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The Journal of the
New York State
Foundations of
Education Association

Volume 1 (2020)

EDUCATIONAL ABUNDANCE

The Journal of the New York State Foundations of Education Association

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Precedents and Prospects of The New York State Foundations of Education Association

Richard Ognibene and Greg Seals

Siena College and College of Staten Island/City University of New York, respectively

Abstract: Richard Ognibene recalls some people and activities associated with NYSFEA during its first decade. Three themes clearly emerge from the recollection to identify NYSFEA's original mission and purpose: 1) securing a vital place for Foundations courses in teacher education programs, 2) contributing to creation and maintenance of a just and peaceful society, and 3) improvement of classroom life and quality of instruction in schools. Greg Seals' editorial introduction to this inaugural (2020) issue of *Educational Abundance: The Journal of the NYSFEA*, discusses the journal's contents as examples of work in each of the three themes characteristic of early NYSFEA and considers prospects for the Association as it begins a process of reorganization and renewal.

Reminiscence on the First Decade of NYSFEA

The New York State Foundations of Education Association (NYSFEA) was born at SUNY Cortland in 1971 and nurtured by colleagues there who believed that such an organization was necessary to ensure the continued existence of Foundations as a program component in New York colleges that educated teachers. The idea of a Foundations association caught on almost immediately. Indeed, there was sufficient interest to organize both fall and spring conferences, and by fall 1976 there had been ten of them. In addition, in 1974, NYSFEA began to publish a journal aptly named *Educational Change*.

There is no mystery about the original purpose of NYSFEA or who was responsible for launching the organization. That honor belongs to Jeff Herold, an historian of Education who came to Cortland in 1969 directly from graduate school. He sought and obtained permission from administration to convene an organizational meeting of SUNY Foundations of Education faculty in 1971. "My basic reason for forming the Association had nothing to do with left-wing politics," Herold confided. "I simply thought it would be good if SUNY Foundations of Education faculty could get together occasionally to discuss the place of Foundations in our undergraduate and graduate teacher education programs as well as to share methods for teaching the courses." NYSFEA was open to all Foundations professors from public and private colleges immediately after it was organized.

The timing for creating a state-wide Foundations organization could not have been better. Prior to the founding of NYSFEA (and, seemingly, continuing forever), questions about the value of Foundations were part of a conservative attack from those with a mechanistic view of the nature of professional training in Education. Individuals with this point of view also believed that there was no place in teacher training programs for content and experiences that encourage alternative perspectives about the purposes the teaching profession was meant to achieve. One could not dare to build a new social order if one did not know it was needed or know that teachers should have an important role in helping to shape that new and more just society.

At the beginning of the 1970s, the expression of conservative ideals about the role of teachers and their training was embedded in a training model known as "performance-based teacher education" (PBTE) or "competency-based teacher education" (CBTE). This model was fully supported by the American Association of Colleges for Teacher Education (AACTE) and by most state Education Departments. Books and monographs about CBTE dominated the field

of teacher education, and in 1972, the New York State Education Department mandated that all college teacher training programs must be developed or reconstituted in a CBTE format. The competencies that constituted the main content in college certification programs were predominately derived from methods and educational psychology courses. Because faculty from those areas outnumbered those from Foundations, there was little motivation to include Foundations' insights and values in those programs. This development was an important topic in the early years of NYSFEA, especially since new Foundations faculty were being terminated as a result of CBTE program development.

Of course there was no way a fledgling academic society could alter the competency-based environment established by the New York State Education Department, but there was one approach that could mitigate the damage to Foundations and that was for Foundations faculty to become an active force in the development of CBTE programs rather than hanging back in despair. Conversations at NYSFEA fostered this approach, and that was what happened at several colleges that retained strong Foundations components in their programs. Indeed, thirty years later, this same approach was discussed and encouraged at American Educational Studies Association (AESA) conference panels focusing on yet another AACTE set of standards (the fourth or fifth set since CBTE). A participant on one of those panels was Richard Ognibene, a founding member of NYSFEA, who had developed an education program at Siena College that contained a strong Foundations component.

Discussions of teacher education issues did not remain the central focus of NYSFEA. How could it? Jeff Herold's Foundations colleagues at Cortland were Bill Griffen and John Marciano, both of whom were passionate, radical activists devoted to the work of creating a peaceful and just society from both inside the college classroom, where they could share their perspectives with teachers in training, and outside the classroom, where they would be observed practicing what they preached. Griffen, the senior member of this activist duo, began teaching at Cortland in 1955 and remained there until illness forced his retirement in 2006. His political transformation took place in the early 1960s when one of his former graduate students was murdered in Alabama while trying to promote racial integration. This event moved Bill and his wife, Judy, to become active participants in the Civil Rights Movement through their literacy work and efforts to register Black voters in the South. Bill subsequently became heavily involved in the attempt to promote peace; and founded an anti-Vietnam War group, Cortland Citizens for Peace, an organization that is still active.

Bill's work was enhanced and expanded when John Marciano joined the Cortland faculty in 1969. Marciano had done his doctoral work at SUNY Buffalo. While there he made a name for himself as a founding member of the Students for a Democratic Society (SDS) group on campus, and as a participant in an anti-war demonstration led by Dr. Martin Luther King, Jr. As a member of the University at Buffalo Graduate Student Association, Marciano was responsible for bringing Dr. King to Buffalo in the fall of 1967 and was his constant companion all the while he was in town. King's speech focused on the need to do more to achieve racial integration and to winning the war on poverty rather than the unjust war in Vietnam. While at Cortland, like Griffen, Marciano was also a community activist, serving as chair of the Tompkins County Human Rights Commission.

From 1971 on, Marciano and Griffen helped shape the agenda of NYSFEA, and that did not change when Jeff Herold left Cortland in 1974 and Ron Butchart joined the faculty as his

replacement. Butchart was writing a revisionist historical study of the work of secular and religious aid societies and the Freedman's Bureau in the education of freedmen during the Civil War and Reconstruction. Butchart's research shattered conventional wisdom about the purposes of those groups and culminated in his 1980 book *Northern Schools, Southern Blacks, and Reconstruction: Freedmen's Education, 1862-1875*.¹

The year before Butchart's book appeared, Griffen and Marciano also published a book, *Lessons of the Vietnam War: A Critical Examination of School Texts and an Interpretive Comparative History Utilizing the Pentagon Papers and Other Documents*.² They sent the manuscript to Howard Zinn, Noam Chomsky, and Jonathan Kozol, all of whom responded favorably, with Zinn offering to write the Foreword. It's hard to imagine a more radical 1970s trio than these supporters of Griffen and Marciano's work, which gives a hint about the kind of political philosophy that prevailed among NYSFEA members. As Ron Butchart wrote when reflecting on his early association with NYSFEA: "Overall, the organization probably had, at the time, the largest concentration of leftists anywhere!"

In 1977-1978, under the leadership of AESA, the Council of Learned Societies in Education developed of set standards by which to delineate and assess the purpose and effectiveness of Foundations instruction. AESA continues to state that the purpose of Social Foundations study is to bring intellectual resources (from humanities and social science disciplines) to bear in developing interpretive, normative, and critical perspectives on Education, both in and outside of schools. Clearly, in its first decade, NYSFEA's agenda, as well as the publications and social activism of some of its notable members, indicates how aligned the organization was with national developments in the Social Foundations field. Not coincidentally, AESA was created in 1968; NYSFEA followed in 1971.

Classroom life was not an issue that was ignored by NYSFEA members, neither as a subject to be studied nor in the quest for personal excellence while teaching. Ron Butchart, for example, after only six years of college teaching, received the SUNY Chancellor's Award for Excellence in Teaching in 1980. Between 1975 and 1981, Richard Ognibene published articles on the specific use of college classroom strategies such as values exercises, simulations, and affective teaching methods, and a general article entitled "Improving College Teaching: A New Role for Educational Foundations."³

No doubt, the NYSFEA member most well-known for a focus on curriculum and instruction was Bill Doll, Jr. from SUNY Oswego. Doll was President of NYSFEA in 1975 and was the first to introduce his colleagues to the emerging caring classroom ideas of Nel Noddings and the curriculum theory of Bill Pinar. Pinar left the University of Rochester in 1985 to go to Louisiana State University, and a few years later Doll left Oswego to join him there. Together they worked to make the idea of "curriculum reconceptualization" an internationally known way to view curriculum as an activity that emerges in a classroom and not something constructed

¹ Ronald E. Butchart, *Northern Schools, Southern Blacks, and Reconstruction: Freedmen's Education, 1862-1875* Contributions to American History Series, No. 87 (West Port, CT: Praeger, 1980).

² William Griffen and John Marciano, *Lessons of the Vietnam War: A Critical Examination of School Texts and an Interpretive Comparative History Utilizing the Pentagon Papers and Other Documents* (Tottowa, NJ: Rowman and Allanheld, 1979).

³ Richard Ognibene, "Improving College Teaching: A New Role for Educational Foundations," *Midwest Education Review*, 12, nos. 3-4, (Spring-Summer, 1980): 19-31.

ahead and then delivered to students. When Bill Doll traveled to China on several occasions to consult with officials about the Chinese curriculum reform project, few remember that five years after it began, Bill was president of NYSFEA.

This essay recalls some people and activities associated with NYSFEA during its first decade. It is for others to judge whether or not NYSFEA has continued down the path carved out by its founders. In writing this essay, the discovery that moved this author the most was that in 2008, one year after his death, Bill Griffen received SUNY's Distinguished Citizen Award. It is not a stretch to say that helping to produce good citizens is a goal that Foundations professors strive to achieve.

Richard Ognibene

Prospects for NYSFEA: An Editorial Introduction

Taking up the challenge with which Richard Ognibene ends his retrospective on the early years of NYSFEA as I consider the articles in this volume, I see clear connections to the past and the present of NYSFEA:

Mark Garrison's "I Feel Like a Robot" concerns itself directly with the theme of a just and peaceful society. Mark sees behaviorist approaches to social-emotional learning (SEL) as selling out the just society for the peaceful one, as inducing a sort of psychological *pax Romana* in which quietude is purchased at the cost of meaningful interpersonal relationships. It takes more than behavior to construct significant social connections. Relationships worth having are forged in fires of trust fueled by heat generated in mutual decision-making aimed at achieving shared goals.

Timothy Glander's "The Liberal and the Technical in Teacher Education — Revisited" takes on the theme of improved life in classrooms and improved quality of instruction in schools. Ceding the point that technist know-how is an important aspect of teacher knowledge, Tim nonetheless demonstrates the uselessness of running "the machine" without knowing why the machine is running; why you, rather than someone else, operates the machine; and how to adapt the machine to various environmental circumstances and conditions as you are running it. Master teachers understand and utilize both strategic and tactical thinking in their work with students.

Greg Seals' "Ecologies of Elegance" carves out a permanent place in schools for Social Foundations of Education. Efficiency approaches to organization and operation of schools cost more than they are worth when they prevent collateral learning from occurring. Elegant schools, not efficient ones, collaterally foster positive attitudes among students towards schooling and school subject matters. Ethnographic information required to promote collateral learning is the very data professionals versed in Foundations bring to pedagogical conversations. Teachers made savvy in Social Foundations courses about the educational value of students' life worlds gain expertise at creating educational energy among their students.

Shawgi Tell's "Unstoppable Resistance to Charter Schools," with its call for readers to join a growing movement to end privatization of education, echoes the social and cultural activism backgrounding the founding of NYSFEA. Conscientization about issues of social justice, commitment to construction of a fairer society, and recruitment of compatriots in fighting the

winnable war against oppression all embody the sort of high-intensity citizenship characteristic of the lives of the good people who first established the Association.

Finally, Richard Ognibene’s historical case study, “Innovation or Tradition,” compares the trajectories of two very different, but regionally similar, institutions of higher education: Union College, oriented to experimentalism in education from its beginning, and The University of Rochester, which, in its early years, attempted to cling to classical conceptions and traditional canons of higher education rather than adopt liberal ideas and an innovative attitude towards post-secondary schooling. The Union vs. Rochester matchup demonstrates that a spirit of innovation beats a body of tradition every time.

Ognibene’s paper connects to another, overarching theme characteristic of NYSFEA that he does not explicitly discuss in his reminiscence. That theme finds expression in the title of the NYSFEA’s original journal, *Educational Change*. NYSFEA has always been and continues to be supportive of changes to schooling that move us farther away from educational scarcity and bring us closer to educational abundance. Under current regimes of education theory and school practice, ours is sad a story of educational scarcity, a seemingly society-wide lack of school environments in which learning abounds. All indications seem to point to the fact that the one thing we all really need, a good education, is among the hardest things to acquire. Themes Ognibene does point out in his remembrance, however, — securing a vital place for Foundations courses in teacher education programs, contributing to creation and maintenance of a just and peaceful society, and improvement of classroom life and quality of instruction in schools — do seem to coalesce around the idea, not of educational scarcity, but, rather, it’s opposite, the idea of educational abundance. Educational abundance demands creation of an approach to educational theory and school practice able to improve the education of students from all strata and segments of society. This is the source of the change of name for the current, revived NYSFEA journal: *Educational Abundance*. The Association’s interest in and commitment to educational change has not altered or diminished. It has only taken on orientation to a more specific direction, pointing towards a less amorphous end in view.

The Association hopes that many respond positively to its call for educational abundance. However, no matter what the future may hold for NYSFEA, I want to thank, both personally and on behalf of the other presenters and attendees at the March, 2019 meeting of NYSFEA, the Foundations faculty in the School of Education at Nazareth College (Pittsford, NY) — Timothy R. Glander, Shirley Mthethwa Sommers, and Shawgi Tell — for courageously convening and graciously hosting NYSFEA’s first conference after a lengthy hiatus. May this turn out to have been the first of many more meetings to come.

Greg Seals

Feeling like a Robot: Origin, Critique and Alternative to “Social-Emotional Learning”

Mark Garrison
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Abstract: The origin of SEL in positive psychology, competency-based education and its behaviorist antecedents is highlighted as mirroring machine learning. The paper then links this understanding of social emotional learning to big data driven education technologies employed by marketing firms, “edupreneurs”, corporate and government entities. Techniques such as sentiment analysis and management of personality through promotion of “grit” and “growth mindset” are explored in relation to new norms of neoliberal austerity, valorization of the militarized personality, and content-free understanding of “goal” as a feedback loop. The paper ends by presenting an alternative vantage point from which to promote the all-sided development of youth, focusing educators’ attention on transformation of culture inside and outside schools by developing the human power to decide. Examples from an ongoing study of professional learning in five schools in Georgia are used to argue for creating social-emotional conditions in schools that affirm human development and avoid the capital centric habit and pathology of people-fixing. While it is widely recognized that poverty and alienation are conditions in which psychological maladies targeted by SEL advocates emerge, few advocates call for the obvious solution: elimination of poverty and renewal of social institutions on the basis of guaranteeing human rights. Ignoring the demand for renewal through the imposition of SEL only exacerbates the crisis.¹

Introduction

Many scholars, policy makers and educators are relieved by the contemporary focus on “social-emotional learning” (SEL) and the apparent focus on the “whole child”. According to Google metrics, use of the phrase ‘whole child’ has increased 300 percent since 1980, when it had no reported use. Federal and state governments, research institutes, think tanks, philanthropies, even international bodies such as the Organization for Economic Cooperation and Development (OECD) and World Economic Forum (WEF) champion so-called SEL. For too long, enthusiasts and reformers point out, policy has directed educators to focus on a limited set of cognitive outcomes, giving rise to a wide-range of well documented problems associated with “high stakes testing.”² Growing concerns about mental health among school-aged youth and school shootings have helped create the conditions for a positive reception of the SEL agenda across the country.

