions. “Classical” Agricultural Education [Ag-Ed] continues to assume that the individual will participate in this sector as a generally independent entrepreneur, with substantial control over their choice of products, means of production, hours and conditions of labor, et cetera. “Modern” Ag-Ed or agri-business is effectively a sub-division of “Trade and Industry” with food and fiber inputs rather than chemicals, oil and ores, in that the participants are generally paid (although possibly highly paid and technical) labor with little or no control over products produced, means of production, terms and conditions of employment, et cetera. Thus the current basic or

fundamental economic segments directly affected by VOTE as defined by the current study are:

- Trade and Industry, including service and agri -business (wage payers)
- Classical (cash crop production) Agriculture (self employed entrepreneurs)
- Government

The fourth economic segment with a very large but not primary stake in VOTE are the VOTE teachers, administrators and organizations, collectively identified as VOTE practitioners. The rationale for this separate classification is that VOTE was never intended to provide employment for the individuals⁷ in this category nor to establish and maintain organizations independent of the other three groups as a whole. Indeed, if VOTE as it is presently implemented were to abruptly vanish, the other three groups would continue to exist with some, but generally minimal, change, but if any of the three basic groups listed above were to be greatly reduced or eliminated, VOTE as it is presently defined and implemented would almost certainly disappear or be changed beyond recognition. To include VOTE teachers, administrators and organizations as a basic stake-holder group would be a classic example of “the tail wagging the dog.”

From a functional classification the current basic stakeholder categories, in no particular order, are:

- Trade and Industry, including service and agri -business (wage payers)
- Classical (cash production) Agriculture (and self employed entrepreneurs)

⁷ Because of considerable personal interest, a due and diligent search was made by this researcher, without result, for a federal, state or local “Vocational Teacher’s and Administrator’s Full Employment Act.”

- Government as an independent and self-perpetuating entity
- Workers (wage earners)

While there are many objectives, goals and expected outcomes listed above which are not overtly economic, nearly all of these considerations are ultimately based on, or at least substantially affected by, “economics,” therefore the following United States economic data, as provided by the United States Bureau of Labor Statistics [BLS], Bureau of the Census[BC], National Agricultural Statistical Service [NASS], other governmental agencies, educational institutions and industry sources, will be combined and examined in detail in the following chapters using the above expectations and common economic assumptions⁸ as criteria. Because this information is only minimally informative in isolation, only data titles / descriptions are included below. The actual graphs and graphs will be found in Chapters Four (Findings), Five (Discussion) and in the appendices. In some cases to preserve the continuity of thought / argument these are combined in a single section. In most cases if the data in tabular format is sizable it is located in the “Tabular Data” section in the Appendix.

- Median⁹ individual income by educational attainment in current and constant value (CPI) dollars
- Poverty rates of full time workers as a group and by gender

⁸ Such as the law of supply and demand

⁹ Where possible median values are used in place of averages because the median minimizes the skewing affect of outlying data points, for example the effect of professional athlete and corporate CEO annual salaries on the “average” income. The median, like the average, is a measure of central tendency which indicates the value such that one-half of all readings are below and one-half of all readings are above it.

- Median individual incomes in total and by gender in current and constant value (CPI) dollars
- United States GINI coefficient of income distribution
- Consumer Price Index [CPI] and Producer Price Index [PPI] series
- Gross Domestic Product [GDP] annualized growth rate by state
- State education attainment as fraction of population
- State death rates from murder, accident, and total in occurrences per 100,000
- Personal and small-business bankruptcies filed under chapter 13 by year
- Dow-Jones stock averages in current and constant value (CPI) dollars in linear and log-linear chart format
- United States Treasury and AAA corporate yearly average bond yields
- Mid-Year Average [MYA] prices for corn, wheat, soybeans, swine and cattle in current and constant value (CPI) dollars in linear and log-linear chart format
- Effective individual income tax rates by year
- Number and types of bankruptcies filed in total and by state

The commonly held assumption about a long continuing and current (1998)

general shortage of qualified retail sales, skilled and technical employees is also investigated. On-line media sources which examine this “shortage” in detail from a local perspective include:

The American Prospect <http://epn.org/prospect/34/34lestnf/htmp>

Boston City Journal www.amcity.com/boston/012797/story1.html

Criner, Oscar H. www.nbfront.org/html/FRONTa...ticles/TechLaborShortage.html

Denver Business Journal	www.amcity.com/denver/stories/052697/story.html
Houston Business Journal	www.amcity.com/houston/stories/051198/story1.html
Information Week	www.iweek.com/author/runtime7.htm
N. Colorado Business Report	www.ncbr.com/aug97/laborroundtable.htm
Witicha Business Journal	www.sfbt.com/wichita/stories/021698/stories1.html

