

## Chapter 18 Post-secondary Public Education

### § 1. Post-secondary Schools

For purposes of this treatise, the term post-secondary school means any Institute of schooling offering instructional programs designed for people at or beyond the U.S. age of majority (18 years of age) who have completed instructional education equivalent to the public K-12 system of public schooling. The actual age of a student, however, is not a definitional criterion and it is not unusual for a minority of post-secondary school students to be below the legal age of majority<sup>1, 2</sup>. The term is applied to such Institutes as community/junior colleges, four-year colleges and universities, graduate schools and colleges, and trade schools training students for specific professions, *e.g.* law schools or medical schools. It is also applied to private academies or schools devoted to other specialized job training programs. I follow the custom of denoting those programs as Voc Ed (vocational education) programs (with the caution that Voc Ed uses the term "vocation" in a different context from that used for the lessons of vocation function of public instructional education. The two usages are not synonymous). In the United States, the term "higher education" generally refers to all post-secondary schooling although some people use it to refer only to four-year college/university schooling and graduate school schooling.

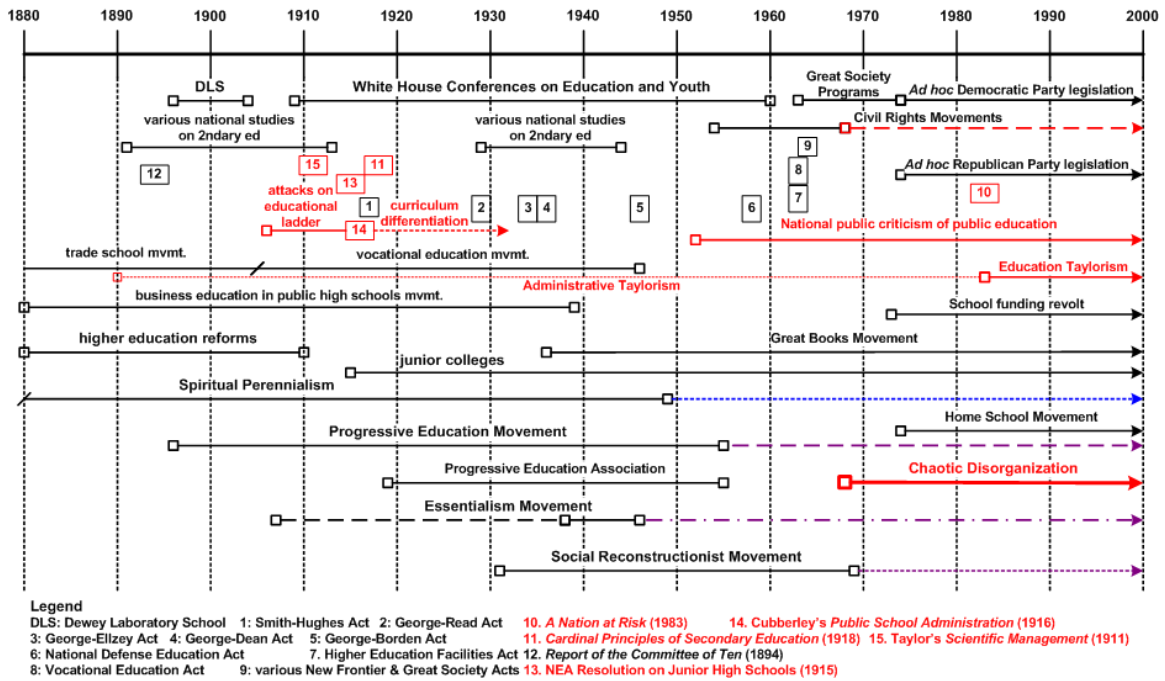
Familiarity might make it seem that all this defining is straightforward, trivial and unnecessary but closer inspection shows that the situation is not as clear and unambiguous as one might think. For example, the divers branches of the U.S. Armed Forces offer many specialized training courses of the Voc Ed variety but, by and large, most people do not associate this training with the term post-secondary schooling. It is, however, precisely that; many of the skills that are taught in these training courses are directly applicable to many types of civilian employment. Scratch just beneath the surface of the concept of post-secondary schooling and one quickly finds many corner cases and ambiguities pertaining to what is or is not regarded as post-secondary schooling. What different people choose to call or not call post-secondary schooling often comes down to a mixture of customs, habits, and judgments of taste. Often there is an emulation aspect that amounts to a form of intellectual hubris in the sense that some forms of post-secondary schooling are held by some to be "inferior" or to suggest the students are in some way "not as smart" as students in traditional four-year colleges. There are no objectively valid grounds for this sort of presumptive stereotyping. It is mere snobbery and could be dismissed out of hand were it not for the fact that such attitudes have consequences. Indeed, this form of institutionalized cultural bias is one of the many appearances by which institutionalized bigotry is presented.

In part, the ambiguities one encounters on closer inspection originated in the ways in which different types of post-secondary schooling historically originated. No small contributor to this can be traced back to the post-Economy Revolution loss of the apprenticeship system in America. A second contributor can be attributed to developments growing out of the invention of school academies such as the one pioneered by Benjamin Franklin and his colleagues in Philadelphia.

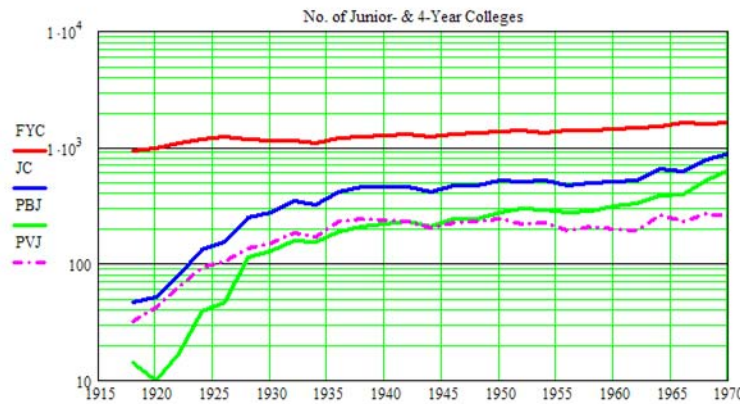
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<sup>1</sup> At most colleges and universities, admission requirements generally include high school graduation or General Educational Development (GED) certification. Many land grant universities offer extension programs providing instruction in specialized crafts and have no age requirement for enrollment. These occasionally have students enrolled in them as young as middle school/junior high school age. Typically programs like this do not award any sort of degree, although it has become fashionable for them to document the completion of extension courses by awarding certificates to those who complete them.

<sup>2</sup> Over the past decade, a number of colleges and universities have partnered with high schools by offering advanced placement (AP) credit for courses taken in high school and applied to college degrees. These sorts of arrangements are typically considered to be part of high school education rather than actual post-secondary education. The ambiguity here is: if AP credit applies to collegiate study, is it not post-secondary education *ipso facto*? The boundaries between traditional education classifications are at best very fuzzy.



**Figure 1:** Education reform timeline in the 20th century [Wells (2013), chap. 14].



**Figure 2:** Number of junior colleges and 4-year colleges in the United States from 1917 to 1970 [Bureau of the Census (1976), pp. 382-383]. FYC = 4-year colleges; JC = total junior colleges; PBJ = public junior colleges; PVJ = private junior colleges.

Like most types of institutions, education institutions historically develop *ad hoc* as means for addressing immediately pressing problems. The institution of government has always been of this character. Likewise, the development of empirical sciences has proceeded in this way, moving from empirical craftsmanship toward gradually increasing levels of refinement. In all cases some type of special interest steers the development of institutions. So, too, it is with post-secondary schooling in America.

Figure 1 illustrates a timeline of U.S. education reform movements in the 20th century. Those of particular pertinence to the present discussion are the trade school/vocational education movement, the business education in public high schools movement, and the establishment and expansion of junior colleges. Voc Ed in the U.S. grew out of the trade school movement (1868-

1912), which itself grew out of a manual labor movement (1800-1865), a corporation school movement (1872-1905), and an industrial arts movement (1876-1900) [Blake (1961), pg. 71]. The original interests provoking these movements were closely tied to the loss of the apprenticeship system and the recognition that skilled craft jobs – which required people to receive specialized job-skill training – were more lucrative than unskilled laborer jobs. So it was that from their beginnings these forms of schooling were attempts to replace what had been lost when the 18th century apprenticeship system collapsed and job-market opportunities for skilled craftsmen were diminished by labor pool growth and machine-age technologies in the industrial revolution.

These education movements were absorbed into or superseded by the Progressive Education Movement (PEM) after the latter gathered momentum from 1920 onward. The schools that were founded by the 19th century movements came to be largely displaced and replaced by the introduction of junior colleges (figure 2)<sup>3</sup>. Manual/industrial arts classes were also implemented in junior high schools and high schools by PEM reforms, although these additions to the curricula utterly failed to answer the needs and concerns attending the older movements and proved to be impractical for implementation in junior high and high schools [Reese (2011), pp. 105-108; Angus & Mirel (1999), pp. 59-77].

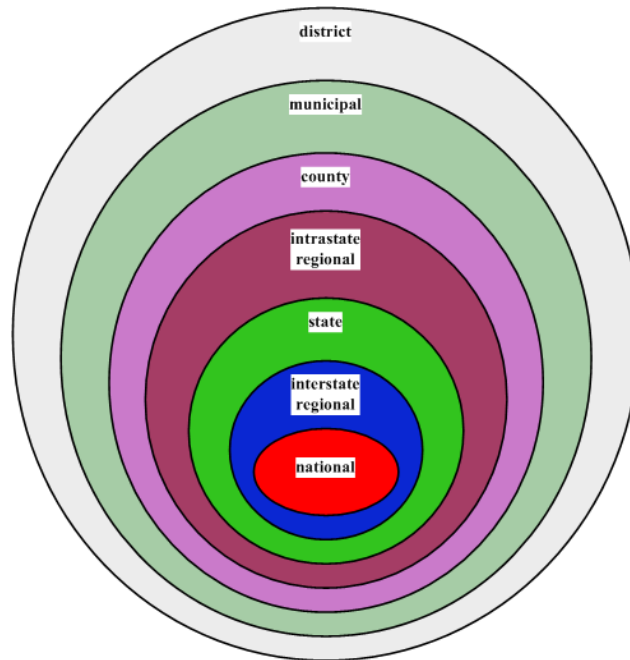
All this took place in parallel with the development of "utility-oriented" four-year colleges and universities. By the mid-20th century these had taken on the character of being craft-training Institutes because of collegiate over-specialization in academic programs, departments, and studies [Wells (2013), chap. 14]. The job-training aspect of education at four-year colleges was and is most pronounced in colleges of engineering and colleges of education, but it has also taken root in most academic programs (with the notable but not complete exception of what are called "humanities programs"). Most educators and administrators at these Institutes resent having what they do being characterized as job-training and insist that what they do is "education" – which is a term much used yet strangely undefined within collegiate academic communities. But the fact remains that almost all college majors today are over-specialized and illiberal.