This paper explores the origin and meaning of the SEL movement, offering a critique and alternative. Social-emotional learning is the broad lexicon used to designate those areas of human development erroneously referred to as “soft skills”. The paper demonstrates that SEL is largely *operationalized* as “grit” which requires having a “growth mindset” and a host of related psychological attributes such as “executive functioning”. The main thesis of this paper is that “social-emotional learning” stigmatizes social critique and social consciousness of the need and demand for social, political and economic empowerment as a basis for solving a host of social problems, and imposes an amoral, hyper-individualistic and mechanistic form of “character education” where social and emotional life is rendered narrowly in “skills” terms, denying human *species being*. It is shown how the profoundly human qualities of empathy, love, and

¹ This paper is based on my forthcoming book, *Skinner’s Ghost in the Smart Machine: Algorithmic Education and the New Behaviorism* (Routledge).

² It should be noted that many of the same social forces that imposed test-based forms of accountability, charters and other corporate-inspired management schemes that failed to improve public education are now championing SEL.

purposeful conduct are, in the SEL framework, given as narrow and discrete skills developed through behavioral reinforcements and the cybernetic control logic of feedback. Taken together, SEL constitutes a form of schooling for life as a virtual human at best, and a robot at worst.³

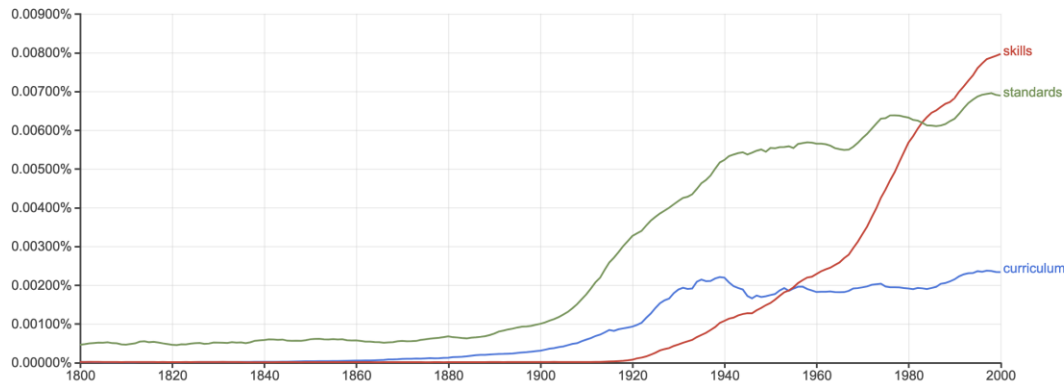


Figure 1: Google Ngram Viewer data for relative frequency of “skills”, “standards” and “curriculum” 1800-2000.⁴

“Skillsification”

Every human attribute, every characteristic, is increasingly rendered in skills terms by self-appointed reformers, governmental and non-governmental agencies, an army of corporate consultants and vendors, and a supporting mass media. (See **Figure 1**.) Not only so-called “critical thinking skills” or “communication skills,” but personality traits such as discipline and human qualities such as empathy are now presented in skills terms. Such skills are presented as *competencies* to be assessed against a minimum standard. The movement to promote SEL originates within this effort to re-define education as development of skills or competencies.

This competency-based education (CBE) approach is often associated with “personalized learning,”⁵ where assessment plays a very important role: “feedback” (that is, data) governs

³ The use of the word “operationalized” here is conscious and meant to reference the technical meaning of the word in the behaviorist and positivist traditions, wherein the meaning of a word is derived from measurement, and not theory. This practice has political, philosophical, and scientific ramifications. See Mark J. Garrison, “Resurgent Behaviorism and the Rise of Neoliberal Schooling,” in *Handbook of Global Education Reform*, ed. Kenneth Saltman and Alex Means (Hoboken, NJ: Wiley-Blackwell, 2018): 323–49; Mark J. Garrison, “Measurement as Politics by Other Means: The Case of Test-Based Teacher Evaluation,” in *Teacher Evaluation: The Charge and the Challenges*, ed. Kate E. O’Hare (New York: Peter Lang Publishing, 2015): 39–58; Burrhus F. Skinner, “The Operational Analysis of Psychological Terms,” *Psychological Review* 52, no. 5 (1945), 270–277; John A. Mills, “Operationism, Scientism, and the Rhetoric of Power,” in *Positivism in Psychology: Historical and Contemporary Problems*, ed. C. W. Tolman (New York: Springer-Verlag, 1992): 67–82.

⁴ While *curriculum* is a domain specific word, and therefore its frequency would be expected to be less than that of less domain specific words such as *skill*, in the context of the analysis here it does suggest a trend to disregard those domains of theory and practice most associated with professional educators — curriculum and pedagogy — and their replacement by automated algorithms and machine logic learning theories.

⁵ See <https://knowledgeworks.org>; also see: World Economic Forum and The Boston Consulting Group, “New Vision for Education: Fostering Social and Emotional Learning through Technology” (World Economic Forum, March 2016), http://www3.weforum.org/docs/WEF_New_Vision_for_Education.pdf.

future behavior (e.g., “drives continuous improvement”). Importantly, the idea of assessment as “feedback” is rooted in the behaviorist inspired field of cybernetics, now known as “deep learning” (machine learning).⁶ Unbeknownst to many, higher education accrediting agencies such as the Middle States Commission on Higher Education advocate governance on the basis of “feedback loops” or “closing the loop” — a notion originating with the Cold War and the militarization of computer science.⁷

Rooted in the work of John B. Watson, B. F. Skinner and linked to Norbert Wiener, the inventor of modern cybernetics, competency-based education views all human qualities and attributes as behaviors governed by feedback loops. Competency is given simply as “what one can do,” as discrete skills. Understanding, consciousness and other human qualities that do not have a verb form are never seriously addressed in this model.⁸ The competency education movement has various origins and dates back at least to the efficiency movement of the progressive era, and is linked to a particular form of vocational education and performance based teacher education in the 1960s.⁹ It has been gaining momentum and influence since the anti-social offensive of the Reagan-Thatcher era, and especially since the 2008 economic crisis and the rise of Silicon Valley as a technology powered form of governance, of surveillance capitalism and the emergence of what Williamson terms the “robot economy.”¹⁰ Once only associated with vocational and special education, education as competency now operates in core academic areas including higher education, often and increasingly via online education initiatives and other digital technologies.

While differences, nuances and competing frameworks exist, CBE tends toward the elimination of curriculum and pedagogy, and at its essence is best defined as “the minimal behavioral sequence produced by a human to receive a positive assessment.”¹¹ For John Preston, Fellow in Conflict, Crime and Security studies for the Social Research Council, this social form is anti-education, reactionary and an existential threat to humanity. Competency based education, he explains, “makes the differences between humans and machines less distinct. Humans are not just ‘like’ machines (in that their anatomy and physiology are analogous to machines) but they are presented as special kinds of machines ... assessed in terms of their ability to produce a

⁶ Ian Goodfellow, Yoshua Bengio, and Aaron Courville, *Deep Learning*, Advanced Computation and Machine Learning (Cambridge, MA: MIT Press, 2016); Yoshua Bengio, Ian J. Goodfellow, and Aaron Courville, “Deep Learning,” *Nature* 521, no. 7553 (2015): 436–44.

⁷ Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge, MA: MIT Press, 1997).

⁸ Examples of this are legion; a search for 21st century skills should suffice to convince the reader of the veracity of this claim. For examples, see N. Shechtman, et al., “Promoting Grit, Tenacity, and Perseverance: Critical Factors for Success in the 21st Century” (U.S. Department of Education Office of Educational Technology, 2013); OECD, *Measuring Innovation in Education: A New Perspective* (Educational Research and Innovation, OECD Publishing, 2014); Anna Davies, Devin Fidler, and Marina Gorbis, “Future Work Skills” (University of Phoenix Research Institute, 2011), http://www.iftf.org/uploads/media/SR-1382A_UPRI_future_work_skills_sm.pdf. also see: <http://www.nea.org/home/34888.htm>.

⁹ John Preston, *Competence Based Education and Training (CBET) and the End of Human Learning: The Existential Threat of Competency* (New York: Springer, 2017), 13.

¹⁰ Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: PublicAffairs, 2019); Ben Williamson, “Education for the Robot Economy,” code acts in education, February 1, 2019, <https://codeactsineducation.wordpress.com/>.

¹¹ Preston, *Competence Based Education and Training (CBET) and the End of Human Learning: The Existential Threat of Competency*, 28.

certain binary output or not — the competence.” As machines have no internal psychological states — such as changes in consciousness or understanding or even the uniquely human product, knowledge — there is no need for pedagogy or curriculum.¹² What counts and gets counted is the *behavior*, the output.

Neoliberal arrangements are readily and correctly viewed as a point of origin for this redefinition of education. It is not at all shocking that the hyper-individualistic notion that “grit” alone explains an individual’s success is now heavily promoted. Yet it must be understood that this theory and practice existed prior to post-Fordist political economies (e.g., Taylorism and the behaviorism of the 1920s). The idea that human abilities and sentiments operate as *automata* dates back, in fact, to Pascal, possibly the first to view human belief as emerging from automatic behavior (such as kneeling for prayer). The full expression of education as competency may suggest a transition to a post-neoliberal form of late capitalism and not a mere repeat of Horatio Alger’s bootstrapping mythology.¹³

Are Social-Emotional Phenomena Competencies?

In this now dominant framework, social and emotional phenomenon are given as skills. Programs such as Positive Behavior Interventions and Supports (PBIS) and the promotion of “grit” and “growth mindset” and the more general proclamations of the importance of “social emotional learning” all sustain a skills focus, derived from the behaviorist inspired competency education model. The World Economic Forum report speaks of “using social and emotional skills” as if social and emotional experiences are summoned like a waiter to more quickly satiate oneself, *as if there is no whole indivisible person*, but only an amalgam of discrete and disembodied powers that can be called into action when externally stimulated to do so.¹⁴ The social and emotional foundations of human *being* are thus redefined in purely instrumental terms.¹⁵ Two examples will suffice to make the point.

Spurred by grants from the United States Department of Education and a host of “edupreneurs”, *Education Week* reported on efforts to embed daily readiness assessments in kindergarten classrooms. “Nearly one-third of the skills [teachers have] been trained to look for are in the domain of ‘social foundations,’ which includes skills such as expressing concern for

¹² Preston, *Competence Based Education and Training (CBET) and the End of Human Learning*, 17. While not addressed here, witness the increased reporting on the lack of value of textbooks and push for open education resources; these resources are mostly digital in nature and directed to support the expansion of online educational formats (as “delivery” of content, sans curriculum) that rely on data-centric technologies to automate and assess, direct and monetize learning behavior generated in online platforms.

¹³ Kenneth J. Saltman, “The Austerity School: Grit, Character, and the Privatization of Public Education,” *Symploke* 22, nos. 1–2 (2014): 41–57; Alexander J. Means and Graham B. Slater, “The Dark Mirror of Capital: On Post-Neoliberal Formations and the Future of Education,” *Discourse: Studies in the Cultural Politics of Education*, January 21, 2019: 1–14; A. Hamza, *Althusser and Theology: Religion, Politics and Philosophy*, Historical Materialism Book Series, Volume 124 (Boston: Brill, 2016).

¹⁴ While the post-humanist challenge to the integrity of an individual is fashionable, that is not the view taken here. There is no space here to directly challenge this view other than to point out that it is, significantly, foreshadowed in the work of behaviorists and positivists, including Karl Pearson’s disbelief in a “self” — that is, the view is not new and is consistent with the intellectual history of behaviorism, cybernetics and machine learning. On Pearson, see Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995), 76.

¹⁵ World Economic Forum and The Boston Consulting Group, “New Vision for Education: Fostering Social and Emotional Learning through Technology,” 9.

others, following multi-step directions, and working cooperatively.”¹⁶ With this formulation, we have moved from the tired focus on basic skills in reading and math to an understanding of the social-emotional domain — what might be better discussed as *socialization* — in purely skills-terms. We must ask: is expressing concern for others properly thought of as a “skill”? According to the article, these skills are to be ranked along a continuum of “not yet evident”, “in progress” or “proficient”.

In the 2017 special edition of *The Future of Children* dedicated to social emotional learning, “skill” is mentioned 62 times in the eight-page introductory article.¹⁷ Grit, growth mindset, and self-regulation are all given as skills, with “competency” offered as a synonym for skill. While there are at least three possible definitions of skill, no definition or nuance is offered. Upon examination, the behaviorist conception of skill dominates the discussion. While knowledge and understanding may be “necessary conditions of the exercise of a skill,” they are in this view “regarded as mere inputs as far as measuring the outcome is concerned.” Thus, as defined by the National Skills Taskforce in the UK, skill is pure behaviorism, defined thusly: “skill is the ability to perform a task to a predefined standard of competence.” “The difficulty,” Hinchcliffe explains, “is the same as that which besets competence assessment insofar as it focuses on outcomes rather than process, assumes a disjunction between performance and person [and context] and tends to disregard personal qualities of both mind and character.”¹⁸

It is important to note the now common mistake of conceiving of emotion in behavioral terms, conflating experiencing anger with aggressive acts, for example. Yet feelings (e.g., pain) and emotions (e.g., love) are experiences or conditions, not themselves behaviors.¹⁹ The behaviorist and cybernetic thesis that all aspects of psychological and social life can be reduced to or understood solely as behavior — the aim of this reduction being the prediction and control of behavior²⁰ — is remarkably consistent with what would be needed to restructure human being on the basis of automated machinery. Once the skillsification takes place, behavior regulation through automated feedback loops (assessment) can be accomplished: in this manner behavior is directed, monitored, and monetized. As Preston argues, this poses an existential threat to humanity because it eliminates internal processes of change and growth and understanding, thus emasculating education and its potential.²¹

Grit and Growth Mindsets as Core Social-Emotional Skills

All 50 states have SEL standards in place at the preschool level with several states having standards for middle and high school (in part as a result of the federal ESSA –Every Student Succeeds Act). For all the prominent literature — whether the popular CASEL program or

¹⁶ Catherine Gewertz, “Kindergarten-Readiness Tests Gain Ground - Education Week,” *Education Week*, October 8, 2014, <http://www.edweek.org/ew/articles/2014/10/08/07kindergarten.h34.html?cmp=ENL-EU-NEWS1>, emphasis added.

¹⁷ While highlighting its affiliation with Princeton University, the journal is closely affiliated with the Brookings Institute and Jacobs Foundation, among others.

¹⁸ Geoffrey Hinchcliffe, “Situating Skills,” *Journal of Philosophy of Education* 36, no. 2 (2002): 189.

¹⁹ Victoria Spring, “Can Outrage Be a Good Thing?,” *Scientific American*, January 22, 2019, <https://www.scientificamerican.com/article/can-outrage-be-a-good-thing/>.

²⁰ Mainstream (positivist) science has mistakenly given the aim of science as that of prediction and control, against it being explanation and understanding; see Peter T. Manicas, *A Realist Philosophy of Social Science: Explanation and Understanding* (New York: Cambridge University Press, 2006).