Two frequently cited sources by researchers in the current socio-economic area are “The End of Work” by Jeremy Rifkin, and “When Work Disappears” by William Julius Wilson. Rifkin uses a macro - global perspective to examine changing economic conditions from the top down, while Wilson concentrates on the specialized niche of minority, predominantly black ghettos in urban America and thus examines changing the conditions from the bottom up. While differing in particulars, both authors agree on the major affects. Wilson, by confining his research to the indicated niches tends to leave the impression that the ill affects of these changes are somehow limited to minority enclaves in major urban areas. This is not the case. All ethnic groups in all social settings from rural to highly urbanized are affected. Indeed, even those groups who have obtained a rising rather than a falling income from these changes appear to be adversely affected because of increases in crime, random violence, and vandalism which are resulting in increased costs for home security systems, auto alarms and limitations on freedom of movement. Rifkin tersely states several key facts:

For the whole of the modern era, people’s worth has been measured by the market value of their labor. Now that the commodity value of human labor is becoming increasingly tangential and irrelevant in an ever more automated world order, new ways of defining human worth and social relationships will need to be explored. [Rifkin xviii]

Business consultants like John C. Skerritt worry about the economic and social consequences of re-engineering, “We can see many, many ways that jobs can be destroyed,” says Skerritt, “but we can’t see where they will be

created.” Others, like John Scully, formerly of Apple computer, believe that the “reorganization of work” could be as massive and destabilizing as the advent of the Industrial Revolution. “This may be the biggest social issue of the next 20 years,” says Scully. Hans Olaf Henkel, CEO of IBM Deutschland, warns, “There is a revolution underway.” [Rifkin 7]

The fact is that while less than 1 percent of all U. S. Companies employ 500 or more workers, these big firms still employ more than 41 percent of all the workers in the private sector at the end of the last decade. [Rifkin 10]

A 1993 study by the Department of Labor found that less than 20 percent of those who were retrained under federal programs for dislocated workers were able to find new jobs paying at least 80 percent of their former salary. [Rifkin 26]

In our highly industrialized urban culture, most people would probably be surprised to learn that the food and fiber industry is the single largest industry in the United States. More than 20 percent of the GNP and 22 percent of the workforce is dependent on crops grown on America’s agricultural lands and animals raised on feedlots and in factory farms. [Rifkin 110]

Government figures on employment are often misleading, masking the true dimensions of the unfolding job crisis. For example, in August 1993 the federal government announced that nearly 1,230,000 jobs had been created in the United States in the first half of 1992. What they failed to say was that 728,000 of them -- nearly 60 percent -- were part-time, for the most part in the low-wage service industries. [Rifkin 167]

The partial transfer of personal loyalties and commitments away from the market and the public sector and to the informal, social economy foreshadows fundamental changes in institutional alignments and a new social compact as different from the one governing the market era as it, in turn, is different from the feudal arrangement of the medieval era that preceded it. [Rifkin 217]

Wilson makes the following penetrating observations:

The problems reported by the residents of poor Chicago neighborhoods are not a consequence of poverty alone. Something far more devastating has happened that can only be attributed to the emergence of concentrated and persistent joblessness and its crippling effects on neighborhoods, families, and individuals. [Wilson 16-17]

The black-white differential in the proportion of males involved in serious violent crime, although almost even at age 11, increases to 3:2 over the

remaining years of adolescence, and reaches a differential of nearly 4:1 during the late twenties. However, when Elliott compared only employed black and white males, he found no significant differences in violent behavior patterns among the two groups by age 21. Employed black males like white males, experienced a precipitous decline in serious violent behavior following their adolescent period. Accordingly, a major reason for the racial gap in violent behavior after adolescence is joblessness; a large proportion of jobless black males do not assume adult roles and responsibilities, and their serious violent behavior is therefore more likely to extend into adulthood. [Wilson 22]

One of the earliest studies to examine the effects of persistent unemployment was conducted over fifty years ago by Marie Jahoda, Paul F. Lazarsfeld, and Hans Seidel in Marienthal, a small industrial community in Austria “at the time of a depression that was much worse than anything the United States went through.” ... “One of the main theses of the Marienthal study was that prolonged unemployment leads to a state of apathy in which the victims do not utilize any longer even the few opportunities left to them.” ... Cut off from their work and deprived of contact with the outside world, the workers of Marienthal have lost the material and moral incentives to make use of their time. Now that they are no longer under any pressure, they undertake nothing new and drift gradually out of an ordered existence into one that is undisciplined and empty. Looking back over any period of this free time, they are unable to recall anything worth mentioning. [Wilson 73-74]