The result of all this is that differences in roles and missions for different kinds of Institutes have become blurred through their accidental developmental histories. It is time to take a fresh look at why public Institutes of post-secondary schooling exist and to understand the justification for their existence as *public* schools.

## § 2. The Principle of Interests-based Public Institutions

A Society's public Institutes are tangible manifestations of that Society's corporate *Person-fähigkeit*. They are established by public investments of wealth-assets, and such wealth-assets are acquired by requiring citizens to alienate some part of their personal wealth-assets to the commonwealth of the Society. This alienation of private wealth-assets for the public welfare is a basic Duty of citizenship under both Republic and *Gemeinschaft* forms of government [Wells (2012a), chap. 11]. It is distinct from taxation under monarchy/oligarchy government (where the subjects share no social contract between themselves and their rulers) and under non-consensus democracy government (where non-consenting minorities are subjugated by the rule of the majority). In these cases there is no Duty to alienate wealth-assets. Instead, for the subjugated people taxation is a confiscation of wealth-assets by coercion. This applies in representative democracies (such as the U.S. is today) as equally as it did in the non-consensus democracy of ancient Athens [Aristotle (c. 328-325 BC)] and still does under monarchy/oligarchy.

<sup>3</sup> Most junior colleges in the U.S. were instituted by local communities. As a result, and in part because of pejorative nuances attached to the designation "junior" in "junior college," most junior colleges had come to be called "community colleges" by around 1992, a renaming process that was already underway as early as 1972 [AACC (2014)].



**Figure 3:** Overlapping spheres of special and general interests by geographical mini-Society regions.

One great practical difficulty encountered in Republican institution of public education subsists in determining how part of citizens' alienations of wealth-assets for the public welfare is to be *justly* allocated to public education functions. For example, should a taxpayer in New York be taxed to support the high school in Kuna, Idaho? Most Americans would say, 'no,' but in fact the New York taxpayer is taxed, in part, to support the Kuna High School. The high school receives a small amount of federal money from time to time to support divers purposes, and a small amount of this federal money is an allocation from the New Yorker's income tax payments. Is this an example of justice or is it an example of injustice under the American social contract?

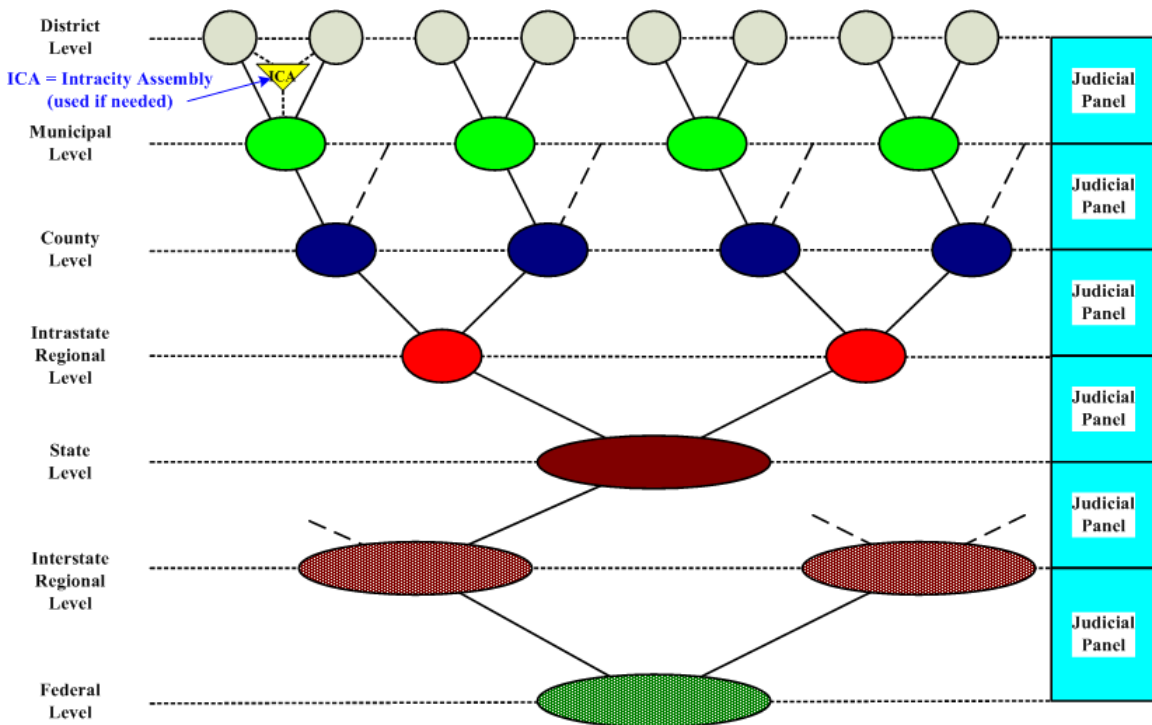
This question, and others like it, can only be *justly* answered on the basis of *the civil interests of citizens*. It is clearly not in a New Yorker's *immediate* interest what sort of education is provided to Kuna high school students. However, it is counter-argued that *all* New Yorkers have *remote* interests in this. *E.g.*, it is in their remote interest that future citizens everywhere in the U.S. should be as well educated as the wealth of the nation permits in order that the nation itself should be as strong as can be made possible (the perfection of the Union; the common defense; the general welfare), that each should become a prudent citizen (securing the blessings of liberty; establishing justice), and that a general state of civil Order be maintained (ensuring domestic tranquility). Obtaining the *consent* of citizens in regard to, *e.g.*, tax policy, the subject-matters of instructional education, and a great many other issues is unlikely without careful analysis of the characteristic interests of the many divers mini-Societies making up any great nation. The available stock of public wealth-assets is not unlimited and therefore allocations of its limited resources among the divers needs of Society are necessary. Decisions are *necessitated* in order to make *just* allocations of these wealth-assets and thus, too, are decision-making *policies* made necessary. Because reciprocal interests are the basis of all social contracts, decision policy must seek its ground of justification in a *principle of interests-based public institutions*.

This principle is implicit throughout the discussions in Part I of this treatise. Figure 3 presents again an illustration of the heterarchy of overlapping special and general interests according to a classification by geographic region. The principle going with this classification is this: *policies and decisions regarding public institutions must be based on analysis of the degree to which each*

*Institute serves localized special interests vs. more general interests in moving from ring to ring in the heterarchy of overlapping interests and with regard to decision-making about sources and allocations of public resources for each Institute.* This is the principle of interests-based public institutions. It is difficult to put into practice but essential in establishing justice for all citizens.

It is not my place, nor is it the place of any individual, to state what policies and decisions are appropriate and just. In a Republic this is a matter for the sovereignty of citizens acting through their duly appointed officials in government insofar as the authority of those offices conforms to just mechanisms for understanding the general will [Wells (2012a), chap. 13, pg. 490]. At this point it seems appropriate to repeat the Critical definitions of authority and expectation of authority. *Authority* is possession of the *Kraft* of causing something to become greater, to increase, to be strengthened, or to be reinforced in some way. A public official is an *authority figure*, i.e., he is a person who holds a position of an agent of leadership governance charged with the duty of causing the association's general success and welfare to become greater, to increase, to be strengthened, or to be reinforced. *Expectation of authority* is the demand by the citizens of a Community that a person holding a position as a designated authority figure possess the *Kraft* of authority and actualize it for the benefit of their common association. These distinctions between the *Kraft*, the official, and the sovereignty in a Republic are crucial distinctions pertaining immediately to justice in a Society.

The issues of Republican organization of the structure and governance of public education were discussed in Part I of this treatise. Chapter 6 (pp. 176-181) and chapter 7 covered the inverted pyramid heterarchy of governance for public education (figure 4) and the legislative committees where expectations of authority for education governance are vested by the public. The topic of discussion for this chapter concerns the nature of just expectations of authority for the education committees that comprise this heterarchical organization of governance for public education. These expectations must take into account a certain peculiarity characteristic of the nature of post-secondary public education, and this is the subject of the next section.



**Figure 4:** The inverted pyramid structure of public education governance.

### § 3. Private, Special, and Common Interests in Post-secondary Public Education

Post-secondary education in America was, from its beginning in Puritan Massachusetts, the education of professionals. In Critical economics, a *profession* is any labor occupation requiring special training in some particular art. A carpenter is every bit as much a professional as a lawyer or a physician. However, in colonial America post-secondary education was more specialized and was craft education for what are called *learned professions*, a term designating a profession for which its practice primarily involves mental rather than manual work<sup>4</sup>. There is an ambiguity contained in the concept of a learned profession because in any profession is found some mixture of mental work and manual work. Therefore, any classification of a learned vs. a non-learned profession must make a fuzzy distinction determining when a craft involves "primarily mental" work vs. when it involves "primarily non-mental" work. In some cases the distinction is not very difficult to make, *e.g.* in comparing civil engineering and truck driving. In others, it is often not clear. For instance, is any such distinction justified when comparing a surgeon and an internist in the medical professions? In medieval Europe and well into the 19th century, it was more correct than not to say internal medicine (a "physician") was a learned profession but that surgery was not; indeed, in medieval Europe the practice of surgery was often carried out by barbers, whence came the red stripe on the familiar barber's pole. Today, however, any claim that surgery is not a learned profession compared to internal medicine is much more difficult to justify even though the defining act of being a surgeon is obviously manual labor (your internist does not cut you open; he gives you a pill or a shot – or has a nurse do it for him). Distinguishing something as a learned profession is always relative. One profession can be more or less "learned" than another, but no profession – at least, none that can command a salary or wage – is absolutely "learned" and no profession is absolutely "non-learned." An absolutely "learned" profession would be one that involves no manual work at all: the professional wouldn't *do* anything (except think), and it isn't likely anyone would pay someone to do nothing.