²¹ Preston, *Competence Based Education and Training (CBET) and the End of Human Learning*, 17.

academic journals — a core component of “social-emotional learning” is the development of “grit” (often given as a thing that exists *inside* a person as opposed to being an attribute of that person). Grit is theorized as people adopting a “growth mindset” and related behavioral dispositions.²² Grit promoter Angela Duckworth and others often talk of grit and growth mindset together, as intimately related.²³ Other key concepts include “executive functioning” which is given as a combination of effective working memory, cognitive flexibility, and inhibitory control. These qualities (which children living in poverty are said to lack) if acquired, would “lift” children out of poverty. This view has rightly been derided as callous if not abusive.²⁴

In 2017, the NAEP began collecting data on students’ “grit.”²⁵ Such social emotional skills are thought to be particularly relevant to working in what digital education researcher Ben Williamson calls the “robot” economy.²⁶ “The OECD’s Andreas Schleicher,” Williamson reports, “is especially explicit about the perceived strategic importance of cultivating social-emotional skills to work with artificial intelligence, writing that ... ‘The future is about pairing the artificial intelligence of computers with the cognitive, social and emotional skills and values of human beings.’” Interestingly enough this is the vision expressed by Norbert Wiener more than half a century ago during the Cold War.²⁷ Virtual reality founder Jaron Lanier recounts the competing visions of artificial intelligence and cybernetics, noting that while the former imagined a world where smart machines existed even after the human race perished, cybernetics promised something far more practical: “computers and people would have to be understood in context of each other.”²⁸ Lanier went on to describe cybernetic computing as “the ultimate Skinner box.”²⁹

While AI is all the talk, the conceptions are unmistakably Wiener’s and the Cold War origin of cybernetic (AI) thinking is unmistakable. Cybernetic forms of management were given in behavioral terms, whether mechanical or human. The goal of the behavioral analysis was

²² Stephanie M. Jones and Emily J. Doolittle, “Social and Emotional Learning: Introducing the Issue,” *The Future of Children / Center for the Future of Children, the David and Lucile Packard Foundation* 27, no. 1 (2017): 3–11.

²³ Angela Lee Duckworth and L. Eskreis-Winkler, “True Grit,” *The Observer* 26, no. 4 (2013): 1–3.

²⁴ Nicholas Tampio, “Teaching ‘Grit’ Is Bad for Children, and Bad for Democracy,” *aeon*, <https://aeon.co/ideas/teaching-grit-is-bad-for-children-and-bad-for-democracy>; Valerie Strauss, “The Problem with Teaching ‘grit’ to Poor Kids? They Already Have It. Here’s What They Really Need,” *The Washington Post*, May 10, 2016, <https://www.washingtonpost.com/news/answer-sheet/wp/2016/05/10/the-problem-with-teaching-grit-to-poor-kids-they-already-have-it-heres-what-they-really-need/>.

²⁵ Valerie Strauss, “U.S. Government to Collect Data on ‘grit’ Levels of Students,” *The Washington Post*, July 11, 2015, <https://www.washingtonpost.com/news/answer-sheet/wp/2015/07/11/u-s-government-to-collect-data-on-grit-levels-of-students/>.

²⁶ Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*; Williamson, “Education for the Robot Economy.”

²⁷ Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (Cambridge, MA: MIT Press, 1961); Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (Great Britain: Free Association Books, 1989). It is impossible to understand the current emphasis on and understanding of psychological attributes such as perseverance outside the influence of the United States military and militarism more generally; see Douglas D. Noble, *The Classroom Arsenal: Military Research, Information Technology and Public Education* (Routledge, 2017); Douglas D. Noble, “Cockpit Cognition: Education, the Military and Cognitive Engineering,” *AI & Society* 3, no. 4 (October 1, 1989): 271–96.

²⁸ Jaron Lanier, *Dawn of the New Everything: Encounters with Reality and Virtual Reality* (New York: Henry Holt and Company, 2017), 58, Lanier claims that AI was developed because many did not like Weiner as a person.

²⁹ Lanier, 60.

synchronization of the human to the machine as a new means of governing (the word ‘cybernetic’ derived from the Greek for “steersman”). Importantly, this governing model originated in the context of militarism. “Cybernetic psychology began,” explains the information and history scholar Paul Edwards, “as an effort to theorize humans as component parts of weapons systems, and continued, after the [second world] war, to draw crucial models and metaphors from those concerns.”³⁰

Mechanizing and Militarizing the Social Emotional

The fact is machines don’t give up. They have grit. They persist until they stop working. Theoretically, machine output can be continually increased — possibly the best example of a growth mindset. The actor Will Smith — an individual showcased by Duckworth (a student of Martin Seligman, founder of the neo-behaviorist program of applied positive psychology) as having a great deal of grit in him — put it this way:

The only thing that I see that is distinctly different about me is I’m not afraid to die on a treadmill. I will not be outworked, period. You might have more talent than me, you might be smarter than me, you might be sexier than me, you might be all of those things — you got it on me in nine categories. But if we get on the treadmill together, there’s two things: You’re getting off first, or I’m going to die. It’s really that simple.³¹

We are to suppose that his middle-class upbringing provided him no advantages, that he is not part of the highly socialized economy, as he jumped on his treadmill of individual success. Also notice that the title of Duckworth’s article, “True Grit” is inspired by a film celebrating vengeance and vigilante justice (something she notes in her TED talks).

Thus, it helps to provide some context regarding what inspired Duckworth’s conception of “grit,” which she insists is “predicting something”. While it is widely known that her so-called grit scale was tested on recruits to the elite West Point Military Academy — not exactly a normed sample — keep in mind that those who make it through the initial training are those most willing to endure doing, over and over again, whatever it is they are told to do, without any sense of why, continuously responding to direction and redirection. Successful cadets accept challenge without, reportedly, being able to *imagine doing anything else*.³² Her notion of purpose is thus circular and empty, that of being successful *per se*. This value-free notion of “having purpose” is similar to that found in the behaviorist inspired field of cybernetics.

For cybernetics, purpose could be formed in machines via feedback. Circular self-corrective cycles refer to a process whereby information about the “effects of an adjustment to a dynamic system is continuously returned to that system as input and controls further adjustments.” In this way, negative feedback was given as providing purpose — that is, *continuous adjustment* and thus system maintenance and replication (whether psychological,

³⁰ Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America*, 180.

³¹ Duckworth and Eskreis-Winkler, “True Grit,” 2. Note Smith’s comment was used to introduce Duckworth’s Association for Psychological Science article in the *Observer*, a comment repeatedly used by Duckworth in her YouTube videos.

³² See Noble, “Cockpit Cognition: Education, the Military and Cognitive Engineering”; Norm Friesen, “Ethics and the Technologies of Empire: E-Learning and the US Military,” *AI & Society* 25, no. 1 (April 1, 2010): 71–81.

biological, or mechanical). It also assumes a value free notion of purpose, limited to the form of feedback itself: the goals to which the machine aims are never evaluated. The point is not that feedback systems do not exist or “work” but rather that in the cybernetic framework, feedback is the ultimate form and essence of control. Here, machines have purpose and humans and machines operate on the basis of the same laws of communication. But, importantly, cybernetics did not advance “by rejecting concepts of purposes, goals and will (as in behaviorist psychology) but by expanding the category of ‘machine’, via the concept of feedback, to include these notions.”³³ Thus, humans are given as a special type of competence machine, as Preston argued.

What kind of character development is this treadmill mentality? Writing in *The New Yorker*, David Denby puts it politically: “the ‘character’ inculcated” by the grit enthusiasts “is perfectly suited to producing corporate drones in a capitalist economy.” He cautions: “If grit mania really flowers, one can imagine a mass of grimly determined people exhausting themselves and everyone around them with obsessional devotion to semi-worthless tasks — a race of American squares, anxious, compulsive, and constrained. They can never try hard enough.”³⁴ Challenging the competency education mantra, he realizes that “grit” is all about “doing” at the expense of “being.” It cannot be overstated that this “mindset” is also especially suited to maintenance of an empire, especially one unable to legitimate itself. In this model U.S. troops are to be trained using “anytime, anywhere learning” for deployment across the globe where the purpose is limited to a successful mission.³⁵

Digital Technology for Machine Socialization

The push for social-emotional learning is increasingly operationalized within the framework of data-centric algorithmic technologies, not only as a technique, but as a philosophy and *form of governance*. This quote from a report prepared for the University of Phoenix Research Institute by the corporate-backed Institute for the Future forcefully makes the point.

The diffusion of sensors, communications, and processing power into everyday objects and environments will unleash an unprecedented torrent of data and the opportunity to see patterns and design systems on a scale never before possible. Every object, every interaction, everything we come into contact with will be converted into data. Once we decode the world around us and start seeing it through the lens of data, we will increasingly focus on manipulating the data to achieve desired outcomes. Thus, we will usher in an era of “everything is programmable” — an era of thinking about the world in computational, programmable, designable terms.³⁶

³³ Both quotes in this paragraph come from Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America*, 180.

³⁴ David Denby, “The Limits of ‘grit,’” *The New Yorker* (June 21, 2016), <https://www.newyorker.com/culture/culture-desk/the-limits-of-grit>.

³⁵ The now often heard phrase “anytime, anywhere learning” used to promote virtual learning initiatives may have originated with Executive Order 13111, responsible for expanding the military role in developing “intelligent tutors” and “Advanced Distributed Learning” as well as other forms of mechanized education. William J. Clinton, “Executive Order 13111: Using Technology to Improve Training Opportunities for Federal Government Employees,” January 12, 1999, <https://archive.opm.gov/pressrel/1999/eo.htm>; See Robert A. Wisher, “Making the Vision of Learning Anytime, Anywhere, a Reality,” *Military Training Technology* 11, no. 4 (2006): 20–23.

³⁶ Davies, Fidler, and Gorbis, “Future Work Skills.”

The central role datification plays here is important. Data is given an active and deciding role, and it is given as a record of an “act” as well as a way of thinking about the world. Clearly data-centric algorithmic technologies are being developed as a means to produce and control specific types of behavior.

Evidence of the behaviorist and cybernetic foundation of SEL is possibly most revealed when it is married to digital technologies (apps, games, social media platforms). DreamBox Learning proudly tells prospective customers that its “Intelligent Adaptive Learning™” has its foundations in “the work of behaviorist B. F. Skinner in the 1950s”. Facebook developers created the “Like” button based on the work of Stanford psychologist B. J. Fogg, known for his work on behavior persuasion.³⁷ Former Facebook executive Sean Parker explained that the objective of the “Like” button was to “consume as much of your time and conscious attention as possible.” The “Like” button was “a little dopamine hit ... It’s a social-validation feedback loop ... exactly the kind of thing that a hacker like myself would come up with, because you’re exploiting a vulnerability in human psychology.”³⁸

The federal PBIS initiative has spawned its own education technology industry, with firms promising to create “positive school culture” with software that “[e]ffortlessly motivates students [and] automatically keeps track of [their] behavior points, scholar dollars, student paychecks, and school store rewards.”³⁹ Pearson, too, will be offering “grit” badges — badging being a technology driven form of competency based education.⁴⁰

With 35 million student users in 180 countries, ClassDojo epitomizes the technology driven form of social-emotional learning, with its algorithms that reinforce and reward students “for [social-emotional] behaviors that are becoming the basis for emerging school accountability systems.”⁴¹ Launched in 2011 with financial and technical support from Silicon Valley, ClassDojo has since become one of the most successful educational technologies. With school-wide features, ClassDojo facilitates school communications and the recording and storing of students’ behavioral data. It emphasizes the surveillance of students’ psychological characteristics and intends to modify through behavioral techniques “attitudes, beliefs and personality, notably through the imposition of positive affect.”⁴² ClassDojo, Williamson highlights “is a material example of how the distinctively technocratic political outlook of Silicon Valley now infuses the educational technology sector, in ways that reinforce the emerging governmentalization of psychological concepts regarding social and emotional learning.” Silicon Valley is thus the “epicenter for the emerging agenda around social and

³⁷ B. J. Fogg, “A Behavior Model for Persuasive Design,” in *Proceedings of the 4th International Conference on Persuasive Technology* (ACM, 2009), 40. For more background see: Garrison, “Resurgent Behaviorism and the Rise of Neoliberal Schooling.”

³⁸ Olivia Solon, “Ex-Facebook President Sean Parker: Site Made to Exploit Human ‘Vulnerability,’” *The Guardian*, November 9, 2017, <http://www.theguardian.com/technology/2017/nov/09/facebook-sean-parker-vulnerability-brain-psychology>.

³⁹ This is from Kickboard (see <https://www.kickboardforschools.com/product-features>). Kickboard is a classic example of the venture capital funded education technology industry.

⁴⁰ Pearson, “Introducing GRIT Badges via Acclaim,” <https://www.pearsonhighered.com/products-and-services/institutional-services-and-solutions/digital-badging-in-higher-education/grit-badges.html>.

⁴¹ B. Williamson, “Decoding ClassDojo: Psycho-Policy, Social-Emotional Learning and Persuasive Educational Technologies,” *Learning, Media and Technology*, 2017, 1.

⁴² B. Williamson, 2.

emotional learning, in particular through its links with Stanford University.”⁴³ The WEF estimates that the social-emotional education technology market to be \$43 billion.⁴⁴

Equally important are the roles of government and non-governmental bodies, such as the U.S. Department of Education (USDOE), the OECD, and the World Economic Forum, along with leading neoliberal consultancies such as the Boston Consulting Group. In the USDOE report “Promoting Grit,” technology plays a leading role. Data purported to assess students’ social and emotional skills is collected via online learning systems. Data collected on students’ facial expressions and posture is analyzed and used to predict future behavior. The report in fact advances a new field of computing, linked to already well-developed subfields of education data mining (EDM) and learning analytics. Williamson describes the new field of computing as follows: “*Affective computing* is the study and development of systems and devices that can recognize, interpret, process, and simulate aspects of human affect. Emotional or physiological variables can be used to enrich the understanding and usefulness of behavioral indicators. Discrete emotions particularly relevant to reactions to challenge — such as interest, frustration, anxiety, and boredom — may be measured through analysis of facial expressions, EEG brain wave patterns, skin conductance, heart rate variability, posture, and eye-tracking.”⁴⁵ Posture seats, facial expression cameras, pressure mice, and skin conductor sensors are being deployed to assess, direct and monetize what are operationalized as social-emotional behaviors. In practical terms these tools function to eradicate human conscious purpose and consciousness from discussion, despite the apparent focus on the “social” and “engagement.” This trend is largely inspired by and parallel to trends in finance, marketing and corporate governance that increasingly rely on the behavioral assessment and manipulation of emotional phenomenon.⁴⁶ It seems obvious in light of this analysis that such approaches are antithetical to fostering student engagement, where they volunteer their sustained efforts in learning about nature, their society, how they might participate, and toward what end.

Not Skills, But Social-Emotional Conditions

In an unexpected turn, evaluation consulting work caused me to conceive of social-emotional development not in skills terms, but as embedded in the context of a school’s culture. In that work, originally designed to evaluate efforts to foster student engagement, several trends became clear.⁴⁷ Observations gathered from surveys, focus groups and interviews with students,

⁴³ Williamson, 3.

⁴⁴ World Economic Forum and The Boston Consulting Group, “New Vision for Education: Fostering Social and Emotional Learning through Technology,” 11.

⁴⁵ Shechtman, et al., “Promoting Grit, Tenacity, and Perseverance: Critical Factors for Success in the 21st Century,” 41, See also, 44.

⁴⁶ Tata Consultancy Services, “Tuning in to the Emotions of the Capital Markets with Sentiment Analysis” (Consulting and Enterprise Solutions, 2016), <https://www.tcs.com/content/dam/tcs/pdf/Services/CES/Tuning%20in%20to%20the%20Emotions%20of%20the%20Capital%20Markets%20with%20Sentiment%20Analysis.pdf>; Z. Wang et al., “Issues of Social Data Analytics with a New Method for Sentiment Analysis of Social Media Data,” in *6th International Conference on Cloud Computing Technology and Science*, 2014, 899–904; S. Raut, “Sentiment Analysis in the Age of Digital Transformation,” *Simplified Analytics*, 2016, <https://simplified-analytics.blogspot.com/2016/05/sentiment-analysis-in-age-of-digital.html>.

⁴⁷ All references in this section come from Mark J. Garrison, “Creating the Social-Emotional Conditions for Engagement: Research Brief” (Atlanta, GA: Professional Association of Georgia Educators., October 1, 2018), <https://www.pageinc.org/wp-content/uploads/2019/03/Creating-the-Social-Emotional-Conditions-for-Engagement.pdf>. The report is available upon written request.

teachers and parents from five schools ranging in size, level and characteristics established a fairly clear association between the types of relationships students have with their teachers and other adults at the school, and observed levels of staff *and* student engagement with academic content and goals. What became clear was that *social-emotional development occurs within and in relation to the relationships that typify a school's culture*. While not at all novel, it presents an alternative to the people-fixing tendency embedded in the SEL framework: deficiencies in individual levels of SEL are documented with posture seats, etc., and then programs (as in machine learning) are created to reward behaviors deemed positive by policy elites. This could not be more counter to the idea of education as mutually engaged meaningful endeavor articulated here. The SEL framework is not at all likely to be associated with school cultures where students, teachers and administrators are thoughtfully, actively, and purposefully engaged in meaningful learning that gives rise to nurturing individuals and collectives who contribute to society.⁴⁸ The social-emotional themes most related to engagement were trust, collaboration, and strong relationships among and between a school's administration, staff, and students. When the relationships between teachers and administrators was lacking in trust and respect, less evidence of student engagement also appeared. Thus, these social-emotional conditions of a school are related to how teachers are led by administrators, how administrators view the role of the teacher, and how staff relate to students and families.

Simply put, this work, while only suggestive, points to an alternative vantage point. It is the social-emotional conditions of a school that socialize, an understanding well-articulated by decades of work in the Social Foundations of Education, but ignored by policy makers, despite it having empirical support, force of argument and philosophical clarity rooted in the democratic purposes and possibilities of public education. If anything, the reform efforts of the last four decades have served to degrade the social-emotional life of schools, and thus stifled the development of generations of young people and soured some educators toward the profession.

Education as the Development of the Human Power to Decide

The anti-social form of education described here, associated with big data analytics and algorithmic forms of education devised to be palliative enough to lubricate the flow of capital with the emotionally gritty grease of growth mindsets, does not originate from within these technologies or even neoliberal political economies. Rather it emerges from the vantage point of a philosophy that is centuries old, unable to break with earlier, pre-scientific and medieval thought and practice. This “thinking” is what helped these technologies take the form they now take, while of course the demand to innovate to accrue capital creates a particularly hospitable set of environmental conditions for SEL. While only briefly noted here, the book of which this essay is a part delves deeply into the question as to the origin of algorithmic education to ascertain the underlying problem of thinking that gives rise to the behaviorist and robotic kind of “social-emotional” conditioning documented here.

Some alternatives that emerge from this analysis are as follows and pose their own problems. The pervasive fixation on skill, and the particular rendering of skill, is profoundly problematic, influencing in negative ways our thinking about education and educational

⁴⁸ Recent research has challenged the value of “grit” and “growth mindset” for meeting the stated aims of increasing student achievement and related outcomes. See Marcus Credé, Michael C. Tynan, and Peter D. Harms, “Much Ado about Grit: A Meta-Analytic Synthesis of the Grit Literature,” *Journal of Personality and Social Psychology* 113, no. 3 (September 2017): 492–511.

practices. Yet to dismiss skill, skilled performance and the expertise extended skill development connotes will do nothing but harm. Humanity confronts no small list of existential problems that require skilled attention.

This assertion directs us to think anew about this domain, and here I propose that we think about education as the development of human power, with the ultimate power being that to decide. Here decision making is understood as deliberative, but not absent social elements such as norms, beliefs and values, nor does deliberation necessitate the absence of emotion; conscious and purposeful democratic deliberation is exciting, accompanied by many emotions and feelings as people work together to harmonize their interests with those of others and the interests of society. Emotions are not the antithesis of reasoned argument, and fear of them in part explains the frenzied desire to control behavior (a specter is haunting).

Additionally, such power is deeply social in another way, as it is seen as necessarily involved in the whole/part relation of society and person, of individual to collective. While one can craft machinery (whether games or software) as a means of deciding, and while processes and things that look like decisions can be automated, we have to think carefully about the aims of automation and the conception of decision it entails. After all, *automatic decisions are not decisions in one sense: they are not conscious by design but rather done without thinking*. While automatic machine processes are part and parcel of the industrial revolution and the development of human productive powers, automating social, political, and economic decisions is possibly a contradiction, if not simply a deflection, indicating only that the decision has been removed from view. Someone, we all know, had to make the machine so that it would decide as it does, and even the name artificial intelligence — grossly misunderstood⁴⁹ — betrays its true nature: the recognition of rules and patterns absent a life purpose and the consciousness that comes with it. We need to challenge the view that human decisions should be replaced with those of machines in the social, cultural, and political spheres.

The conditions for the full expression of the perversion noted here, where violence is being done to socialization, are of course found in the assault on learning known as “high stakes” testing. But more generally, the problem rests not so much with the “stakes” but rather the conception of how individuals and collectives are formed and understood in relation to mandated tests — that is, to borrow the language of former Google manager Triston Harris, humans are just a “meat suit” ready for behavior modification.⁵⁰ A low-stakes approach is not less problematic. So-called “data-driven instructing” tends toward the removal of educators from decision making about education, where data-driven feedback loops remind us we have no role to play but to press the lever again. It is precisely the human power to decide (a phenomenon that includes all the psychological and social aspects of being human) that has been the target, that has been identified as the problem — but decision making powers of human beings should be the center of analysis and the analysis should be aimed at fruitfully expanding those powers. It is not

⁴⁹ A useful discussion that serves to ground one’s understanding of computer-derived forms of intelligence is Meredith Broussard, *Artificial Unintelligence: How Computers Misunderstand the World* (MIT Press, 2018).

⁵⁰ Nicholas Thompson, “Our Minds Have Been Hijacked by Our Phones. Tristan Harris Wants to Rescue Them.” *Wired*, July 26, 2017. <https://www.wired.com/story/our-minds-have-been-hijacked-by-our-phones-tristan-harris-wants-to-rescue-them/>. “So it’s essential to understand that we experience the world through a mind and a meat-suit body operating on evolutionary hardware that’s millions of years old, and that we’re up against thousands of engineers and the most personalized data on exactly how we work on the other end.”

a surprise to see that the next step in the development of a test-based (competency based) education is the focus on shaping attitudes, efforts and affects via the manipulation of behavior. These are but desperate attempts to fit individuals to the austerity and deprivation that results from autocratic cultural forms that arise from an unprecedented concentration of wealth and power.

There are in fact two notions of human ability that can inform discussions of skill and education as the development of the human power to decide.⁵¹ One can have an ability to do something, and one can be granted the ability to do something. We need to situate the development of skill (more generally understood as ability) in the context of the second theme. Education needs to foster the power to decide as a right of participation, as a condition for the full deployment of participants' developed powers. While the CBE framework and focus on SEL appears geared toward extracting human powers as some kind of natural resource (e.g., "human capital") for the enrichment of others, it is postulated here that the full potential of human beings and their full social, emotional and cognitive development — individual and collective — cannot be realized absent the affirmation of the power to decide for each human person and the collective of which each person is a member. It is in this context that technology can play a liberating and empowering role. Put differently, educational technologies must be developed to enhance, rather than replace, the human power to decide..

⁵¹ For an expanded discussion of this point, see Mark J. Garrison, *A Measure of Failure: The Political Origins of Standardized Testing* (Albany, NY: SUNY Press, 2009).

The Liberal and the Technical in Teacher Education – Revisited

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Abstract: This essay revisits the liberal/technical dialectic in teacher education, identified by Merle Borrowman in 1956, in light of Martha Nussbaum’s more recent observations concerning the attack and marginalization of liberal education occurring in the United States and around the world. Nussbaum refers to this as a silent crisis, and this paper explores the implications of this silent crisis on our work in teacher education. Building on the work of Borrowman, Nussbaum, John Dewey and others, the essay argues for the importance of liberal education in professional preparation of teachers.

One might well argue that the defining dialectical tension in teacher education concerns the relative value placed on the practical and the theoretical. Historical analysis amply confirms this. One hundred years ago,¹ John Dewey gave a talk to the Indiana State Teachers’ Association concerning what he regarded to be the fundamental dualism in the education of teachers. The talk, later published as “The Educational Balance, Efficiency and Thinking,” advanced a recurring theme in Dewey’s work about the need to balance the liberal and technical aspects of teacher education.² Forty years later in 1956, educational historian Merle L. Borrowman offered a sweeping analysis of this essential dialectic shaping the education of American teachers from the early 19th century through the middle of the 20th century: The orientation to teacher education growing out of the ancient liberal arts college on the one hand, and the more technically focused approach largely associated with the normal school movement on the other.³ In Deweyan fashion, Borrowman advocated for a compelling model of synthesis between these two critically important themes in teacher preparation. For the past sixty years those of us in teacher education in New York State have worked in a regulatory environment that has in various ways sought to integrate the liberal and the technical strands at both the programmatic and institutional level. To be sure, this integration has not always been successful, or even well defined, but in no small way it provided the framework and justifications for our labors.

Today, however, this model of integration has been seriously challenged as we face a new iteration of narrowly driven regulatory pressures and instrumental standards in teacher education, coupled with an unprecedented market assault on the value of liberal education. We are in the midst of what philosopher Martha Nussbaum has aptly called a “silent crisis.”⁴ At all levels of schooling, the purpose of education has been reduced to preparing workers, and education has been increasingly constricted to those technical skills assumed to be economically profitable in the short term. Vocational education, in its most narrow meaning, is insurgent everywhere one seems to look today, as the notion of social progress is reduced to the single measure of Gross

¹ An earlier version of this paper was presented at the annual meeting of the New York State Association of Teacher Educators and New York Association of Colleges for Teacher Education, 21 October 2016 (Saratoga Springs, NY).

² John Dewey, “The Educational Balance, Efficiency and Thinking” (1916) in *Teachers, Leaders, and Schools: Essays by John Dewey*, eds. Douglas J. Simpson and Sam F. Stack, (Carbondale, IL: Southern Illinois University Press, 2010.): 41-44.

³ Merle L. Borrowman, *The Liberal and Technical in Teacher Education: A Historical Survey of American Thought* (New York: Bureau of Publications, Teachers College, Columbia University, 1956).

⁴ Martha C. Nussbaum, *Not For Profit: Why Democracy Needs the Humanities* (Princeton, NJ: Princeton University Press, 2012), 1.

National Product. Educational policy follows suit by valuing only the kind of learning regarded to be quantifiable and measurable as reflected in so many accountability schemes. “We see its shadow in the relentless focus on ‘basic skills’ in K-12 [schooling],” writes William Deresiewicz, “as if knowledge were simply an assemblage of methods and facts. In the move to ‘Informational’ text in English classes, as if the purpose of learning to read were to understand a memo. In our various testing regimes, as if all learning could be quantified. In the frenzy of the MOOCs [Massive Open Online Courses], as if education were nothing more than information transfer. In the tables that rank colleges and majors by average starting salary, as if earning power were the only thing you got from school.”⁵

Increasingly devalued, marginalized and lost are all those largely intrinsic ways of learning and knowing that we associate with liberal education, which is to say “liberating education,” an education whose primary purpose is to make us free: “free from the dictates of passion and prejudice, free from the natural limitations of an untutored mind and free from the pressure for immediate production of goods and directly marketable skills.”⁶ Moreover, liberal education, especially as it is manifested in the arts and humanities, is necessary for the creation and maintenance of a democratic and just social order. These ways of knowing humanize us; these ways of knowing make us more fully human. Thus, for Martha Nussbaum their demise in American culture and around the world represents a crisis of the first order. She writes: “Radical changes are occurring in what democratic societies teach their young, and these changes have not been well thought through. Thirsty for national profit, nations, and their systems of education, are heedlessly discarding skills that are needed to keep democracies alive. If this trend continues, nations all over the world will soon be producing generations of useful machines, rather than complete citizens who can think for themselves, criticize tradition, and understand the significance of another person’s sufferings and achievements. The future of the world’s democracies hangs in the balance.”⁷

In what follows I revisit the liberal/technical dialectic in teacher education in light of Nussbaum’s observation of our silent crisis. I take as my starting point the view shared by both Dewey and Borrowman that the integration and synthesis of this dichotomy is both possible and essential. I also share their view that teaching is a highly practical art, mostly learned in the actual practice of it, but that teaching fundamentally resists attempts to be taught and learned formulaically. No one today seriously argues against the critical importance of the development of practical teaching skills, and thus the “technical” dimension of teacher education is firmly ensconced. The same cannot be said, however, of the “liberal” dimension of teaching. Apart from maintaining that teachers should have some satisfactory knowledge of the subject matter they are called upon to teach (sometimes referred to as their liberal arts and sciences major or general education core), the “liberal” dimension of teaching is only dimly recognized and supported. Moreover, the liberal dimension of teacher education shares the same declining status

⁵ William Deresiewicz, “The Neoliberal Arts: How College Sold Its Soul to the Market,” *Harper’s Magazine*, September 2015, 26.

⁶ Merle L. Borrowman, “Liberal Education and the Preparation of Teachers” in *Teacher Education in America: A Documentary History*, ed., Merle L. Borrowman, (New York: Teachers College Press, 1965), 2.

⁷ Nussbaum, *Not For Profit: Why Democracy Needs the Humanities*, 2.

of liberal education generally today, as witnessed by the increasing marginalization of foundational study in our programs.⁸

I will briefly explore Dewey's view (actually, merely one aspect of his view) while leaving the rich larger social and intellectual history unexplored. For this I apologize, but my intention here is to focus our attention on a problem that has both individual/local as well as social/structural relevance. I want us to consider the implications of the attack on liberal education on the preparation of teachers, and to ask how this attack is reflected in certain current tendencies in teacher education. I also want us to ask how our work in teacher education thus exacerbates the crisis. In this instance, it seems to me, we are more than simply the canaries in the coal mine, and that we bear some responsibility for producing the carbon monoxide that is killing us. Finally, many of us teach at institutions where the liberal arts and teacher education are both under considerable duress, owing in part to shared enrollment decline which itself reveals our symbiotic relationship and linked fortunes. I want us to consider the situation as it appears on our own campuses, and to ask what opportunities this crisis affords. How might we establish new forms of collaboration with our colleagues in the liberal arts and sciences? What elements of our teacher education programs are liberally oriented, even if they are largely moribund, and how might they be resurrected? How might this crisis provide opportunities for new transformative program development in teacher education? Before getting to these questions, however, it is necessary to further develop Nussbaum's argument and to explore how it relates to Dewey's plan to synthesize the liberal and the technical in the education of teachers.

Nussbaum refers to her 2010 book, *Not For Profit*, as a manifesto, and indeed it has this style and feel. Here she engages in forms of inquiry familiar to those of us in educational foundations: She brings a sociological and historical perspective to bear in investigating the dominant purposes of education, drawing heavily from psychoanalytic theory, and she adopts a philosophical perspective to ask how we might critically re-imagine these purposes. As noted, she is highly opposed to the worldwide movement to reduce the purpose of education to the mere technical preparation of competent workers. While certainly not opposed to technical, skill-based, learning per se (such, of course, has an important place in our technologically complex world), she is very much concerned when this becomes the dominant and only purpose that animates our schools. We need to recognize ourselves as manifesting a culture, and not simply an economy. She advocates replacing the prevalent (and increasingly destructive) Economic Growth Model that guides so much of our thinking and policy formation, with the Human Development paradigm, which is oriented around a much-expanded notion about what constitutes social progress. This Human Development Model would necessitate the inculcation of those ways of knowing we associate with liberal education: "The ability to think critically; the ability to transcend local loyalties and to approach world problems as a 'citizen of the world'; and finally, the ability to imagine sympathetically the predicament of another person."⁹ The humanities and the arts must be restored to a central place in the curriculum because it is precisely these disciplinary experiences that encourage the development of this kind of needed understanding and sensibility. Moreover, liberal study provides us with the capacity to

⁸ See, for instance, Stephanie Mackler, "The Lone Liberal Artist in the Ed School: Reconnecting Foundations Scholars With the Liberal Arts," *Educational Studies*, 50 (2014): 103-122.