Harvard, colonial America's first college, was founded to provide a labor supply of specialized learned professionals – namely, Puritan theologians. Government in Puritan New England was a theocracy and so the education for which Harvard was established was, in a very neat sense, an education for future rulers of the colony. The example set by Harvard was copied when other colonial colleges were established inasmuch as these were also viewed as education Institutes for learned professions. Indeed, it can be fairly said that the establishment of Harvard was the reason for the establishment of the first secondary schooling in colonial America – the Latin grammar schools [Cubberley (1919), pp. 13-19]. These were established to prepare pupils for professional study at Harvard. This understanding of what colleges were for also had much to do with establishing the practice of setting up grades-based admission standards for colleges. From the time when universities were first established in medieval Europe in the 13th century, being college educated meant a significantly lucrative improvement in one's tangible *Personfähigkeit* because admission to the guild of many learned professions – especially theology, law, and medicine – was based on it [Pedersen (1997)].

The 19th century movement to establish public high schools in America was undertaken in part because of an interest in broadening the availability of professional education. It can be seen as a merger between the interest in college preparation and the interest in what up to then had been the private academies that offered occupational training [Wells (2013), chap. 9, pg. 316]. The institution of public high schools had a dual role from its beginning [*ibid.*, pp. 316-318]. This is reflected in the sorts of curricula variously offered in 19th century high schools [Barnard (1857)]. Table 1 illustrates a more or less typical schema of 19th century high school curricula.

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<sup>4</sup> Note that the word "learned" used here is pronounced as a two-syllable word, "learn-ed."

**Table 1**  
**19<sup>th</sup> Century High School Curricular Subject-Matters**

<u>General Subject-Matters</u>			
1. reviews of preparatory studies	9. mensuration	17. natural philosophy	25. moral studies
2. physical geography	10. surveying	18. chemistry	26. etymology
3. history	11. navigation	19. geology and minerology	27. English literature
4. ancient geography	12. elementary bookkeeping	20. rhetoric	28. Hillard's First Class Reader
5. arithmetic	13. botany	21. logic	29. drawing
6. algebra	14. astronomy	22. political economy	30. vocal music
7. Davie's Legendre	15. higher astronomy	23. principles of government	31. German or French
8. plane and spherical trigonometry	16. physiology	24. mental philosophy	32. recitations and compositions
Classical Department	English Department	Normal Department	
from <u>general subject-matter list</u> : 1-7,14, 16-17, 26, 28, 30, 32 additional subject-matters: Latin grammars; first and second Latin lessons; Latin prose composition, Andrew's Caesar; Johnson's Cicero; Bowen's Virgil; Andrew's Latin Lexicon; Anthon's Classical Dictionary; Crosby's Greek Grammar; Crosby's Greek Lessons; Arnold's Greek Prose Composition; Felton's Greek Reader; Boise's Xenophon Anabasis; Owen's Homer's Iliad; Liddell and Scott's Greek Lexicon	all general subject-matter topics	from <u>general subject-matter list</u> : 1-7, 12-14, 16-20, 23-30, 32 additional subject-matters: theory and practice of teaching; German and French (both optional)	

Source: Barnard (1857). American high school curricula did not change very much from this from 1857 to 1900.

This dualism is illustrated in table 1 by the threefold curricular offerings. College preparation is represented in the Classical Department. A learned professional interest is displayed by the Normal Department, which trained teachers. The sorts of interests characteristic of the private academies is represented by the English Department, so named because instruction was presented in English rather than Greek and Latin. You may, however, find it difficult to identify any kinds of specific *occupations* represented in the English Department curriculum. This is because there are none. Franklin's academy concept recognized the infeasibility of labor occupation education:

As to their STUDIES, it would be well if they could be taught *every Thing* that is useful and *every Thing* that is ornamental: But Art is long and their Time is short. It is therefore propos'd that they learn those Things that are likely to be *most useful* and *most ornamental*, Regard being had to the several Professions for which they are intended. [Franklin (1749), pg. 227]

In other words, Franklin proposed to educate pupils in capital skills rather than job skills. This wise understanding was later reflected in 19th century high school curricula. It is interesting to examine the sorts of skills in particular he had in mind [Franklin (1749)].

The concept of *public* high schools was not popular in the first half of the 19th century and did not begin to gain popularity until after the Civil War of 1861-1865. Prior to 1850 there were less than somewhere around 28 public high schools in the entire United States and only somewhere between 40 to 68 by 1860. That number had grown to 2,526 by 1890 and 6,005 by 1900 [Wells (2013), pg. 317]. It at least hints of irony that PEM reformers seem to have not particularly cared for the concept of high school (their attention was much more focused on the junior high school) and, indeed, regarded it as a terrible inconvenience when high school enrollments jumped sharply in the 1930s because so many high-school-aged youths were thrown out of the job market by the Great Depression and therefore decided to continue their schooling.

However, even before PEM reformers were forced to turn their attention to the high school, the public had come to recognize an educational need for something more occupation-oriented

than the high schools could provide. This was the seed from which grew the institution of junior colleges, beginning around 1917 (figure 2). By 1970 the number of public junior colleges had grown to just over 600 schools with the total number of junior colleges standing at just over 1000 schools [Bureau of the Census (1976), pp. 382-383]. According to the American Association of Community Colleges, that number had grown to 986 by 2014 and the total number of community colleges overall had climbed to 1,132 with a total enrollment (full plus part time) of around 6.8 million students [AACC (2014)]. Of the 38 general categories of academic programs offered at U.S. community colleges, roughly half are immediately occupation-oriented [AACC (2014)].

The point I wish to make is this: Post-secondary education in the United States is instituted as a mixture of professional studies with some small degree of contribution from non-professional broadening subject-matters (offered referred to as a "core curriculum" component). This raises controversial issues of concern to public Institutes of post-secondary education precisely because of the dominating presence of private and special interests instruction in these Institutes. How, then, can such institutional special interests be *justly* governed and funded?

### § 3.1 Post-secondary Education and Common Interests

The post-Revolutionary War period witnessed the publication of views on a national system of education by various prominent Founding Fathers. Among them were George Washington, Thomas Jefferson, Benjamin Rush, Noah Webster, Samuel Knox, and Samuel Smith. There are a number of differences between all these views but there are also several common interest factors found either explicitly or implicitly in their publications or public statements. Each man was keenly aware that the radical American experiment in government placed new objectives and demands on public education, each saw public education as a national issue, and each expressed a necessity for what we would now call post-secondary education. Some of these views appear to have been more carefully thought through than others, none of them appear to have been thought through to the depths that an education scientist would deem necessary. Nonetheless, the objects of a national system of education they did express are still pertinent today despite great changes that have happened in terms of subject-matter important for modern life.

Washington was perhaps the most *laissez faire* of the Founders, expressing no specific thoughts in regard to primary and secondary education. He did, however, express to the Congress his view of a need for a national university. In his first state of the union address he said,

Nor am I less persuaded that you will agree with me in opinion, that there is nothing which can better deserve your patronage than the promotion of Science and Literature. Knowledge is in every country the surest basis of public happiness. In one in which the measures of Government receive their impressions so immediately from the sense of the Community as in ours, it is proportionably essential. To the security of a free Constitution it contributes in various ways: By convincing those who are entrusted with the public administration that every valuable end of Government is best answered by the enlightened confidence of the people; and by teaching the people themselves to know and to value their own rights; to discern and provide against invasions of them; to distinguish between oppression and the necessary exercise of lawful authority; between burdens proceeding from a disregard to their convenience and those resulting from the inevitable exigencies of Society; to discriminate the spirit of liberty from that of licentiousness, cherishing the first, avoiding the last, and uniting a speedy but temperate vigilance against encroachments with an inviolable respect to the laws.

Whether this desirable object will be best promoted by affording aids to Seminaries of Learning already established – by the institution of a national University – or by any other expedients will be well worthy of a place in the deliberations of the Legislature. [Washington (1790), pg. 750]



Congress had not acted upon "this desirable object" by the end of his Presidency, and Washington renewed his call for a national university in his final state of the union address:

I have heretofore proposed to the consideration of Congress the expediency of establishing a National University; and also a Military Academy. The desirableness of both these Institutions has so constantly increased with every new view I have taken of the subject that I cannot omit the opportunity of, once and for all, recalling your attention to them.

The Assembly to which I address myself is too enlightened not to be fully sensible how much a flourishing state of the Arts and Sciences contributes to National prosperity and reputation. True it is that our Country, much to its honor, contains many Seminaries of learning highly respectable and useful; but the funds upon which they rest are too narrow to command the ablest Professors in the different departments of liberal knowledge, for the Institution contemplated, though they would be excellent auxiliaries.

Amongst the motives to such an Institution, the assimilation of the principles, opinions and manners of our Countrymen by the common education of a portion of our Youth from every quarter well deserves attention. The more homogeneous our Citizens can be made in these particulars, the greater will be the prospect of permanent Union; and a primary object of such a National Institution should be the education of our Youth in the science of *Government*. In a Republic, what species of knowledge can be equally important? and what duty more pressing on its Legislature than to patronize a plan for communicating it to those who are to be the future guardians of the liberties of the Country? [Washington (1796), pp. 982-983]

Congress did eventually establish a national military academy (West Point) but did not act to establish the national university. There was little else Washington could do other than plead for them to do so. Despite the unconstitutional idea that the Presidency is the most powerful office in the world (or, at least, the country)<sup>5</sup>, Washington was only the Executive, not the Legislature, and it was not within his power to force Congress to do anything. It is perhaps easy to miss a subtle point Washington's argument contains – namely, that those who come to hold government office have to be *qualified* to hold it by means of a thorough understanding of the Idea of a Republic and of Republican government. Men of scant intelligence can be rulers; coercion and force are easy to understand and not difficult to apply. Much more is required for the officers and agents charged with expectations of authority in a Republic to serve the people faithfully and well.

Jefferson chaired an 1818 Commission on the University of Virginia. His report to the legislature of Virginia elaborated upon a distinction between "primary" public education and "higher" public education. In regard to the latter, he wrote,

To instruct the mass of our citizens in these, their rights, interests, and duties, as men and citizens, being then the object of education in the primary schools, whether private or public, in them should be taught reading, writing and numerical arithmetic, the elements of mensuration (useful in so many callings) and the outlines of geography and history. And this brings us to the point at which are to commence the higher branches of education, of which the [Virginia] Legislature require the development; those, for example, which are:

To form the statesmen, legislators and judges, on whom public prosperity and individual happiness are so much to depend;

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<sup>5</sup> This idea is unconstitutional because, under the concept of checks and balances, the office of the Executive is co-equal with the offices of the Speaker of the House, the President Pro Tem of the Senate, and the Chief Justice of the Supreme Court. The modern idea to the contrary is a product of the Party System, which makes the President the head of his political party with the political muscle to bully the Congress into acting when his party controls both houses. This situation is not Republican; it is oligarchy.

To expound the principles and structure of government, the laws which regulate the intercourse of nations, those formed municipally for our own government, and a sound spirit of legislation which, banishing all arbitrary and unnecessary restraint on individual action, shall leave us free to do whatever does not violate the equal rights of others;

To harmonize and promote the interests of agriculture, manufactures and commerce, and by well formed views of political economy to give a free scope to the public industry;

To develop the reasoning faculties of our youth, enlarge their minds, cultivate their morals, and instill into them the precepts of virtue and order;

To enlighten them with mathematical and physical sciences, which advance the arts, and administer to the health, the subsistence, and comforts of human life;

And, generally, to form them to habits of reflection and correct action, rendering them examples of virtue to others, and of happiness within themselves.

These are the objects of that higher grade of education, the benefits and blessings of which the Legislature now propose to provide for the good and ornament of their country, the gratification and happiness of the fellow-citizens, of the parent especially, and his progeny, on which all his affections are concentrated. [Jefferson (1818), pp. 334-335]

Measured against advances of knowledge since then and changes that have occurred in regard to the age range of students, this twofold division is too simple. Nonetheless, the objects he details do set a standard for high schools and state colleges in terms that are not unfamiliar today.

Benjamin Rush likewise stated general objects of education and proposed a somewhat more detailed plan for achieving them in Pennsylvania:

Before I proceed to the subject of this essay, I shall point out, in a few words, the influence and advantage of learning upon mankind.

I. It is friendly to religion, inasmuch as it assists in removing prejudice, superstition and enthusiasm<sup>6</sup>, in promoting just notions of the Deity, and in enlarging our knowledge of his works.

II. It is favorable to liberty. Freedom can exist only in the society of knowledge. Without learning, men are incapable of knowing their rights, and where learning is confined to a few people, liberty can be neither equal nor universal.

III. It promotes just ideas of laws and government. "When the clouds of ignorance are dispelled (says the Marquis of Baccaria) by the radiance of knowledge, power trembles but the authority of laws remains immovable."

IV. It is friendly to manners. Learning in all countries promotes civilization, and the pleasures of society and conversation.

V. It promotes agriculture, the great basis of national wealth and happiness. Agriculture is as much a science as hydraulics or optics, and has been equally indebted to the experiments and researches of learned men. . . .

VI. Manufactures of all kinds owe their perfection chiefly to learning – hence the nations of Europe advance in manufactures, knowledge, and commerce only in proportion as they cultivate the arts and sciences.

For the purpose of diffusing knowledge through every part of the state, I beg leave to propose the following simple plan.

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<sup>6</sup> In the 18th century, "enthusiasm" was most often used in a negative connotation that denoted excessive, blind passion for something without the tempering effects of thinking things through. To say someone had enthusiasm for something was not at all a compliment. Indeed, it was a kind of insult.

I. Let there be one university in the state . . .

II. Let there be four colleges. . . .

III. Let there be free schools established in every township or district consisting of one hundred families. In these schools let children be taught to read and write the English and German languages, and the use of figures. Such of them as have parents that can afford to send them from home, and are disposed to extend their educations, may remove their children from the free school to one of the colleges.

By this plan the whole state will be tied together by one system of education. The university will in time furnish masters for the colleges, and the colleges will furnish masters for the free schools, while the free schools, in their turns, will supply the colleges and the university with scholars, students and pupils. [Rush (1786), pp. 97-99]

Rush clearly expresses important common interests when he sets down "the influence and advantage of learning." Like Washington and James Madison, Rush also advocated having a national university:

[Let] one of the first acts of the new Congress be, to establish within the district to be allotted for them, a federal university, into which the youth of the United States shall be received after they have finished their studies and taken their degrees in the colleges of their respective states. In this University, let those branches of literature only be taught which are calculated to prepare our youth for civil and public life. . . . [The] following arts and sciences should be the subjects of them.

1. The principles and forms of government, applied in a particular manner to the explanation of every part of the Constitution and laws of the United States, together with the laws of nature and nations, which last should include every thing that relates to peace, war, treaties, ambassadors, and the like.
2. History both ancient and modern, and chronology.
3. Agriculture in all its numerous and extensive branches.
4. The principles and practice of manufactures.
5. The history, principles, objects and channels of commerce.
6. Those parts of mathematics which are necessary to the division of property, to finance, and to the principles and practice of war, for there is too much reason to fear that war will continue for some time to come . . .
7. Those parts of natural philosophy and chemistry which admit of an application to agriculture, manufactures, commerce and war.
8. Natural history, which includes the history of animals, vegetables and fossils. . . .
9. Philology which should include, besides rhetoric and criticism, lectures upon the construction and pronunciation of the English language . . .
10. The German and French languages should be taught in this University. The many excellent books which are written in both these languages . . . will render a knowledge of them an essential part of the education of a legislator of the United States.
11. All those athletic and manly exercises should likewise be taught in the University which are calculated to impart health, strength, and elegance to the human body. [Rush (1788), pp. 101-103]

It comes across with reasonable clarity that Rush viewed the "federal university" as the place to train competent future agents and officers of government. When agents and officers of government are public servants, and not rulers, the people are best served by *competent* servants. If the new Congress had voted to establish Rush's university, they would in effect have been legislating at least some of themselves eventually out of their jobs as Congressmen in favor of people who were more competent in the arts of government. Perhaps some of them knew this.

This sampling of views presents a broad and fairly complete picture of how the leaders of the

Founding Fathers regarded the new nation's common interests in education. It can be seen that their unifying themes turned around the basic precept of educating citizens for personal exercise of their civil liberties within the new form of civilization peculiar to America and governed by the new form of Republic that the United States' Constitution established. None of these views go into enough practical detail to be properly called a *plan*, but it is fair to say they describe the sorts of objectives any detailed plan for a national system of education should meet. These objectives call for a mixture, of some sort, of educational special interests embedded in a common interests backdrop at the post-secondary level of education. The question that this immediately raises is, of course, the practical one of *how* this can be accomplished in a way that is congruent with the social contract of the new Republic. There were two major schools of thought argued. These can be fairly characterized as the idea of a "uniform national system" vs. specialized post-secondary education. The first school of thought was represented by the Knox plan and the Smith plan; the second was represented by Noah Webster. Neither school of thought, as these men expressed it, can justly be said to really meet those common objectives.

### § 3.2 The Knox Plan and the Smith Plan

Samuel Knox and Samuel Smith each proposed fairly detailed, if in several ways naïve, plans for a national system of education [Knox (1797); Smith (1797)]. Both plans suffer from the defect of mimesis, *i.e.*, of merely copying traditional curricula and school organizations. In both cases, it seems reasonably clear that both men proceeded on the basis of their own backgrounds and on the shoulders of tradition. Knox was a minister and the president of an academy school in Maryland. Smith was a journalist and printer in Philadelphia and a member of the American Philosophical Society (APS). According to Hansen, he "comprehended" in his essay ideas held by prominent members of the APS [Hansen (1926), pg. 139].

Knox stated the objects for his proposal as follows:

In a course or system of national education, there ought to be two, and, I think, only two great leading objects to which it should be adapted, *the improvement of the mind, and the attainment of those arts on which the welfare, prosperity and happiness of society depend.*

Education ought to comprehend every science or branch of knowledge that is indispensably necessary to these important objects. To confine it to a system that comprises only the knowledge of mechanical, commercial or lucrative arts, or even a knowledge of the world as far as it can be attained by literary accomplishments, would be to view its advantages in a very narrow and illiberal light. [Knox (1797), pg. 73]

The Knox plan proposed four educational tiers: a) "parish schools," which were primary schools of the sort found in New England; b) county academies, which were basically secondary schools for college preparation; c) state colleges which would bestow a Bachelor of Arts degree and which would follow a "uniform national plan" in all states; and d) a national university, which would have been more or less an 18th century equivalent of graduate school. His plan does not offer to explain why he proposed these particular tiers, nor does it try to explain or justify the somewhat detailed curricula and courses he proposed for them. His design was for a static system of courses and topics with little room for innovations and little difference between it and the pre-Revolution school system of New England.