⁹ Nussbaum, *Not For Profit: Why Democracy Needs the Humanities*, 7.

imaginatively transcend our narrow functional milieus so that we might understand the meaning and purposes of our activities and to redirect these purposes when needed.

The Economic Growth Model, on the other hand, values efficiency, continuous expansion, and inherent social inequality. In this way, the Economic Growth Model tends to prize and reward certain unseemly human attributes and more or less unconsciously directs our educational efforts to these ends. For instance, the Economic Growth Model actually encourages a kind of insensitivity to our fellow humans — what Nussbaum calls “moral obtuseness” — and discourages people from thinking critically and seriously about themselves or their world. Insofar as the arts and liberal education increases our capacities for empathy and critical thinking they are regarded as anathema to the Economic Growth Model and considered dysfunctional to the efficient operation of the system. Nussbaum writes: “Educators for economic growth will do more than ignore the arts. They will fear them. For a cultured and developed sympathy is a particularly dangerous enemy of obtuseness, and moral obtuseness is necessary to carry out programs of economic development that ignores inequality. It is easier to treat people as objects to be manipulated if you have never learned any other way to see them.” Moreover, while educators for economic growth might support the teaching of history in a non-liberal way, they “will not want a study of history that focuses on injustices of class, caste, gender, and ethno-religious membership, because this will prompt critical thinking about the present.”¹⁰ Seen in this light is there any reason to wonder why liberal education is being marginalized throughout our K-16 schools?

The competitive ethos of the Economic Growth Model also provides soil fertile for the unchecked growth of narcissism and the closely related and derivative anti-moral emotions: Racism, homophobia, classism, sexism, etc. Narcissism is widely seen as a universal aspect of the human condition, which is most pronounced during the early childhood years when we begin to become aware that we are not omnipotent but rather helpless, highly dependent, and incomplete creatures. Narcissism is our psychological attempt to deny this reality and this human fragility by exaggerating our worth through dominating others. Many, perhaps most, of us mature beyond the more acute forms of narcissism, but we need look no further than the top of our political, corporate, and educational institutions to find examples of how our society quite literally promotes this narcissism. While it may be true that we can never fully transcend this fundamental narcissism, it is certainly possible to mitigate it through the educational experiences we provide to the young and through regular replenishment of these experiences throughout our lives. Indeed, as Erich Fromm has noted, the softening (if not full eradication) of this narcissism is seen as a primary project of all the great religious traditions.¹¹ Left unchecked, however, this narcissism takes the form of “projective disgust” against people who are regarded as different and who are stigmatized for being so. In its most virulent forms this group animosity is codified in laws, established in social hierarchies, and manifested in violence.

Nussbaum argues that liberal education, centered as it is in engagement with the arts and humanities, needs to serve as a major antidote to these trends. Schools are not all-powerful institutions and they cannot do everything needed to create healthy citizens for a healthy democracy. Nevertheless, schools have much to contribute if their efforts are explicitly directed toward this goal and if their curricula and pedagogy deliberately reflect these goals of liberal

¹⁰ Nussbaum, *Not For Profit: Why Democracy Needs the Humanities*, 23 and 21, respectively.

¹¹ See Erich Fromm, *The Heart of Man: Its Genius for Good or Evil* (New York: Harper and Row, 1964).

education. She advocates for the adoption of seven things that schools can and should do, which, of course, cannot be quantifiably assessed:

- Develop students' capacity to see the world from the viewpoint of other people, particularly those whom their society tends to portray as lesser, as "mere objects"
- Teach attitudes toward human weakness and helplessness that suggest that weakness is not shameful and the need for others unmanly; teach children not to be ashamed of need and incompleteness but to see these as occasions for cooperation and reciprocity
- Develop the capacity for genuine concern for others, both near and distant
- Undermine the tendency to shrink from minorities of various kinds in disgust, thinking of them as "lower" and "contaminating"
- Teach real and true things about other groups (racial, religious, and sexual minorities; people with disabilities), so as to counter the stereotyping and the disgust that often goes with them
- Promote accountability by treating each child as a responsible agent
- Vigorously promote critical thinking, the skill and courage it requires to raise a dissenting voice.¹²

Nussbaum goes on to explore how through the utilization of Socratic pedagogy, richly culturally diverse curricula, and serious and playful engagement with the arts and imaginative literature, these values can foster a reconceptualization of the purpose of education to meet the needs of a democracy.

Most importantly, these liberal ways of knowing help to foster in students what she terms "the narrative imagination," a way of thinking about the role of the imagination which, we will see, has significant implications for how we should think about teaching and teacher education. This kind of imagination is not to be confused with the imaginary or with fantasy. Rather it refers to "the ability to think what it might be like to be in the shoes of a person different from oneself, to be an intelligent reader of that person's story, and to understand the emotions and wishes and desires that someone so placed might have."¹³ Nussbaum notes accurately that the cultivation of this kind of narrative imagination, this kind of basic and refined sympathy and understanding, can be spotted throughout our educational history, in both Western and non-Western cultures.

Nussbaum acknowledges that her chief intellectual precursors in this matter are the great Indian educator Rabindranath Tagore, and, of course, John Dewey. Early in the 20th century both Tagore and Dewey recognized the importance of liberal study as a foil to the increasing instrumentalism associated with our burgeoning technological system. Both feared that without this liberalizing influence we were doomed to become more bureaucratized and mechanized and

¹² Nussbaum, *Not For Profit: Why Democracy Needs the Humanities*, 45.

¹³ Nussbaum, 95-96.

dehumanized. Both remained hopeful, however, that educators would respond. John Dewey also brought these concerns to the education of teachers, the topic to which I now return.

Dewey treated the relationship between the liberal and the technical in the preparation and work of teachers in several key educational writings, including his “My Pedagogic Creed” (1897), “The Child and the Curriculum” (1902), “The Relation of Theory to Practice in Education” (1904), and *Democracy and Education* (1916).¹⁴ Perhaps his clearest, if not most concise, statement can be found in his aforementioned 1916 talk “The Educational Balance, Efficiency and Thinking.” His opening statement, written though it is in Dewey’s notoriously difficult style, is worth quoting verbatim:

There are two traits which have to go together and which have to be balanced with each other in order that we may get an adequate and rounded development of personality, and for that reason there are two factors which have to be constantly borne in mind in all teaching and borne in mind in such a way that we do not first tend to one and develop one, and then, forgetting that, develop the other, but that we keep the two balanced together all the time.

I call those two factors efficiency and thought.

Efficiency, or skill in execution and good, orderly, effective method and technique of doing things which is under control. The other, thinking or the recognition of the meaning of what we do, having a definite, well-thought-out and comprehensive plan or purpose in our actions.¹⁵

Dewey explored how this dualism was revealed in other vocations as well, and he argued for the need for ongoing and continual synthesis across these vocations in order to conceptualize their full promise. The effective business person, the effective physician, the effective lawyer, the effective chemist, the effective mathematician, as well as the effective manual trades person, were all required to strike a balance between liberating thought and the development of technique appropriate to their particular function. Possession of both liberal and technical understanding makes possible recognition of the meaning of what one is doing and exercise of the ability to thoroughly and purposely plan the activities in which one is engaged. Each varied practitioner needed to have an “education which enables him to see within his daily work all there is in it of large and human significance” and not simply a form of schooling that will adapt or adjust them to the prevailing order.¹⁶ To put this still another way, Dewey was arguing for development of capacities both to develop habits *and* to break habits. All practitioners needed to have the capacity to strike a balance between the ability to acquire necessary routinized habits in order to respond to that part of one’s domain that was static and fixed with the ability to break

¹⁴ John Dewey, “My Pedagogic Creed” and “The Child and the Curriculum” in *The Essential Dewey: Volume 1, Pragmatism, Education, Democracy*, eds., Larry A. Hickman and Thomas M. Alexander (Bloomington, IN: University of Indiana Press, 1998): 229-235 and 236-245, respectively; “The Relation of Theory to Practice in Education” in Borrowman, ed., *Teacher Education in America*: 140-171; and *Democracy and Education* (New York: Macmillan Publishing Co., 1916).

¹⁵ Dewey, “The Educational Balance, Efficiency and Thinking” (1916) in *Teachers, Leaders, and Schools: Essays by John Dewey*, eds, Simpson and Stack, 41.

¹⁶ As quoted in Michael S. Roth, “Learning as Freedom,” in *The New York Times*, September 5, 2012, Section A: 27.

with habitualized and routinized ways of apprehending and engaging their particular domain. A constantly changing world demanded such a stance, and it was a needed antidote to the tendency to develop people as machines or automatons on the one hand, and ineffectual and groundless dreamers on the other.

Having developed his argument regarding the essential capacities of all practitioners (professional or otherwise), Dewey turned his focus to why teachers needed to be educated toward this balance. As he had done in earlier writings he asks us to compare the classroom teacher with the visual, literary, musical, and performing artist. He encourages us to envision the accomplished artist who possesses both artistic skill as well as artistic insight and sympathy, the artist who has honed the skills of expression and also expresses with meaning and purpose. Without the capacity to strike the necessary balance, “the artist might have a fine technique with the instrument and yet the use of that instrument would not move people, would not affect them on any very deep level, because there was no feeling back of it or because there were no ideas expressed in it.”¹⁷ Similarly, a teacher might be trained to utilize the techniques of effective teaching, and yet s/he would not be able to truly move students without the capacity to see within her teaching the liberalizing view of “all there is in it of large and human significance.” Dewey writes:

Now, there is a technique of teaching, a technique of the management of the schoolroom, keeping order, treating children, of asking questions, even of giving out, assigning lessons; assigning the different school work and so forth, is just as much a part of the art of teaching as the particular technique of the artist is a part of the calling of the artist, but over and above that is the need for that sense of the purpose of meaning of it that results in sympathy with a development of the life of the children, what is going on not in their more outward motions, in the things they do, but what is going on in their feelings, their imagination, what effect the schoolroom is having on the permanent disposition, the side of their emotions and imagination, without which the teacher cannot be an artist, no matter how complete and adequate the teacher’s command is of the technique of teaching, that is of the various forms of outward skill which are necessary to make the successful teacher. The teacher as an artist needs to be one who is engaged in getting the pupils as much as possible into the attitude of the artist in their relations in life . . . to get that unity with certain affections and desires and sympathies and with power to carry out intellectual plans.”¹⁸

Dewey was writing at a time when the polemics between the liberal and the technical in teacher education were raging. On the one hand, a strong contingent in the liberal arts and sciences claimed that the structure of the disciplines contained the knowledge of how to teach them, that the act of thinking in the disciplines provided a model for how they should be taught. To be an expert in a particular field conferred on one the authority and skill to teach that subject matter field. On the other hand, a growing body of normal school educators were preparing teachers to teach in the burgeoning schools by emphasizing the role of instructional

¹⁷ Dewey, “The Educational Balance, Efficiency and Thinking” (1916) in *Teachers, Leaders, and Schools: Essays by John Dewey*, eds., Simpson and Stack, 42.

¹⁸ *Ibid.*, 45.

methodology, often at the expense of subject matter knowledge and mostly without regard for the consideration of the larger social purposes of education. An effective teacher, seen from this perspective, is capable of teaching nearly anything to nearly anyone.

Dewey was highly critical of both views, though he also thought that each view contained an element of truth. He abhorred those subject matter experts who wore their knowledge as mere adornment and as evidence of their class and status. The kind of teaching that followed from this attitude was typically stifling and inert and ultimately mis-educative. Nevertheless, he was well aware that some disciplinary experts were transformative teachers even without formal training in the methods of teaching. Moreover, the curriculum, accurately understood, represented the historical record of how our species has solved its problems. The curriculum as a map for our problem solving was the key concept here, and deep and expansive curricular knowledge was thus essential for all teachers.

Likewise, Dewey was certainly sympathetic to the need for teachers to develop the techniques of their craft. But he recognized that there was so much more needed in order to connect with what Dewey referred to as students' "inner attention."

As every teacher knows, children have an inner and an outer attention. The inner attention is the giving of the mind without reserve or qualification to the subject in hand. It is the first-hand and personal play of mental powers. As such, it is a fundamental condition of mental growth. To be able to keep track of this mental play, to recognize the signs of its presence or absence, to know how it is initiated and maintained . . . is the supreme mark and criterion of a teacher. It means insight into soul-action, ability to discriminate the genuine from the sham, and capacity to further one and discourage the other.¹⁹

Instructional methods and classroom techniques, learned in isolation from a sympathetic understanding of the students' psychological and social circumstances and without reference to the meaning and purpose of what is being learned, tended to address merely a students' shallow "external attention." While such technique might have the immediate and apparent effect of keeping classroom order or of producing superficial learning, it was not likely to lead to further growth or an intrinsic desire for further learning. Unfortunately, so much technique driven teacher education associated with the normal schools seemed to have this effect.

Dewey was searching for a way to synthesize the liberal and the technical in teacher education. He was searching for a language to illuminate the unique and profound knowledge required of the teacher, knowledge both shared with, and yet divergent from, the subject matter expert and the teacher as technician. In so doing, he gravitated toward the liberal ideal of deepening and extending one's understanding of what it means to be human. It was a perspective that, like Nussbaum's notion of the "narrative imagination," was based on a heightened sense of sympathy for the needs of others. A teacher must have an acute sensitivity to the inner world of the learner; a teacher must be able to grasp how other people are experiencing the world, and how these others are contending with the particular problems with which they are (in the very nature of things) confronted. Moreover, the teacher must be able to relate this sympathetic

¹⁹ Dewey, "The Relation of Theory to Practice in Education" in *Teacher Education in America*, ed., Borrowman, 148-149.

human understanding to a deep and dynamic understanding of the curriculum and to imagine the relationship between the “inner” dimension of the learner and the subject matter to be learned. The primary task of the teacher, Dewey wrote in his essay “The Child and the Curriculum,” is to see the subject matter “*as representing a given stage and phase of the development of experience*. His problem is that of inducing a vital and personal experiencing.”²⁰

The teacher’s function is to connect the learner to the record of the known, the curriculum, the record of how as human beings we have solved our problems in the past. But for Dewey this was neither a mechanical, nor simply technical, enterprise. And it certainly could not be developed by fixing one’s attention only on the “external” dimension: The sources of data, the standards of effective instruction, the learning outcomes, the professional behavior rubrics, and so on. Rather it also required the cultivation of all those ways of knowing and experiencing that we have historically come to associate with liberal education, those speculative and liberating arts that enable us to transcend our immediate and narrow milieus and to experience the world from another person’s vantage point.

John Dewey died in 1952 at the age of 93. Among his many legacies was this contribution to the framework of how we should think about the liberal/technical dialectic in teacher education. His was a view that demanded balance, integration, and synthesis. There is no question but that he would be thoroughly dismayed, if by some freak, he was able to survey our situation today. He would recognize immediately how fundamentally out of balance we have become. He would certainly agree with Martha Nussbaum that the attack on liberal education has led to a pervasive silent crisis, the consequences of which will spread well beyond the school. He would remind us, too, of the need to think of this crisis in relation to teachers and their education. As we know, the education of teachers has rippling effects; if we ignore the need to balance the liberal and technical in teacher education it will surely redound to other educational and social domains as well. Machines can only produce more machines. If teachers are taught only to adapt to existing circumstances, to only serve as technically competent tools for the prevailing social order, these narrow instrumental qualities will surely prevail in other domains as well.