In his proposal, Samuel H. Smith stated,

The ideas . . . which succeed must be understood as applicable to a system of general education. They only prescribe what it is necessary every man should know. . . . In forming a system of liberal education, it is necessary to avoid ideas of too general a character as well as those which involve too minute a specification. Considerable latitude must be

allowed for the different degrees of natural capacity and the varying shades of temper and bias. It seems, therefore, fit to lay down principles which possess properties common to every mind, and which will, of course, in their application admit of few, if any, exceptions. [Smith (1797), pp. 41-42]

The Smith plan proposed a three-tiered system: a) primary schools; b) state colleges; and c) a national university [Smith (1797), pp. 67-82]. He also proposed a hierarchical structure for governing this system with a national governing board at the top and subsidiary boards below it extending down to the local level. This part of his plan is a model of Taylorism a century before that term was coined. It is a thesis that was more or less embraced by and inherent in the reforms of the Progressive Education Movement in the first half of the 20th century. The Smith plan was not as overtly bigoted as the PEM but it did have a built-in presumption that somehow or other it was possible to identify "those who have the ability . . . of acquiring a knowledge of the modern languages, music, drawing, dancing, and fencing" for admission to the college level [*ibid.*, pg. 69]. Of this cohort, a smaller number was to be "promoted" to attend the national university "in which the highest branches of science and literature shall be taught" [*ibid.*, pg. 70]. The Smith plan also presents what may be the earliest proposal in America of a tenure system for professors [*ibid.*, pp. 71-72].

The Knox and Smith plans both move swiftly into detailed levels of curricula and governance. Neither is innovative in this; the ideas presented are in nowise different from practices that were already established and traditional in pre-Revolutionary schooling. Mimesis, rather than planning to meet the common interests objects, ruled the day in both plans.

Although no national plan or system of public education ever materialized in the U.S., the course-centric educology reflected in the Knox-Smith plans did dominate the institution of post-secondary education in the U.S. up until the Civil War of 1861-1865. This is not surprising when one considers that the Knox and Smith plans, in their detailed specifics, were not innovative in terms of curriculum and reflected educology thinking as it had been before the Revolution. The mimesis exhibited in these plans is not especially different from the mimesis exhibited by the present-day Common Core State Standards Initiative or by the earnest defense of PEM reforms characteristic of the 1950s and 1960s. A special interests establishment, such as the education establishment in the U.S. today, tends to defend its own practices and dogmas – an institutional behavior characteristic of the process Toynbee documented for arrested Societies [Toynbee (1946), pp. 164-186]. Historically, once a special interests establishment is institutionalized it tends to organize and maintain itself as a Taylorite hierarchy, and by doing so it plants seeds of destruction in itself and in the Society it is intended to serve.

It can be accurately enough said that post-secondary education institution from 1800 to 1860 was one designed for a few select learned professions, especially those associated with theology and, more or less accidentally, post-secondary teaching. There is little room to doubt that this had much to do with the very low levels of college enrollments that characterized this period. It also accounts for the scathing criticisms leveled at college education later by industrialists like Andrew Carnegie. The reform in post-secondary education that happened from 1880 to 1910, in contrast, was a radical reform consistent with the ideas of Noah Webster.

### § 3.3 Webster's Ideas for Education

Noah Webster (1758-1843) is one of the most colorful characters of the Revolutionary period. Today he is mainly remembered, by those who remember him at all, for the dictionary that bears his name. But he was also a prolific essayist and publisher on many subjects, served as a militiaman in the Connecticut militia during the Revolutionary War, and after the war he traveled up and down the Atlantic coast visiting and conferring with many of America's most prominent

Patriot leaders. He has been called "the father of American scholarship and education," and in his day was probably the most un-silent man in America. He was a controversial figure and many of his ideas and proposals were ill-received. The Jefferson faction thoroughly detested him. An interesting brief biography of Webster has been given by Hansen [Hansen (1926), pp. 200-208].

Webster broke radically from the ideas of uniform and homogeneous education promoted by people like Knox and Smith. In secondary and post-secondary educational matters, he was a champion of education for special interests according to the goals of the individual. Specialized departments established in American colleges from 1880-1910 are very much in harmony with Webster's ideas. PEM differentiated curricula in secondary education is also consistent with his views but with the important exception that Webster held it was the individual, and not any board or committee of officials, who was to decide what he would choose to specialize in. His phrase "designed for" meant "having as his goal." His vision for American education is interesting:

But young gentlemen are not all designed for the same line of business, and why should they pursue the same studies? Why should a merchant trouble himself with the rules of Greek and Roman syntax, or a planter puzzle his head with conic sections? Life is too short to acquire, and the mind of man too feeble to contain, the whole circle of sciences. The greatest genius on earth, not even a Bacon, cannot be a perfect master of every branch; but any moderate genius may, by suitable application, be perfect in any one branch. By attempting therefore to teach young gentlemen everything, we make the most of them mere smatters in science. In order to qualify persons to figure in any profession, it is necessary that they should attend closely to those branches of learning which lead to it.

There are some arts and sciences which are necessary for every man. Every man should be able to speak and write his native tongue with correctness; and have some knowledge of mathematics. The rules of arithmetic are indispensably requisite. But besides the learning which is of common utility, lads should be directed to pursue those branches which are connected more immediately with the business for which they are destined.

It would be very useful for the farming part of the community to furnish country schools with some easy system of practical husbandry. By repeatedly reading some book of this kind, the mind would be stored with ideas, which might not indeed be understood in youth, but which would be called into practice in some subsequent period of life. This would lead the mind to the subject of agriculture, and pave the way for improvements.

Young gentlemen designed for the mercantile line, after having learned to write and speak English correctly, might attend to French, Italian, or such other living language as they will probably want in the course of business. These languages should be learned early in youth, while the organs are yet pliable; otherwise the pronunciation will probably be imperfect. These studies might be succeeded by some attention to chronology, and a regular application to geography, mathematics, history, the general regulations of commercial nations, principles of advance in trade, of insurance, and to the general principles of government.

It appears to me that such a course of Education, which might be completed by the age of fifteen or sixteen, would have a tendency to make better merchants than the usual practice which confines boys to Lucian, Ovid and Tully till they are fourteen, and then turns them into a store, without an idea of their business or one article of Education necessary for them, except perhaps a knowledge of writing and figures.

Such a system of English Education is also much preferable to a university Education, even with the usual honors; for it might be finished so early as to leave young persons time to serve a regular apprenticeship, without which no person should enter upon business. But by the time a university Education is completed, young men commonly commence gentlemen; their age and their pride will not suffer them to go through the drudgery of a counting house, and they enter upon business without the requisite accomplishments.

Indeed it appears to me that what is now called a liberal Education disqualifies a man for business. Habits are formed in youth and by practice; and as business is, in some measure, mechanical, every person should be exercised in his employment, in an early period of life, that his habits may be formed by the time his apprenticeship expires. An Education in a university interferes with the forming of these habits; and perhaps forms opposite habits; the mind may contract a fondness for ease, for pleasure or for books, which no efforts can overcome. An academic Education, which should furnish the youth with some ideas of men and things, and leave time for an apprenticeship, before the age of twenty-one years, would in my opinion, be the most eligible for young men who are designed for active employments.

The method pursued in our colleges is better calculated to fit youth for the learned professions than for business. But perhaps the period of study, required as the condition of receiving the usual degrees, is too short. Four years, with the most assiduous application, are a short time to furnish the mind with the necessary knowledge of the languages and of the several sciences. It might perhaps have been a period sufficiently long for an infant settlement, as America was, at the time when most of our colleges were founded. But as the country becomes populous, wealthy and respectable, it may be worthy of consideration, whether the period of academic life should not be extended to six or seven years. [Webster (1788), pp. 14-15]

In this quotation we find little evidence of the common interest objects stated earlier. Webster is a clear proponent of specialized education, and in this much of his thinking follows the ancient prejudice (dating back in the West to the ancient Greeks) that it is best for a person to focus all his efforts into just one area of specialization. He was likely America's first radical reformer for what can accurately enough be called "learner-centered education," and in this he was influenced to a considerable degree by Rousseau's *Émile* [Rousseau (1762)]. Post-secondary education today in America is very Webster-like.

#### § 4. Republican Institution of Post-secondary Public Education

The Knox-Smith systems and the Webster system are opposing poles of educology sharing a common feature that both neglect the common interest objects in the details of these systems. Reform of post-secondary public education for a Republic must begin with the principle of interests-based public institution. The reform must synthesize a unity between locally-common interests and special interests at the governing level of the institution.

Presently post-secondary public education tilts too heavily in the direction of Webster at the expense of the common interests that are the sole justification for *public* instructional education. When the institution neglects the common interests there is no just rebuttal to critics who call for all post-secondary education to be privatized. This is because strictly private and special interests have no just call on public wealth-assets for its support. What are the general common interests? Careful examination of and reflection upon the themes of common objects stated by Washington, Jefferson, and Rush uncovers five basic areas of knowledge to be imparted to learners:

1. citizenship [refer to Wells (2012a)];
2. leadership [refer to Wells (2010)];
3. mathematics and science;
4. language arts; and
5. commerce (entrepreneurship and capital skills).

Implicit in these one also finds a common interest in knowledge of history, the empirical store of knowledge of past human responses to circumstances. It is not difficult to locate these five-plus-one common objects within the frameworks of chapters 13-17.

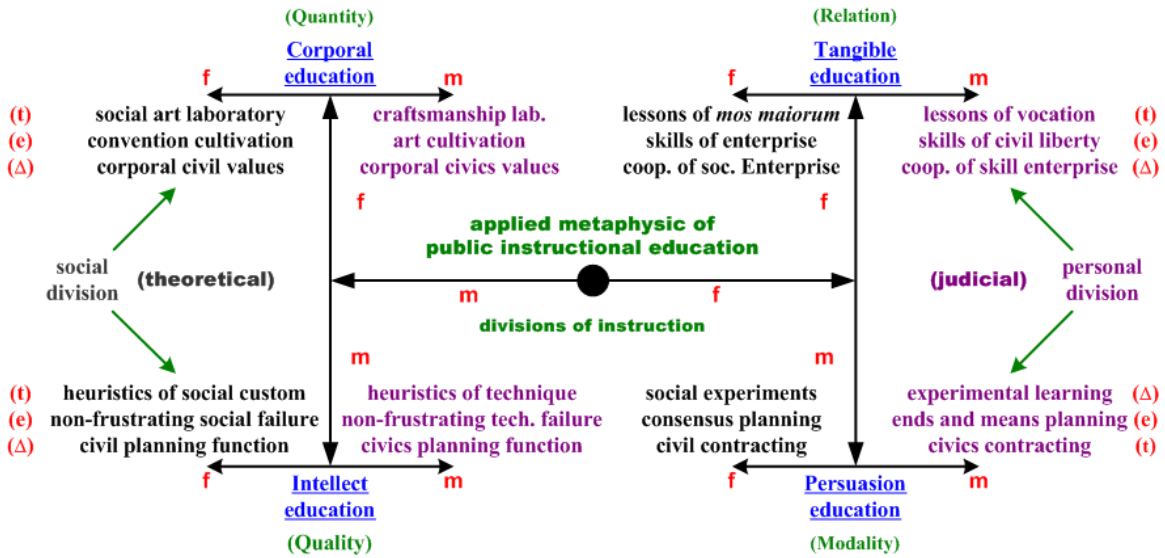


Figure 5: 3LAR structure of public instructional education.