²⁰ Dewey, “The Child and the Curriculum” in *The Essential Dewey: Volume 1, Pragmatism, Education, Democracy*, eds., Hickman and Alexander, 242. Emphasis in the original.

Innovation or Tradition: Conflicting Perspectives of Two Nineteenth Century Colleges in New York State

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Abstract: This study examines the 19th century origins of two New York State higher education institutions: Union College in Schenectady and the University of Rochester. They had very different beginnings, but both are strong and well-regarded today. From the beginning, Union experienced a trajectory toward experimentation, excellence, and success, while Rochester's early years were discouraging because university leadership was reluctant to alter traditional programs and practices in the face of changed economic and social conditions. Despite those differences, there were equalizing changes in both institutions that enabled each to enter the twentieth century with strong foundations upon which to build the successful institutions they are today.

Introduction

Many colleges make the news today because they are closing or merging with other institutions as a way to prevent that outcome for themselves. In fact, Moody's rating service projects that soon an average of 15 colleges will close every year (Marcus, 2019, p. 4). New York's higher educational institutions, however, are collectively stronger than those in many other areas. Since 2016, only two New York State colleges have closed, Dowling College in 2016 and College of New Rochelle in 2019 (Education Dive Staff, 2019). This study examines the 19th century origins of two New York State higher education institutions: Union College in Schenectady and the University of Rochester. They had very different beginnings, but both are strong and well-regarded today. Union's endowment is \$470 million dollars and Rochester's almost \$2.5 billion. Both schools are in the "more selective" application acceptance rating scale system, and both attract students from a wide range of states and foreign countries. From the beginning, Union experienced a trajectory toward experimentation, excellence, and success, while Rochester's early years were discouraging because university leadership was reluctant to alter traditional programs and practices in the face of changed economic and social conditions. Despite those differences, there were equalizing changes in both institutions that enabled each to enter the twentieth century with strong foundations upon which to build the successful institutions they are today. This article will discuss the nineteenth-century origins of Union College and the University of Rochester in depth and conclude with brief comments about crucial developments that spurred their continuous success in the years that followed.

Founding Union College, 1779-1795

Historical generalizations frequently overlook individual developments that do not fit the overview they provide. For example, at an earlier time it was argued that most colleges founded before the Civil War were narrowly denominational and wedded to a classical curriculum suitable for the intellectual and moral training of gentlemen, many of whom would subsequently attend a seminary. That view does not square with the reality of an institution like Union College in Schenectady, NY founded in 1795, the second college in New York State after King's College (now Columbia) which opened in 1754.

Although the focus of this analysis is Union College's academic innovation, other aspects of its early history are also important. For one thing, even when Schenectady was little more than a frontier outpost of Albany, several of its leading citizens, under the direction of the Elders of

Schenectady's Dutch Reformed Church, sent a petition in 1779 with over 800 signatures from around the region to the newly created state legislature seeking the authority to open a college. It was the middle of the Revolutionary War and the petition was ignored, as it was in 1782 when they tried again with 200 additional signatures (Raymond, 1907, pp. 3-4).

In late 1784, Rev. Dirck Romeyn from New Jersey was appointed pastor of the Dutch Reformed Church and he came to town with a fresh approach to their education project: Start an academy first and grow it into a college. Church leaders voted to support the endeavor financially and a small group of "twenty-seven respectable citizens of the town" met at a local tavern to sign a document related to the management and support of the school (Pearson, 1883, p. 434). A portion of that group, an ethnic mix of Dutch, Scotch, and English citizens, formed the Academy and Library Company to oversee the management of the school. Romeyn's role was to head the academy's Board of Trustees (Neisuler, 1964, p. 19). While church leaders led the way, The Schenectady Academy was a community school, not a religious one or a private venture.

The Schenectady Academy opened in 1785, was immediately successful, and filled to capacity of over 100 students by its second year. Romeyn's noticeable achievement earned him a place on the newly reorganized New York Board of Regents in 1787, the same year Albany's famous General Philip Schuyler was also selected to serve on that board. A friendship began which stood Romeyn in good stead as he moved to phase two of his campaign to start a college. The Regents appointed Romeyn and Schuyler official "visitors" to the school in 1793. Unsurprisingly, their positive review resulted in granting the school a charter, thus paving the way once again to seek approval for a college charter.

In the fall of 1794, a series of meetings were held in Schenectady and Albany to draft the actual content of the petition for a college charter to submit to the Board of Regents at their January 1795 meeting. The petition was signed by 130 "respectable inhabitants" from Albany and Schenectady, and "influential characters" from other locations in the capital district. It listed names of a proposed Board of Trustees, many organizational details, and named the institution Union College because it represented diverse individuals and constituencies that supported the petition to grant a charter (Raymond, 1907, pp. 20-27). In February 1795, the petition was approved, and Union College came into existence (Fortenbaugh, Jr., 1978, Chapter VI).

The story of Union College's founding illustrates the way a college was founded through the actions of communities and not exclusively by an individual or religious denomination. One of the earliest outcomes of revisionist history in higher education was to show that institutions founded in the post-revolutionary era were the result of community participation as much as any other factor (Axtell, 1971). Historian David Potts expressed that idea quite simply. The claim that sectarianism in the early nineteenth century was the primary cause of higher education institution building, Potts points out, "would obscure the essence of antebellum colleges. They were, above all else, *local* colleges" (Potts, 1971, p. 368, italics in original).

Nothing could be clearer than the fact that Union College was born because so many community groups and individuals worked to give it life. Union College's first Board of Trustees included seven people from Albany and six from Schenectady. Geographically, in relation to those communities, there were also three trustees from Ballston (north), and one each from Saratoga (north), Troy (east), Kinkerhook (south), Palatine and Herkimer (west), Whitestone

(south-Queens), and Hackensack, NJ. (Hough, 1876, p. 7). Union was seen as a regional college, not one defined by its specific address. Without question, the Dutch Reformed Church in Schenectady took the lead in the effort to obtain a college charter, but the first four presidents, all ministers, were Presbyterian, Congregationalist, Baptist, and another Presbyterian who was in office from 1804 to 1866. A diverse community wanted to establish a college and worked together to organize the college for the immediate capital district and beyond.

Educational Ideals for a New Republic

Another element that supports institutional success is some level of agreement about the basic purpose of the institution. Union was a non-denominational Christian school whose first non-ministerial president was appointed in 1888 and which had mandatory morning chapel prayer requirements well into the twentieth century. However, from the beginning, there was an Enlightenment perspective at the college and individuals connected to it who were members of an Enlightenment-related organization, the Freemasons.

In pre-revolutionary America, the higher education institution most associated with Enlightenment ideas was the College of New Jersey, later known as Princeton. The college had been struggling but convinced John Witherspoon, a Presbyterian minister in Scotland, to become president. Witherspoon was a well-known participant in the influential Scottish Enlightenment philosophical movement. He arrived in 1768, served until 1794, and successfully improved the college's enrollment and finances. Equally significant was the impact of his philosophical orientation that altered the curriculum and improved the library needed to support it. In addition to his academic work, Witherspoon was a signer of the Declaration of Independence and subsequently served as member of the Continental Congress and the New Jersey state legislature. He was one of two of the 56 signers whose principal work was at a college, the other being George Wythe, law professor at William and Mary and mentor to Thomas Jefferson.

Some of the essential beliefs of Witherspoon's Scottish Enlightenment perspective include respect for the individual's ability to reason and solve problems when given freedom to do so. He and his like-minded philosophical colleagues believed religious tenets should not be used to suppress truth generated by common sense observation augmented by practice of scientific and intellectual inquiry. Independence was the political environment that best fostered this way of being. In an educational setting, an overemphasized reliance on classical languages stunted intellectual growth and diminished the possibility of educational experiences contributing to social, scientific, and political progress. Accordingly, Witherspoon altered the upper level curriculum with increased emphasis on mathematics, natural philosophy (science), English grammar and composition, history, and French. In the senior moral philosophy course which he taught, Witherspoon included Enlightenment thinkers like John Locke, David Hume, and Francis Hutcheson. He strengthened the library with donation of 300 of his own books, and purchase of others to keep the collection contemporary. He obtained laboratory apparatus for scientific instruction (Geiger, 2015, pp.51-52, 72-76). Twenty-one of his former students became college presidents.

Schenectady was fortunate to have two of Witherspoon's former students present at critical moments in development of Schenectady Academy and emergence of Union College. The first was John Taylor who graduated from the College of New Jersey in 1770 and came to head the academy in 1792. Taylor took charge of the process to get the academy chartered in 1793 and managed the process by which the academy charter was successfully transitioned to a charter for

Union College. The second was Rev. John Blair Smith, a Witherspoon student who graduated in 1773. Smith was a Presbyterian minister who had both educational and pastoral experience and who left a church in Philadelphia to become Union College's first president in 1795. Smith and Taylor were Union College's only professors in the first two years of its existence.

An obvious question was whether Schenectady was ready to accept Enlightenment inspired perspectives, and the answer was yes (Fortenbaugh, Jr., 1978, pp. 80-81). Historian Susan Staffa noted that Schenectady's pre-Revolutionary War "businessmen and politicians became exposed to Enlightenment ideas through regular contact with Albany, Hudson Valley communities, and New York City" (Staffa, 2004, pp. 359-361). In the absence of colleges in most communities, the vehicle for spreading these ideas were Freemason lodges that were very popular in the pre- and post-Revolutionary War era, including in Albany, Schenectady and twenty-five miles west in Johnstown. Freemason lodges were places where community leaders assembled to socialize, to discuss local and national political issues including those featured in Freemason newspapers and pamphlets, to hear lectures, and to participate in somewhat exotic, quasi-religious rituals that promoted a sense of brotherhood among the participants. Their ranks were primarily filled with those who supported independence from Britain and their written material often used Enlightenment language with frequent references to liberty and justice (Bullock, 1996). John Taylor and three founding trustees of Union College were prominent Freemasons: Joseph C. Yates was a lawyer, Schenectady's first mayor and later Governor of New York; Jeremiah Van Rensselaer was a banker, a former member of Congress, and later Lieutenant Governor of New York; and Stephen Van Rensselaer, was to become Lieutenant Governor, member of Congress, and one of the richest men in the United States. Yates served as Master of the Schenectady lodge his father founded, Jeremiah was a leader in the Albany lodge, and Stephen served a term as Grand Master of the Grand Lodge of New York. Stephen also had a personal connection to John Witherspoon. In 1779, at age sixteen, Van Rensselaer was a student at Kingston Academy and was to enroll in the College of New Jersey in the fall. President Witherspoon was in northern New York and arrangements were made for him to meet Van Rensselaer in Kingston and accompany him to the college. For part of the way, George Washington escorted them. Once in Princeton, young Stephen lived in the home of Professor Samuel Standhope Smith, Witherspoon's son-in-law and John Blair Smith's brother (Barnard, 1839).

John Blair Smith's inaugural address at Union clearly demonstrated the influence of Witherspoon and Enlightenment values on his educational philosophy. He noted that liberal education brought happiness and success to those who possess it,

but, above all, it is most useful to the general welfare of the state. In a republic where all men have the same opportunity to attain honors and offices a wide dissemination of knowledge is absolutely necessary. It nourishes freedom, resists servitude, (and) stands up against autocratic domination. It explores and sanctifies the rights of man; it considers liberty of supreme value, and age after age, it propagates this most prized heritage of free citizens. Education utilizes the history of other nations for the benefit of our country. [It calls up] worthy examples [to] show the way to those who have the power of making the laws. (Fortenbaugh, Jr., 1978, p. 103)

Smith then proceeded to delineate the essential curriculum for personal success and political progress. While Greek and Latin were retained, he expressed considerably more

enthusiasm for French, which was becoming the common language of educated people in Europe. Smith's curriculum included history and ethnology because they are entertaining and provide examples of practical wisdom. Geography, chronology, mythology, and antiquities of the most renowned people are included because they are tools needed in the study of history. To save a person from an ignoble life and make him a gentleman, Smith believed one had to study all types of literature, literary criticism, elocution, and poetry. Mathematics was useful because it increased mental power, while astronomy and physics enabled one to understand the laws of nature. One studies ethics both to understand what a moral life is and to become motivated to live it. To maintain our democracy and understand how it holds together, one examines constitutions and the major concepts of law and economics (Fortenbaugh, Jr., 1978, pp. 104-105).

This outline of Union's initial curriculum says important things about the college. To a limited extent, many of the elements in this curriculum were present in newly created colleges, though Union's inclusion of the study of constitutions was unique. As a post-Revolutionary War institution, Union did not have to overcome obstacles resulting from an older and previously honored curriculum already in place. The Union curriculum was contemporary at birth. It represented both the educational goals of the new republic and the inclusion of advanced knowledge that was the result of Enlightenment based inquiry (Geiger, 1992, pp. 10-11). In short, Union College was state of the art in higher education from its inception. And so was its library. Jeremy Dibbell's (2008) recent study of Union's library shows that this carefully collected catalog of first purchased books matched the curriculum very closely. This may seem odd, but early American higher education libraries often consisted of books donated from private collections that did not particularly support the curriculum that was in place. In Union's case, with President Smith paying close attention to every detail, books were ordered from home and abroad that reflected the most important current literature in the specific subjects that constituted the college's new academic program. Dibbell's essay names and discusses the specific books collected and concludes that "Union's leaders created one of the first fundamentally useful college book collections in America, forming a library that appears strikingly different from its colonial predecessors" (Dibbell, 2008, p. 385).

The Incredible Career of President Nott

Between Blair Smith's resignation in 1799 and 1804 there were two short term ministerial presidents who were followed by Rev. Eliphalet Nott, who served as president from 1804 to 1866, the longest serving president in the history of American higher education. Eliphalet Nott was born in Connecticut in 1773 and lived ninety-two years, sixty-two of which he served as President of Union College. When he died in 1866, he had made his mark as a minister whose sermons were inspirational, an inventor whose stoves provided heat for buildings and power for boats, and as a social reformer who participated in the temperance and abolitionist movements in the pre-Civil War era. The story of his full life is comprehensively told in a 650-page biography written by Codman Hislop (1971). The analysis that follows will focus on Nott's leadership in curriculum reform, and the way in which Union's programs drew attention to the Capital District as a center for academic relevance that produced successful graduates in ways no one who attended the college's first commencement in 1797 could have predicted. As Dixon Ryan Fox, noted historian and Union's twelfth president, wrote: "Under Dr. Nott's regime alone, Union sent forth men who were to become: a president of the United States; six cabinet secretaries; 13 United States Senators; 91 members of the House of Representatives; 12 governors; 49 important

diplomats; about 200 judges; 40 missionaries; and 86 college Presidents” (Fox, 1945, p. 16). One of the myths about America’s pre-Civil War colleges was that “their alumni were somehow irrelevant to the ‘mainstream’ of American social and cultural development,” an assertion that has been debunked generally and quite specifically in the case of Union College (McLachlan, 1978, p. 291).

Nott’s own education was classical and informal; his stern, older brother who was a Congregational minister in the Puritan tradition, mentored him. Despite the absence of either academy or collegiate education, in 1793, at age 20, Eliphalet Nott became the principal teacher at the Plainfield Academy in Connecticut. Significantly important there was Nott’s interaction with Rev. Joel Benedict, a Congregational minister who was pastor at the local church and preceptor at the Academy (McLachlan, 2015, pp.483-486). Benedict was a graduate of the College of New Jersey (now Princeton) whose “New Light” theological orientation was more liberal than that taught by Nott’s brother, and whose mentoring helped Nott become licensed to preach by the Congregational Association in Connecticut in 1796.