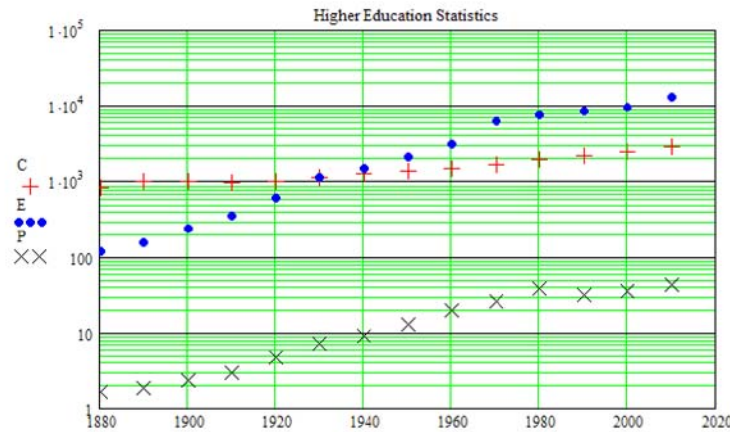


Figure 6: Statistics for 4-year Institutes of post-secondary education [Wells (2013), chap. 15, pg. 558]. C = number of 4-year Institutes; E = resident enrollments (in thousands); P = percent of 18- to 24-year olds.

With few exceptions, post-secondary learners are mature, if still inexperienced, adults who make their own selections of the specialized area or areas of knowledge they choose to pursue. They make their selections (with a few exceptions in which a student is coerced by his or her parents) on the basis of their own private interests. There is still a personal division of the learner in post-secondary instructional education, just as there is still a social division (figure 5). If enrollment in programs of post-secondary education is a measure of how well that education potentially serves Society, then the history of college enrollments demonstrates quite clearly that Webster's emphasis on professional craft studies was correct to a significant degree (figure 6) because the rise in enrollments (as a percentage of the available population) is a 20th century phenomenon.<sup>7</sup> However, if *public* post-secondary education is to be a *public good*, then it must also provide for education in the common objects of Washington *et al.* The degree to which these two divisions (personal and social) are served, relative to each other, affects how post-secondary

<sup>7</sup> The data also vividly illustrates the arrest of this growth after 1980, which corresponds to the start of the current reform movements and a resurgence of Taylorism in government and corporate management.



education funding can be *justly* sourced in terms of private vs. public sources.

#### § 4.1 Occupational Training vs. Skill Training

The distinction between post-secondary education as labor occupation training vs. training in special craft skills is a subtle one. It is almost beyond reasonable doubt that most post-secondary students choose a program of study on the basis of what kind of work they desire to take up after graduation. They have an habituated trust and expectation that the program of study (their 'major') will prepare them for success in that kind of job and provide them with necessary craft skills for entry-level employment in such a job. It is almost as much beyond reasonable doubt that their teachers have similar, if more experienced, understandings of what it is the particular degree program they teach is intended to accomplish. The U.S. institution of junior/community colleges and 4-year colleges is constructed, in the main, to serve as a kind of replacement for the pre-Economy Revolution system of apprenticeship. The most noticeable distinctions between the two are: (1) the students in the post-secondary Institutes are older than were the craft apprentices of colonial America; (2) the students are usually required to pay for this education; and (3) students are not bound by indentured servitude contracts.

Although motivating incentives for post-secondary study are occupation-centric, instruction provided by Institutes must be *skill-training-centric*. This is because, with very few exceptions, institutional education cannot prepare learners for jobs tailored to any one *specific* Enterprise employer. The Institute must prepare learners for *craft* enterprise at any of *many* Enterprises. *Occupations* differ from Enterprise to Enterprise because *jobs* involve more activities than do craft professions. For example, one's *craft* might involve building something but one's *job* might additionally require attending and participating in meetings, filling out forms and reports, &etc.

Every specific Enterprise has its own local peculiarities, culture, economic marketplace conditions, and empirical circumstances determining the sorts of challenges the entrepreneurs employed in it must overcome. I have no doubt that managers in most specific Enterprises would love to have learners explicitly trained in every nuance of their own peculiar businesses – thus saving the organization any learning costs incurred by the need to learn the peculiarities of its workplace – and I have met some whose advice rendered to faculty and administrators at post-secondary Institutes is heavily laced with precisely such demands. But in point of fact, any Institute that tailored itself to such specifics could not *justly* be an Institute of *public* education. It would instead be a *private* Institute and, as such, any expenditure of public wealth-assets to support it would constitute an injustice unless this is done by *unanimous* consent of the citizens.

Occupation-centric attitudes typically found in most post-secondary Institutes does have a not-insignificant effect on the nature of instruction provided. If the pseudo-metaphysics underlying the planning and design of curricula and course contents is so occupation-centric that it becomes *employee training* centered, then it almost invariably follows that the instruction offered at the Institute will neglect those aspects of proprietorship knowledge an individual must have in order to carry out his *personal* enterprise in business commerce successfully. To put this in slightly different terms, the education offered to the learner will prepare him to be a wage laborer but not to be a capitalist entrepreneur. It will offer to instruct him in *craft* skills but not in *capital* skills.

That is a recipe for evolving a Society along lines not essentially different from a system of feudalism, and is incompatible in its essence with the social contract of a free Society. It will tend, *ceteris paribus*, to first *create* economic class divisions within the body politic and then, secondly, to *sustain and widen* these divisions, *creating* in this process pockets of poverty within the Society. When these things happen, they *do* provoke the formation of disgruntled Toynbee proletariats and these *will*, eventually, disintegrate the Society and bring about its fall. These consequences are as social-naturally inevitable as are the consequences of physical-natural laws.

**Table 2****Example Associate Degree in Applied Science Degree Programs**

	<b>Brookdale Community College (Lincraft, NJ) A.A.S. Degree in Automotive Technology</b>	<b>Ivy Tech Community College (Indiana) A.A.S. Degree in Business Administration</b>
<b>Semester 1</b>	Auto. Fundamentals (4) Auto. Steering, Suspension & Alignment (4) Auto. Electricity/Electronics I (4) English Composition (3)	Intro. to Business (3) Principles of Management (3) Business Law (3) Intro. to Microcomputers (3) English Composition (3) Student Success Elective (1-3)
<b>Semester 2</b>	Auto. Drivelines & Transmissions (4) Engine Performance I (4) Auto. Brake Systems (4) Communications (3) General Education Elective (3)	Financial Accounting (3) Business Ethics and Social Responsibility (3) Principles of Marketing (3) Business Admin. Elective (3) Humanities/Social & Behavioral Science Elective (3-4)
<b>Semester 3</b>	Engine Performance II (4) Auto. Engines (4) Auto. Heating and Air Conditioning (4) Math, Science, or Tech. Competency Elective (3-4)	Managerial Accounting (3) Human Resource Management (3) Fundamentals of Public Speaking (3) Economics Elective (3) Mathematics Elective (3)
<b>Semester 4</b>	Automatic and Manual Transmission Overhaul (4) Humanities Elective (3) Social Science Elective (3) General Education Elective (3)	Case Problems in Business (3) Business Admin. Evaluation & Professional Development (2) Business Admin. Elective (3) Business Admin. Elective (3) Life/Physical Sciences Elective (3-5)

Source: schools' websites (2014 edition)

We do have it within our power to alter the conditions that bring about these effects. Altering the conditions is accomplished by altering the biases and presumptions of occupation-centric institution of secondary and post-secondary public education, replacing them with systematic instruction that is entrepreneur-centric and capital skills oriented. The need for this is pressing. That the United States is already exhibiting visible stages of economic arrest is shown by empirical evidences such as those discussed in Wells (2013), chapter 12. Education reforms presently being undertaken do nothing to address its causative social-natural phenomena and will fail as utterly as the PEM reforms of the 20th century and the various attempted reforms of the 19th century. When they do, I am dubious if America will get another chance at education reform.

## § 4.2 Blending of Common and Special Interests in Post-secondary Public Education

The good news in all this is that the basic existing curricular structure typical of Institutes of post-secondary public education in America does not appear to require *essential* restructuring. It requires an enlightened reconsideration of what this education's civil purposes are, and it does require some fairly significant changes in instructional and curricular design *téchne*. It does *not* require a wholesale do-over but it *does* require breaking down the isolation of silos of over-specialized departments that grew out of college reforms in the 1880-1910 period [Wells (2013), chap. 14, § 3]. Most of all, it requires common-objects-centric re-design of non-major courses.

Examination of particular program curricula offered at junior/community colleges and 4-year public Institutes reveals an over-arching similarity. Table 2 presents two examples of community college curricula that appear to have structures schematically typical of post-secondary Institutes across the United States. This structural schema is found at many community colleges and nearly all 4-year bachelor's degree Institutes (although exceptions can be found as, *e.g.*, at Walla Walla Community College in Walla Walla, Washington).

Table 3

## Culinary Arts Associate Degree Program at Finger Lakes Community College, Canandaigua, NY

First Year		Second Year	
Semester 1	(English): Composition I (3) Culinary Fundamentals + Lab (4) Foodservice Sanitation (1) Beverage Fundamentals (3) (Physical Education): Stress Reduction Through Exercise (2)	Semester 3	(English): Introduction to Literature (3) Advanced Culinary Application + Lab (4) Culinary Restaurant Practicum (5) (Physical Education): Advanced First Aid, CPR and AED (3)
Semester 2	(Communication): Public Speaking (3) Intermediate Culinary Applications + Lab (4) Food and Beverage Cost Controls (3) Mathematics Elective (3) (Nutrition Science): Introduction to Nutrition (3)	Semester 4	(Business): Business Communication (3) Culinary Senior Seminar (3) (History): Regional History of the Finger Lakes (3) (Spanish): Occupational Spanish (3) Liberal Arts Elective (3) General Elective (3)
Summer	Culinary Professional Work Experience (2)		

Source: Finger Lakes Community College website (2014 edition)

In the characteristic schema, courses are divided into: (a) 'major' courses that are craft skill courses for professional practice; and (b) 'non-major' courses, most of which lie within frameworks discussed in chapters 13 through 17 ('core courses'). A particular school might also have additional courses offered by departments outside the major department that do not fall under the 'core' convention or within the frameworks discussed in the earlier chapters. An example of this sort of curriculum is provided by the Culinary Arts major at Finger Lakes Community College of Canandaigua, New York (table 3). Courses of this sort might be required due to special local conditions or to some special aspect important to the professional practice but not taught by the major department. In table 3 this is represented by the physical education courses in first aid and cardio-pulmonary resuscitation (CPR) and in stress reduction, the Occupational Spanish course, and the nutrition course. An interesting course in the Finger Lakes curriculum is the regional history of the Finger Lakes history course. This course is presumably part of the culinary arts curriculum because it touches upon local interests in the Community that supports Finger Lakes Community College. I mention this as a reminder that "common interest" means an interest common *in the Community that establishes* a particular Institute (figure 3). *The 'core courses' are those that should be designed to serve the common objects of public education.*

Some professions are such that a two-year program is not sufficient to cover all of the craft skills deemed necessary for the profession. Examples of this include nursing and dental hygiene programs. Nonetheless, the structures of typical post-secondary curricula for these professions tend to follow the same schema of mixing craft skill courses and framework courses. They merely take one or more additional semesters to fulfill the graduation requirements.

A legitimate criticism of the framework requirements, at all levels of post-secondary public education, is that 'core' courses tend to be de-emphasized in importance by student advisors in the major departments. This is not universally true of all advisors, of course, but it is an attitude encountered frequently enough to be called typical. Much of this can be traced to two factors: (1) the silo effect that tends to accompany establishing specialized departments; and (2) the historical fact that course design within specialized departments is not based on a general Idea of the purpose of public instructional education or its axioms (figure 7) or its functions (figure 5). A consequence of the latter is that the historical development of curriculum and instructional subject matter has focused almost exclusively on craft skills without regard to the social dimension of public instructional education that is the *quid pro quo* owed to the public whose alienated wealth-assets (taxes) provide principal economic support for public post-secondary education.

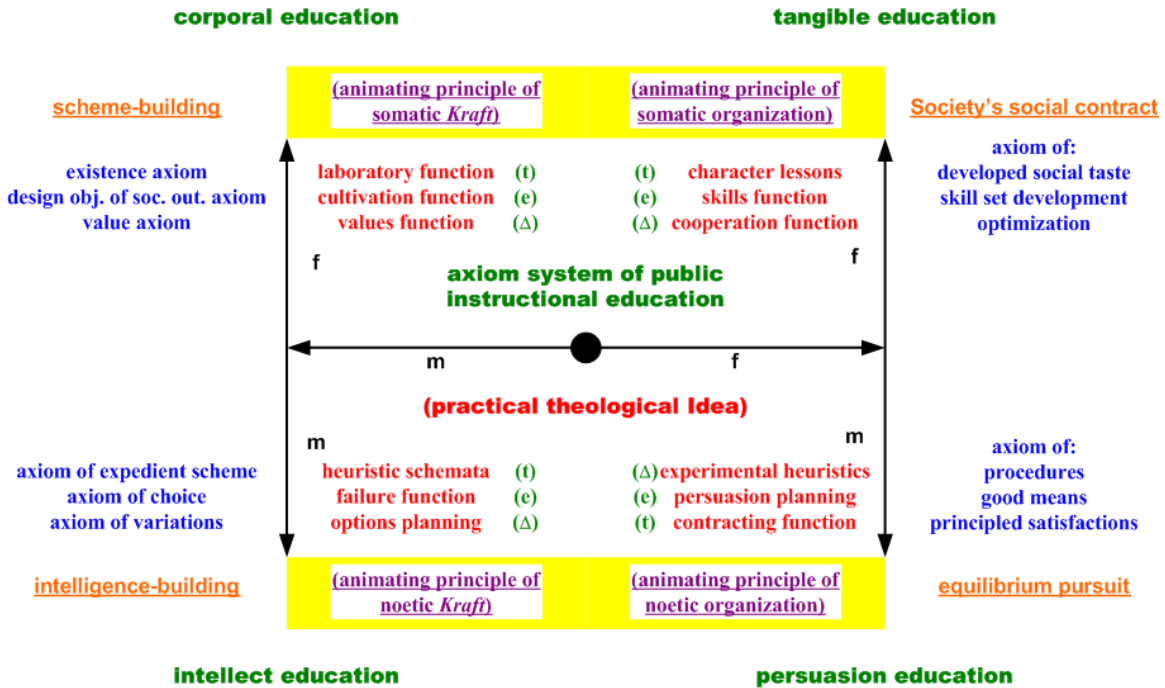


Figure 7: 2LAR structure of the axiom system of public instructional education [Wells (2012b)].

The first factor is a direct consequence of attitudes taken in the name of so-called "utility" and "social efficiency" during the radical reformation of American higher education from 1880-1910. The reformers revamped the curricula, specialized and departmentalized instruction, and created the professor-as-researcher-rather-than-teacher we know today. What the reformers ended up with had neither "utility" for the public nor "social efficiency" for the nation. Veysey found,

Thus just after the turn of the century an air of self-congratulations pervaded the ranks of the academic utilitarians. It was believed that the basic battle had been won. Some leaders, including [Harvard's] President Eliot, confused their curricular victory with something far more grandiose: the complete triumph of the ideal of public service in American universities. . . . But in fact such a picture of overwhelming utilitarian triumph constituted an oversimplification of a much more complex situation.

For one thing, the very success of the reform at the level of the curriculum seemed to dissipate the movement's crusading thrust. Routine encouraged reliance upon the newer sort of catch phrase. Then, too, as a conception utility became partly merged with at least two other academic tendencies after the turn of the century: with research on the one side and with what might be called pure administration on the other. Thus, if utility triumphed, it did so in a doubly diluted fashion. . . . The utilitarian outlook claimed the loyalty of many prominent academic figures of the nineteenth century. But others found the ideal of useful public service wanting. Either they considered it rather tritely true, but not the proper central description of the academic life, or else they openly attacked it as a distortion of what higher education should mean.

The concern of the proponents of utility for "real life" usually made them strangers to the more esoteric sorts of activity that were now taking place within academic walls. Lacking a fundamental sympathy for the inconspicuous way of life of the quiet scholar, and girded by the standard battle slogans of the Progressive Era, the "practical" educator tended to mistake his formal success for a substantial dominance that he had by no means clearly gained. Nor did he often realize what had happened when utility silently evaporated as an ideal, leaving bare a largely institutional structure that functioned as its own end. [Veysey

(1965), pp. 118-120]

So far as I know, there has never been a count taken of the number of grandiose movements – born of high ideals or passionate ideology and undertaken with the best of intentions – that lost themselves in and dissipated their energies on the myriad details that effecting any reform always entails. But it appears to be beyond reasonable doubt that such has been the fate overwhelmingly more often than not. The American Revolution is one outstanding exception the historical record can point to, and its ability to not lose sight of its ends is due only to the concentrated efforts of the Patriot leaders who worked doggedly from May 14th to September 17th of 1787 to see to it that the blood shed upon American soil during the Revolution was not shed in vain [Farrand (1911)]. Much more often, the fate of reform has been a devolution into what Santayana called *fanaticism*:

Fanaticism consists in redoubling your effort when you have forgotten your aim.  
[Santayana (1905), pg. 13]

When the work of fanaticism is done, dogma is the typical form of its institution. So it was with American higher education reform from 1880 to 1910. Even a great Idea, once it has succumbed to dogmatism, is no longer great and is re-made into a breeding ground of social enormities.

If the reform of primary and secondary public education proposed in this treatise accomplishes the reform's purposes, the breadth of reform necessary in post-secondary education is lessened. One principal shortcoming of the present institution is its inattention to capital skill to accompany acquisition of craft skills. Design *téchne* for curriculum and instruction must additionally provide the learners with a greater depth of understanding of their Duties of citizenship and the Idea of the American social contract. But it would not be necessary to *introduce* learners to these because that task would have already been accomplished by primary and secondary education. The framework courses would only need be redesigned so that they abandon the ineffective Platonism that usually characterizes course design when a course is designed without reference to the purposes of public instructional education (by which alone instruction is made relevant to life in a Republican Community). These purposes, one and all, are purposes social-naturally grounded in the Idea of the Social Contract and the Idea of the American Republic.