When Nott left Connecticut (1796) to do missionary work in central New York, he was armed with a more optimistic theological perspective (salvation possible for all) thanks to Joel Benedict, and experience teaching at an academy, a type of school that offered broader curricula than those in the English grammar tradition. In fact, Plainfield Academy had a dual track program, one of which focused on the classics and the other on more modern, useful subjects, an approach Nott would favor in subsequent educational endeavors (Hislop, 1971, p. 21). Nott’s missionary venture landed him in Cherry Valley, NY where for two years he was both the pastor of the Presbyterian Church and head of the local academy. In 1798, when Nott accepted a call to become pastor of the First Presbyterian Church of Albany, he had leadership experience in two academies, which certainly gave him credibility as an educator as well as a pastor.

When Nott came to Albany, he shared a theological belief with many Protestant leaders that one looked at the world to amass evidence of God’s presence and to act accordingly when finding it. One studied academic subject matter in part to acquire better tools to find God in the world and in nature (Hislop, 1954, p. 103). Nott’s first public statement specifically related to his function as president was the *Address Delivered at the Anniversary Commencement of Union College, May 1, 1805*. In it, he encouraged graduates to follow the examples of the great 17th century scientists like Isaac Newton, John Locke, and Robert Boyle: “In one word, go, and with the great, and the wise, and the good, of all nations, and all ages, ponder the mysteries of Infinite Wisdom, and trace the EVERLASTING in his word and in his works” (Nott, 1805, pp. 2-3). The rest of the address was essentially a sermon exhorting graduates to control their passions, exhibit sympathy for others, live a just life, and cherish and practice religion. This first address by Nott was not reflective of the tenor of his talks in later years, or the way in which he led an expansion of curriculum that had more secular goals related to personal success and social improvement.

In addition to Nott’s experience as an educator in schools with varied programs, and his belief that science could assist one’s understanding of God’s work at a deeper level, one can add another factor to explain the curriculum changes Nott instituted over the course of his Union presidency, namely, his own creative abilities. As has been noted, Nott’s education was classical and theological; nowhere did he study science or engineering. Yet in parts of America and Europe, Nott was known as an inventor of stoves, not as a college president. In 1812, he created a room for himself on campus where he could conduct experiments as a means of relaxing. His

attention to stoves grew out of the practical problem of warming rooms where students lived and the need to find a replacement for stoves that were minimally effective. From February 1819 to March 1836, Nott obtained twenty-six patents related to stoves for heating and cooking, fireplaces, boilers, and steam generators (Patents, n.d.).

While curriculum changes were ongoing during the whole of Nott's presidency, four specific changes will illustrate the college's continuing movement toward a curriculum broader than the classics, a trend that was present from the beginning when John Blair Smith was president. The first occurred as part of the 1807 curriculum revision at Union. Existing courses in math and science were moved to the junior and the senior year to emphasize their importance, and a new required course in chemistry was added to the senior year. Chemistry had practical applications in areas as diverse as mineralogy, geology, husbandry and medicine, and its study reflected Enlightenment ideas about the role of science and its relation to human progress. Yale was the leader of the movement to integrate chemistry into the curriculum when the eminent Benjamin Silliman began lecturing on that subject in 1802, an assignment given to Thomas Brownell at Union in 1807. Like Silliman, Brownell went off to Europe to purchase equipment needed to teach the subject. At both Yale and Union, chemistry was also viewed as another way to see God's work, not surprising since both places had Congregationalist ministers as their presidents. Nevertheless, as historian Roger Geiger notes, "chemistry was the subject that led the transformation of academic science" (Geiger, 2015, p. 258). Union's early involvement in this transformation provides evidence to bolster George Schmidt's assertion that Nott was "the president of the most conspicuous 'progressive' college in the first half of the nineteenth century" (Schmidt, 1957, pp.112-113).

There was another important change that occurred in 1807; President Nott began to teach a senior moral philosophy course that previously was called "Criticism," and taught in the second or third year. It was traditional in the nineteenth century that college presidents taught such a course; what was unique about it was the way Nott did it, and he continued to do it until 1859. In the college catalogue the course was identified as "Kames," named after the author of *Elements of Criticism*, the book students used. Lord Kames was an eighteenth-century lawyer and philosopher in the Scottish Enlightenment tradition who emphasized the power of reason to inevitably reach conclusions needed to solve problems. With anecdotes, enthusiasm, and humor, Nott used the book as a foil to raise questions and challenge students to think for themselves and not accept answers because it was in a book written by someone named Kames. Nott believed that men of action were also motivated by passion and emotion and students needed to acknowledge that fact. Nott's class was famous among Union students and remembered fondly by alumni because dialogue about current issues in a classroom setting with a strong professorial personality who was a minister but non-sectarian was outside the norm (Hislop, 1971, 234-254).

After 1807, the next significant curriculum development occurred in 1815 and was important primarily because it was a precursor to the unique curriculum options offered in 1828. More mathematics was added to the junior year, and in the senior year there was a different set of courses for those who wanted a more useful track, while the classics course remained for those who were there to complete a program designed to prepare them for the more traditional life of a scholar and gentleman. Except for "Kames" and an added component focusing on Dugald Stewart's *Elements of the Philosophy of the Human Mind*, the senior year in the scientific course was entirely devoted to science courses, including for the first time, biology and geology

(Hislop, 1971, pp. 167-168; Somers, 2003, p. 200). In the 1820s, Union would take this separation of a classics course and a scientific course to a higher level than any other college in the country. Eliphalet Nott signaled that increased momentum toward more useful higher education in an address to the Phi Beta Kappa fraternity at Union in 1824.

Phi Beta Kappa was founded in 1776 at the college of William and Mary, and between then and 1787 three new charters were granted, first to Yale, then Harvard, and finally Dartmouth. In 1817, Union was the fifth institution to obtain a charter and establish a chapter, and it was to this group that Nott's 1824 *Address Delivered Before The Phi Beta Kappa Society of Union College* revealed his somewhat equal reverence for science and religion. Half of the address was devoted to a delineation of the scientific advancements already made, a quarter was devoted to a critique of slavery and the progress made so far in abolishing it, and the final quarter offered thoughts about a reconciliation between science and religion (Nott, 1824).

The science section of Nott's remarks was astonishingly detailed. He argued that knowledge is power, that science has the power to improve conditions around the world, and that "the friends of science [must not] remit their exertions until this shall have been accomplished.... until all that is gross, and vulgar, and revolting shall disappear and the entire world [exhibits] ... what is tasteful in art, recondite in science, or enchanting in eloquence and song." Nott reminded students that this is the work that college alumni can do (Nott, 1824, pp.35-36). Next he discussed recent accomplishments in science, emphasizing that they only represent a beginning and that we cannot imagine how much further those, and other discoveries can be developed. Nott then described in detail the discoveries and improvements already made in the fields of mineralogy, botany, electricity, transportation, medicine, sign language, eyeglasses, artificial limbs, treating mental illness, and improving conditions in prisons. Even though a minister, Nott critiqued the way in which inflexible doctrines and religious wars have impeded progress. For Nott, it was time to "connect Jerusalem with Athensand plant the banner of religion in the vestibule of science" (Nott, 1824, pp. 66-67.) No longer was science primarily evidence of god's work; its goal was to make the world better for all of mankind, something right-thinking believers should understand. The perspective Nott expressed in 1824 was one he held for the rest of his life.

This perspective undergirds a change in 1828, Union's parallel curriculum that was a unique contribution the college made to curriculum development in higher education in the pre-Civil War era. Simply put, after a traditional first year curriculum, students chose either a classics course or a scientific course (with some courses common to both) and received the same degree at the end of the program. This was as clear a statement of the value of academic science as one could make. There were many advocates for more useful education in America going back at least as far as Ben Franklin's *Proposals Related to the Youth of Pensilvania* in 1749. In the early nineteenth century, there were trials of separate but equal academic programs attempted at University of Virginia, Harvard, and Amherst, among others, and all failed. When a call for a more practical course of studies hit Yale University in the 1820s, President Jeremiah Day and two faculty members wrote a well-circulated report in 1828 that was an ardent defense of classics as a mechanism for teaching students how to learn. They argued that the mental discipline involved was the best preparation for professional life, and that the classics supported an upper-class culture and moral code that benefitted the nation (Geiger, 2015, pp. 187-193). Many colleges, both old and new, used the Yale Report to justify resisting calls for curriculum

change. Old traditions die hard, and it was cheaper for the myriad small colleges that opened between the 1820s to the Civil War to hire a Latin teacher than a science professor whose classes would likely be under-enrolled but would still need expensive equipment to begin instruction.

The Yale Report had little impact on Union because the college's curriculum strategy was working. "In 1830 Union graduated 96 seniors to Yale's 71, Harvard's 48, and Princeton's 20.... As late as 1861, [Union's] graduating class was the third largest in the country" (Rudolph, 1977, p. 87). It would be incorrect to assume the various changes at Union were solely responsible for dramatic growth in student enrollment and graduations. Those numbers grew incrementally and helped keep Union in the top tier of colleges that had a modern curriculum, solid enrollment, and financial health (Potts, 2000, pp. 42-43). As Roger Geiger (2015) notes, Union also benefitted from state financial assistance and from the "economic vitality" of the Capital District (p. 114).

Union's civil engineering program is the final curriculum innovation to be discussed. That program began in 1845 and was the first such degree-granting program located in a liberal arts college. Nott's decision to start civil engineering was based on the well-known need for trained engineers to oversee transportation and construction needs of the vastly expanding country the United States had become. Some colleges offered course work in engineering, but Nott's success at launching a degree program in a traditional college was unique (Reynolds, 1992). In the early 1840s, with strong mathematics instruction already in place, Nott added surveying as a required course for students in the scientific course, and electives in topography and leveling (methods for measuring heights). In 1845, he announced creation of a civil engineering program and the hiring of William Gillespie to teach it (Bonner, 1988, p. 49). Gillespie was a Columbia graduate who went to study in France, the leading country for academic study of engineering. After completing his work there, he spent a decade engaged in engineering, traveling abroad, and writing, although precise details of the ten-year period following his formal training are murky. He wrote Union's Vice President, Reverend Alonzo Potter in 1844 proposing creation of an engineering program and, given Union's experience as a leader in science education, the proposal was readily accepted (Somers, 2003, pp. 336-339). Union's program was successful from the beginning. From 1850-1865, Union graduated forty engineers, substantially more than the small numbers in colleges elsewhere (Bonner, 1988, p. 44).

One consequence of the continued growth of the sciences at Union was change in composition of the faculty. In the period from 1795 to 1850, in the traditional classics departments, there were fifteen professors, twelve of whom were ministers. In the same period, the math, science, modern language, and engineering group totaled twenty-one professors, four of whom were ministers (Hough, 1876, pp. 59-61). Not long after its start, Union began to transition from a non-sectarian school with a prominent Christian atmosphere, to one that was increasingly secular in orientation and modern in curriculum. According to Roger Geiger, "Of the approximately 180 colleges established between 1820 and 1860, just 10 were state controlled; almost all the rest were denominational colleges, many of which were a consequence of the nation's western expansion (Geiger, 2015, p. 194). Financial problems and a desire to be favorably compared to eastern colleges were the principal reasons most of those colleges clung to traditional classical curriculum (Geiger, 2015, pp. 202-203). Again, we observe differences with Union College. Begun with continued support of the Dutch Reformed Church, and led by four ministerial presidents, Union hired faculty because of academic background and not religious affiliation, which contributed to the continuing cycle of modern program development.

By 1845, Union's semi-centennial, the college had graduated 2,588 students (Potter, 1845, p. 54). Franklin Hough's (1876) historical sketch of Union College compiled in conjunction with America's centennial celebration provides important enrollment data for every year from the college's beginning to 1875. Looking at the graduation data from 1797 when 3 students graduated, and then every ten years starting with 1800 through 1860, one gets a quantitative sense of the success of Union's continued program development and strong reputation. In 1800, there were seven graduates and in 1810 there were 27. Over the next five decades the graduation numbers were as follows: 1820, 65; 1830, 96; 1840, 105; 1850, 77; and 1860, 98 (Hough, 1876, p. 64). As previously noted, these statistics place Union no lower than third when counting annual graduation numbers of all colleges in the country during this period. In 1851, four colleges were depicted on the cover of a new book about college life. Those pictured were Harvard, Yale, Princeton, and Union (Fox, 1944, p. 5).

Founding the University of Rochester, 1847-1850

Unlike Union College, the University of Rochester was created by faculty from another institution who were unhappy with developments there and who saw relocation as a mechanism to create a more suitable institutional environment, one that would grow stronger in a more productive setting. The faculty were from Madison University (now Colgate), a Baptist institution in Hamilton, NY whose origins go back to 1819. Hamilton is located midway between Utica and Syracuse. Its first Yankee settlers arrived in the mid-1790s, and in 1816, with about 50 dwellings there, the area was incorporated as a village. Baptists from that locale formed the Baptist Education Society of the State of New York in 1817, obtained a charter in 1819, and subsequently opened the Hamilton Theological Seminary in 1820. In the 1830s, the institution evolved to include an academy and a college and renamed as Hamilton Literary and Theological Institution. In 1846, the name changed again and the three units became Madison University.

Hamilton Village was small, not easily accessible, and did not benefit from the booming New York economy following the opening of the Erie Canal in 1825 or railroads that came later. By 1850, Hamilton's population was only about 1,500. Despite the natural beauty and presumed superior moral purity of countryside locations for institutions of higher learning, several leading trustees and a majority of the Madison faculty proposed relocating the institution in the late 1840s. While communities everywhere wanted a college, Baptists in Rochester, NY, a flourishing canal boomtown whose population was 1,500 in 1820 and 36,400 in 1850, enthusiastically courted the Madison group. John Wilder, a wealthy Baptist living in Albany, was the leading trustee advocate for relocating the college and gave several reasons for his support of the relocation plan. According to Wilder, the Madison campus was in disrepair, its library was too small, and it received insufficient support from denominational members around the state. Additionally, local politics and doctrinal disagreements were periodically disruptive, a competitor, Hamilton College in Clinton, NY was only 20 miles away, and there was discontent among the faculty about the location (May, 1977, p. 11). One faculty member, John Raymond, expressed that discontent this way in 1847: "You know how often I have had a depression of feeling, from the extreme loneliness and inactivity of our secluded place, especially when returning to it from the bustle and vivacity of the great cities and thoroughfares from which we are so effectually cut off. My only consolation was that there was some prospect of effectual and permanent change" (Pieterse, 2014, pp. 1-2).

The first organized meeting to discuss relocation took place in Rochester at First Baptist Church in September 1847 where a motion unanimously passed to support relocation of Madison University to Rochester. In October 1847, at a meeting held in City Hall, influential citizens of Rochester from several denominations endorsed that idea and promised financial support. A subsequent meeting in December authorized Wilder to gather signatures from Baptists at Madison University, the Baptist Education Society, and prominent Rochester Baptists to send a resolution to the Legislature to approve the relocation. The Legislature approved the resolution in April 1848, which was then endorsed by the Trustees of Madison University in August 1849. However, opponents of relocation obtained an injunction to halt the move, and after some compromise efforts failed, supporters of the Rochester site decided to send a proposal to the Board of Regents for a new university in Rochester. With the support of former Governor William Marcy, a Baptist graduate of Brown University, the proposal quickly gained approval in January 1850. The charter created a non-denominational university with a self-perpetuating board of trustees, but in fact, 20 of the 24 trustees subsequently appointed were Baptists, including Marcy (Gilmore, 1886, pp. 3-9). The enthusiasm for a university in Rochester bode well for the institution, but factors emerged that were obstacles to maintaining that enthusiasm.