I think it prudent to make a special mention here of those learned professions we call sciences. Craft skill training in the empirical sciences and mathematics is, if anything, more isolated from core framework topics than, for example, the culinary arts program at Finger Lakes. Why should the physical-natural or the social-natural sciences be taught at *public* Institutes of education? The typical work of a typical scientist is usually not *immediately* aimed at commercial purposes. Such is not the personal interest that motivates a typical scientist. Veysey noted that when the professor-as-researcher metamorphosis was effected in higher education,

The lover of learning for its own sake commonly mistrusted popular approval of what he did . . . Even when he showed an interest in the goings-on of the society outside his laboratory or his library, he tended to keep the interest in a separate compartment of his mind, to be exercised after hours, so to speak. The research-oriented professor did not write for a multitude. Unlike the social scientist of the Ely circle, who might talk of converting "hundreds of thousands" to a new way of thinking and acting, the pure scientist directed his remarks principally toward a few fellow specialists. In this sense, his was a private experience. It also claimed to be a universal one, in that it sought to penetrate some new aspect of the demonstrable nature of reality. But, if it was both abstract and internally self-involved, it was rarely social. [Veysey (1965), pp. 122-123]

This would be all well-and-good *if* the wealth-assets supporting a scientist's work were all from

private sources and made no claim upon the public stock of wealth-assets. There are some research scientists whose funding is precisely and only of this kind. But for scientists who work in public Institutes of education, their liberty to professionally occupy themselves with their work is made possible by wages and capital investments taken from the stock of public wealth-assets. Some people, noting that scientific discoveries sometimes pay back this investment by empowering Progress in overall Society, are willing to underwrite scientists' asocial occupations as a speculative investment for the future. However, there are also many other citizens who are *not* willing to make such investment without some *quid pro quo*. They might insist, for example, that the scientist accept *teaching* his craft to novice learners as a Duty. They might insist that the applications of new knowledge take into account unintended social consequences and provide some sureties against its misapplication.

There is a social dimension in *public* education of a scientist. Following the changes in higher education effected from 1880 to 1910, this dimension was largely ignored, and it has steadily become ever more ignored through the passage of years. A scientist whose work is supported by public funding becomes *ipso facto* a public servant. Science education at public Institutes for this reason incurs an expectation of *obligatio externa*, namely, to include cultivation of learner social responsibility. A scientist is not excused from his Duties as a citizen in the civic practice of his craft. Indeed, this consideration is the *deontological* grounding for ethics in science, for all codes of good practice in scientific professions, and for publically-trained scientists to make a pledge *obligatio externa* for the way in which they will carry out the practice of their professions.

This public service expectation for a scientist has implications for the education of scientists inasmuch as a knowledge base beyond overly-narrow confines of specialization is necessary for the possibility of a person possessing *actual* scientific authority. By the phrase "scientific authority" I mean a *Kraft* of applying scientific knowledge in order to cause something to become greater, to increase, to be strengthened, or to be reinforced in some way. The Enlightenment era discovered discoverability; the 19th century named this 'science' and glorified it. People tended to rather naively assume that advances in scientific knowledge automatically led to improvements in people's general welfare. Despite voices to the contrary, such as Dickens', and contrary evidences rising out of the industrial revolution, science was widely regarded as prescriptive for curing any and all ailments of the world. Mathematician William Kingdon Clifford wrote,

Remember, then, that [science] is the guide of action; that the truth which it arrives at is not that which we can ideally contemplate without error, but that which we may act upon without fear; and you cannot fail to see that scientific thought is not an accompaniment or condition of human progress, but human progress itself. [Clifford (1872)]

Is it really? John Stuart Mill wrote,

[If] we would increase our sum of good, nothing is more indispensable than to take due care of what we already have. If we are endeavoring after more riches, our very first rule should be not to squander uselessly our existing means. Order, thus considered, is not an additional end to be reconciled with Progress, but a part and means of Progress itself. If a gain in one respect is purchased by a more than equivalent loss in the same or in any other, there is not Progress. [Mill (1861), pg. 16]

It would seem Clifford was either unaware of Mill's statement or else he did not agree with it. And this is in microcosm my point here: true social-natural authority vested in a scientist can only be predicated on the condition that his understanding of technical matters is broad enough to encompass some understanding of interplays between science and Society and between one special science and other special sciences. Mere *depth* in knowledge of one special area is not enough for authority in science. There must in addition be *breadth* in knowledge of other areas.

Here is where the deep over-specializations established in American higher education by the 1880 to 1910 reforms was a serious disbenefit to the public welfare. The *obligatio externa* in science education – indeed, in all specialized education – must be made to include a pledge to accept no *excuse* to neglect *breadth* of knowledge by any appeal to so-called social efficiency. All *real* disciplinary skill is *interdisciplinary* because no *real* knowledge is *isolated* knowledge. Nature is holistic and therefore so too is every true natural science.

It will take some time before reforms of primary and secondary education can bring them to the point where the presupposition of their prerequisite adequacy will be a valid presupposition. In the meantime, post-secondary education will not close its doors. A provision must therefore be made and planned for a period of transition until primary and secondary education have been brought to a state where the prerequisite presupposition is valid. During this transition, close communication and cooperation between teachers at all these levels of education will be vital.

The second factor – the misdirection of 'core' courses – is largely a consequence of the silo effect of collegiate overspecialization. What happens at most Institutes is that courses which are designated as 'core' courses are usually nothing of the sort. They are usually craft courses that are part of some other professional major or else they are "introduction to" courses "watered down" by a department for non-majors and not-infrequently relegated to graduate student teaching assistants to teach. It is not unusual for a department to regard the latter courses with a kind of silent contempt. It should surprise no one if students and faculty in other departments reciprocate with the same sort of contempt for those courses. In fact, however, *'core' courses are the only ones that justify support by the public for the Institute as an Institute of public education.* They are the courses where the common objects must be taught, and they require teachers who are skilled and knowledgeable of the subject matter – not novice instructors learning that craft.

Capital skill instruction is woefully absent from post-secondary education today. In a few majors, such as engineering, some small part of the curriculum usually includes a small part of capital skill instruction – specifically, instruction in return on investment calculations usually provided by a required course in "engineering economics." Learners studying economics or taking a minor in it often have the option of electing some additional capital skills training covering, *e.g.*, quantitative approaches to management or the basics of retailing. But in the main, framework courses available to the divers majors are not designed to functionally serve either their professional skills or the application of their subject-matters to real socio-economic life. A theory that cannot be reduced to practice is correctly called a *useless* theory; Platonism or the habit of presenting elective framework courses as if the learner is majoring in that subject are both errors hindering the cultivation of the learner in reducing their subject-matters to practice.

The overall object is to effect a *blending* of craft skill instruction – which serves to cultivate the learner's tangible *Personfähigkeit* in both the personal and social divisions of public instructional education – with skills of intellectual and persuasive *Personfähigkeit* that prepare learners to function in Society as citizens and entrepreneurs. Specific objects of instruction that are appropriate to a particular educational Institute are, again, those which serve the common interests of the local Community providing the public support for the Institute. But, as Franklin said, art is long and the learner's time is short. This means that *blending* of instruction has for a practical constraint a *limitation* – specifically, that what type and amount of subject-matter to be blended into any special training must be determined according to the principal Pertinences the specific profession affects and is affected by. Making this sort of determination is part of *téchne* for curriculum and instruction design.

## § 5. The Role of the Education Committee in Post-secondary Public Education

This leaves the issue of determining what fields of special instruction are appropriate for a

particular Institute and how the costs of this special instruction are to be provided for. Here is where a keen examination and understanding of divers mini-Community interests is crucial. The single most pressing challenge any Society must face is presented by the presence of mini-Communities embedded in the overall Society. Mini-Communities are themselves the product of the social-natural law that each individual chooses his own personal society; mini-Societies and mini-Communities emerge from cooperations found among the personal societies of individuals.

The membership structure of the education committees discussed in Part I of this treatise was designed in recognition of this factor. It is not part of the expectation of authority that committee members design curricula or decide upon subject-matters, but it is part of the expectation that the committee as a whole be capable of making the best determinations they can of how local special interests reconcile with local common interests so that their governing of public education can effect this reconciliation to the extent education is able to effect. It is likewise their Duty to see to an equitable distribution of funding sources in such a way that members of the public bear the proportionate costs of providing for the common interests while special interest mini-Societies bear the proportionate cost of those parts of professional instruction that directly serves their special interests but only remotely serves general public interests. The typical practice of funding post-secondary Institutes on the basis of one type of broad taxation – e.g. property tax or income tax – when parts of the costs of the institution provide benefit only special interests is unjust.

Historically, the faculty of an education Institute have been the people who not only designed academic programs but also made the decision to implement them. The special expertise of faculty members should not be overlooked, but *informed decision-making* by the governing committee should never be taken lightly nor should it be "outsourced" by the committee. It is often true that proposals for new academic programs must be "approved" by some governing body. In Idaho this function is performed by Idaho's State Board of Education, and other states do not greatly differ. However, when one examines actual governance practices, committees like this Board usually merely rubberstamp whatever is recommended to them with little or no consideration given to how or whether a new program serves any locally *common* interest. They are, however, oftentimes keenly aware of and responsive to *special* interests. They do not typically recommend tax policies to the state's governor or legislature. These are all practices that must be amended.

This facet of the Republican governance of public instructional education is not easy to accomplish, and, yes, the representatives charged with this governance will make mistakes. No one ever said a Republic is an easy form of Community to actualize. It is the most difficult and challenging of all the historical forms of governance that have ever been widely adopted. This, by the way, is the principal reason why a thorough public education in the principles of government for the American Republic is so crucial for the well-being of the nation. The first major enormities effected by the general government of the United States did not occur until the election of the populist government of Andrew Jackson and his Democratic Party, America's first national political party. Woodrow Wilson wrote,

The election of Andrew Jackson marked a point of significant change in American politics – a change in *personnel* and in spirit, in substance and in method. . . . Almost immediately upon entering the period of Jackson's administration, the student finds himself, as if by a sudden turn, in the great highway of legislative and executive policy which leads directly to the period of the civil war, and, beyond that, to the period of our own day. . . . More significant still, a new spirit and method appear in the contests of parties. The "spoils system" of appointment to office is introduced into national administration and personal allegiance is made the discipline of national party organization. All signs indicate the beginning of a new period. [Wilson (1909), pg. 9]



James Madison astutely noted,

But what is government itself but the greatest of all reflections on human nature?  
[Hamilton *et al.* (1787-8), no. 51, pg. 288]

Representative democracy (the form that is often called a democratic republic) and rulership by monarchy/oligarchy are both much simpler to effect; but both are also *essentially* antisocial and *essentially* unjust in their treatment of *at least* a minority of citizens. Public education belongs to the judicial branch of a Republic's government, and the establishment and preservation of justice is its highest governing objective. Governing a Republic is a serious and difficult task and success in it requires officials who are well versed in and committed to its principles.

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