Educational Ideals: Mid-Nineteenth Century and Beyond

While Union College was a leader in dramatic higher education curriculum change in the first half of the nineteenth century, by the mid-nineteenth century most colleges had altered curriculum incrementally, especially in the areas of science, modern language, and degree options (Potts, 2000). When the University of Rochester opened in 1850, the first order of business was to develop a curriculum. Robert Kelly headed a trustee-faculty committee to do that which included Chester Dewey, a newly appointed faculty member who was the city's most well-known scientist and educator. Kelly was a trustee at Madison University, New York University, and involved in the creation of a Free Academy that became the College of the City of New York. As part of this process, trustee John Wilder consulted with Reverend Francis Wayland, President of Brown University, the country's preeminent Baptist educational institution. Wayland was a nationally known proponent of curriculum reorganization to include practical subjects and electives and who offered proposals to implement those practices in 1842, 1850, and 1854. By breaking the stranglehold of the classics his ideas were intended to attract more paying students from a larger portion of the population (Geiger, 2015, pp. 227-228). Wayland was a graduate of Union College, class of 1813, and an admirer of President Nott with whom he visited and corresponded (Celebration, 1854). The Rochester plan that resulted included a traditional classics program that led to a Bachelor of Arts degree, but also a Bachelor of Science degree that included sciences, higher mathematics, modern languages, English literature, and electives in the third and fourth years (May, 1977, pp. 23-24). As elsewhere, the traditional curriculum attracted the larger number of students, but in its first two years Rochester had 12 then 14 students in the science program. From then until 1871-72, the number was always in the single digits, and the number of students in the science program never surpassed 14 until 1875-76 when the program enrolled 18 students from a total of 165 (Gilmore, 1886, p. 32).

What explains these low numbers in an era of scientific discoveries and technical advancements? Neither the faculty nor the trustees who developed the curriculum should be faulted for the slow implementation of the programs they envisioned. Several of the influential founding trustees were well aware of the progressive changes in mid-nineteenth century higher education. Trustees William Marcy, John Wilder, and Ira Harris had served on the Board of

Trustees of Union College. Marcy joined the Union board after the approval of the parallel curriculum, and Wilder and Harris after the college's undergraduate engineering program was established. Marcy was a Brown University graduate and Harris from Union College. Wilder had consulted with Francis Wayland, headed the Executive Committee of the board, and since there was no president when the university opened, Harris was named Chancellor. Harris, a Supreme Court judge, was a founding trustee at Albany Medical College (1839) and one of three founders of Albany Law School in 1851, and both institutions represented best practices of those types of institutions. Marcy, Wilder, and Harris, in addition to their mutual appreciation of contemporary higher educational developments, were all members of the same Baptist church in Albany.

Rochester's main organizational problem in its first three years was that they could not get a notable Baptist to accept the presidency. Francis Wayland was the trustee's first choice, but he declined. As previously noted, Wayland was a Union College graduate, but he also served twice as a faculty member there for a total of five years, including the year before he accepted the Brown presidency. He was well versed in the ongoing curriculum changes at Union. Indeed, in the 1850s, as Wayland was garnering favorable notice for his educational ideas, Jonathan Pearson, an 1835 Union College graduate and then professor, questioned the attention given to Wayland's educational proposals: "For more than 30 years," Pearson wrote, "[Wayland's] 'New System' has been taught at Union in spirit and in fact" (Hislop, 1971, p. 232).

A second choice was Reverend Barnas Sears, an 1825 Brown graduate who had taught theology and ancient languages at the Hamilton Seminary and then at Newton Seminary in Massachusetts, where he also served as president from 1839 to 1848. He resigned that post in 1848 to accept the most highly visible position in the development of public schooling in the United States, Secretary of the Massachusetts Board of Education, an appointment held by Horace Mann since 1837. Sears accepted the presidency of Brown in 1857 when Wayland resigned the position after twenty-eight years. Offers were made to other individuals, including several members of the trustees, but without success.

In 1853, trustees offered the Rochester presidency to Martin Brewer Anderson, then editor of the *New York Recorder*, a Baptist periodical headquartered in New York City. Anderson accepted and held the position for 35 years, retiring in 1888. For better or worse, Anderson was the face of the university and his educational and religious beliefs represented the institution to both the secular and religious worlds in which it operated. Anderson was born in 1815 in Maine and lived with his parents in three different communities until 1836 when he entered Waterville College (now Colby) in 1836. The family was Baptist, and Anderson deepened his connection to the church and its teachings after he participated in a religious revival in 1833. His subsequent written personal communications typically contained multiple references to God and his later professional comments about the aims of higher education referred to the creation of a "true man," which he equated with development and exhibition of Christ-like virtue. For Anderson, college study correctly structured produced intellectual and moral virtues, which was its principal objective. These were beliefs he never abandoned or altered (Vedder, 1890, p. 18). As an adult, Anderson was a student, preacher, teacher, editor, and college president. As his biographer noted, "Whatever his nominal calling he could not evade the instinct that made of him a moral instructor" (Kendrick, 1895, p. 64).

After graduation in 1840, Anderson spent a year in Newton Seminary; but was not ordained when he left to preach in a church in Washington D.C. In 1843, he returned to

Waterville as a teacher where he remained until 1850 when he took over the periodical that gave him a wider audience. He was not Wayland or Sears, but Anderson was recognized as a strong, orthodox Baptist voice, one who was known to have favored Rochester in the relocation saga. He began his work at the University in the fall of 1853 and was formally inaugurated during commencement week activities in July 1854 where he gave an address entitled *The Ends and Means of a Liberal Education* (Anderson, 1854). This lengthy address presented educational ideas he had already formed, and which would remain unchanged during the next thirty-four years of his presidency, even though higher education was changing dramatically in a variety of directions. According to Anderson, a classical education leads to the “best conduct of life in society, in the church (and) in the state.” Professional education alone “assume(s) that our only existence is material, and that all good is to be found in worldly honors and wealth” (pp. 5-6). “The development of the soul, in all its capacities and powers” is the main purpose of higher education. The goal is to produce “a true man, the noblest product of earth,” and teachers “thoroughly imbued with God’s plan in the universe of truth” are the ones who will help students achieve that goal (pp. 9-10, 30).

Anderson’s preference for classics was also anchored in his belief that “the present has its basis in the past. The new is embedded in the old” (p.33). Unlike Francis Wayland, he dismissed the idea that colleges ought to offer the kind of education people are willing to pay for: “We believe that it is the duty of a body of learned teachers associated in a University to *lead* public opinion in the matter of their profession, and to follow it only where its tendencies are in the right direction. Like the ministers of religion, they should ask what people *need* rather than what they will most readily pay for” (pp. 55-56, italics in original). Anderson argued since the presence of the University would benefit the city, he hoped “Rochester [would] emulate the cities of New York and Boston and the villages of New England in establishment of a free Latin school of the highest class (p.64). In short, in the middle of the nineteenth-century, Anderson was asking for the kind of school established in the mid-seventeenth century colonial era.

President Anderson was widely respected as a good citizen of Rochester, a broadly educated person with strong religious convictions, and a president so committed to the college he led that he rejected offers to serve other institutions in that capacity. Nevertheless, the religious tone sustained by the predominant Baptist affiliation of the faculty and trustees, the mandatory chapel talks, the absence of dormitories and athletics, and the inordinately slow development of the curriculum prevented any significant breakthroughs to distinguish Rochester from other small institutions in the nation or in the region. The University of Rochester was not alone in this regard. As historian David Potts (1971) has shown, denominational ties between colleges after 1850 grew stronger than earlier in the century when support by the local community was a more significant factor, as was the case with Union.

Still, Anderson’s rigid perspective and slightly “dictatorial” tendencies did not help the college grow or its financial health improve (Kendrick, 1895, p. 124). In his 1876 commencement address, even before mentioning some of the new curriculum additions, Anderson (1876) noted that a small number of electives have been added “with reference not to their accidental popularity, but to the demands of symmetry and proportion in a liberal education” (p.2). Anderson referred to the acquisition of some “apparatus for physics,” a lecture room and laboratory for chemistry, and a cabinet to hold specimens related to geology and mineralogy. But then we learn that “the study of the Greek and Roman political constitutions has

received special attention” and that a course on the “Institutes of Justinian have been introduced as an elective study for the Senior Class...” (p.9).

In 1884, thirty-one years after he assumed the presidency, Anderson attended the three-day centennial celebration of the University of the State of New York. The heads of various types of educational institutions attended and presentations were grouped accordingly. Anderson was chair of the conference of college presidents and gave the first address. Remarkably, at a gathering where the spotlight was primarily on new developments in education, President Anderson chose to assert the value of classical language and the inappropriateness of the elective system. He argued that since people take advice of doctors when they have medical issues and lawyers when there are legal ones, the same respect is due to teachers who prescribe curriculum: “[E]xperienced [college] teachers do not believe in permitting young men to select indefinitely from the various departments, according to their own idiosyncrasies and tastes.... Their intellectual tastes lead them to follow the line of least resistance” (Celebration, 1885, p.159).

According to Anderson, the study of language is the most fundamental subject, even for science: “[H]ere we find a necessity for studying the classical tongues, for the whole range of science is embedded in a nomenclature which has been drawn from the Greek and Latin languages” (pp. 159-160). Anderson supported the study of physics and chemistry, but his approval was partially based on the idea that “they illustrate each and all of the Almighty’s plan in the universe” (p. 161). This was a view that the twice-ordained Eliphalet Nott had abandoned over 60 years earlier. Anderson concluded his remarks by reasserting a familiar theme: “In actual life the true man does not follow his tastes but the dictates of duty, and duty often requires us to do what is most antagonistic to our natural tastes or tendencies.... It is the power of self-control — the power to do disagreeable work — which makes a man” (p.164).

Andrew Dixon White, president of Cornell, was the next speaker and had prepared an entirely different topic to address, but he could not let Anderson’s remarks go uncontested. After praising what he could about Anderson’s address, White noted that without change from the outside a profession, physicians would still be bleeding patients and colleges would be still teaching scholastic philosophy. Non-practitioners like Erasmus and Pasteur had changed the content of higher education and the basic theory of illness and its treatment. “My contention,” White continued, “on this point is that the profession of teaching, like other professions, must be adjusted to the advancing needs of the world, and that this will never be done wholly by men who sit in the chairs of professors or presidents of universities and colleges” (p.166).

White also responded to Anderson’s condemnation of the elective system. He noted that Anderson’s description of complete freedom to elect all courses did not exist anywhere and thus was not an appropriate way to analyze that issue. White commented that within the last month “Yale College, the last great bulwark of the old system, has announced its conversion to the new system, giving a greater range of choice among studies” (p. 167). White believed that the elective system was “one of the greatest advances in the history of education” (p. 168). He had more faith that young men of eighteen who had to make several important decisions about their lives “can certainly decide after advising with professors and fellow students whether they shall make up their supplementary course with more or less Greek, or Latin, or mathematics, or moral philosophy, or science, or history, or literature”(p. 168).

Given the radically different origin stories of the University of Rochester and Cornell University, the former a very small religious institution relocated to a developing city, the latter a land grant university funded by a wealthy donor and the sale of land given by the federal government, the variables are too enormous to extract comparative lessons about the early development of these institutions. What one can say is that they were structured differently, had different objectives, and that one operated as a denominational enterprise while the other was strictly secular. As a result, their enrollment patterns were different. When Rochester opened in 1850, it had 74 students; Cornell opened in 1868 with 412. In 1871, Rochester enrolled 42 freshmen, Cornell, 250. In 1876, when Anderson gave the commencement address cited earlier, Rochester had 165 students, Cornell, 561. Eight years later, in 1884, when Anderson was addressing the college presidents, Rochester's enrollment was still at 165. Over the next 25 years, led by two new presidents, Rochester grew to 405 students in 1909. During that same period, Cornell's enrollment rose to 5,028 (Gilmore, 1886, p.32; Rudolph, 1962, p.268; Geiger, 2015, p. 289; Veysey, 1969, p. 339).

The enrollment disparity was unrelated to population density. When Rochester opened in 1850, the city's population was 36,400. When Cornell opened in 1868, Ithaca's population was around 8,000. When Rochester's second president, David Jayne Hill began his term in 1889, 185 students were enrolled while the city's population was about to reach 133,850 (Rosenberger, 1927, p. 232). Data from the 1870s and 1880s make it clear that young Rochesterians were not flocking to the University. In 1875-76, only 46 of the 165 enrolled students were from Rochester. In 1883-84 enrollment was still 165 with 54 students coming from the city (Gilmore, 1886, p. 34). When Rochester's enrollment reached 405 in 1909, population in the city was 218,000. Obviously, things were improving, but why was enrollment low in a city that was and had been a booming success for 80 years?

The answer in part is that neither Anderson nor the curriculum of the college he led engaged the people who were responsible for Rochester's economic success. There is no mention of these kinds of contacts in Anderson's biography written by Asahel Clark Kendrick (1895). The biographer was one of the Madison University professors that came to Rochester in 1850 and worked with Anderson throughout his presidency. Moreover, the biography ends with seven "personal portraits" written by individuals who had a denominational and/or educational connection to Anderson, not one of whom was a resident of Rochester. The first of the seven reflections was by a Rochester graduate who had a subsequent higher education presidential career. Included in his remarks was the observation that "Dr. Anderson was *not a genial man* ...and had not the winsome ways of spontaneous cheerfulness ...he was inclined to be introspective and despondent" (p. 211, italics in original).

When Anderson arrived in 1853, Rochester's economy was beginning to diversify. It was no longer the "flour city" based on wheat from the Genesee Valley processed by water-powered mills located by the river's falls in the city and shipped via the Erie Canal. Rochester had become the "flower city" because its 500 acres of nurseries produced flowers, fruit, and seeds shipped by rail across the country. Like many northern cities, Rochester prospered after the Civil War, though tempered by the financial panics of 1873 and 1893. Clothing and shoe manufacturing became important industries, as did furniture and metal works. Some 50 breweries opened from the 1850s through the 1890s. The development of glass lined steel containers for that industry by Casper Pfaunder's company in 1884 also served the needs of other industries nationwide. John

Jacob Bausch opened an optical shop in 1853 and with some financial help from Henry Lomb made their company the leading producer of optical products in the world. In 1887, Frank Ritter's furniture making company morphed into one that manufactured specially designed chairs to treat dental patients. William Gleason's metal works company opened in 1865 and a decade later pioneered design and manufacture of machinery to make bevel and cylindrical gears. Most significantly, George Eastman developed a process to manufacture dry coated photographic plates, and with initial financial backing from wealthy businessman Henry A. Strong, formed the Eastman Dry Plate Company in 1880 to sell them. In 1888, after several more years of experiments produced transparent film and a rolled film holder, the Kodak (a made up name) camera with rolled film already placed inside was manufactured, making it possible for anyone to take photographs (McKelvy, 1949, pp. 249-250). For the next century, Eastman Kodak was the world leader in film and camera manufacturing. The period 1878 to 1888, when the Kodak enterprise was launched, was the last decade of Martin Brewer Anderson's presidency, a time in which he still clung to higher education traditions that were outdated many years before. Rochester's City Historian expressed an unfavorable view of the University's response to this kind of economic development: "Dr. Anderson, struggling to keep the university's doors open, was frequently plagued with doubts concerning the future, but part of the difficulty lay in his inability to grasp the community's special desire for practical and scientific knowledge. Instead of responding boldly to the new intellectual trends, the university ...spent most of the [era] struggling to maintain ...traditional methods. (McKelvey, 1949, p. 195)

This view of Anderson was not unique and was expressed even by those associated with him at the university. In 1900, at the five-day university semi-centennial celebration, Professor William Carey Morey gave an address entitled *The University of Rochester in its Relation to the Educational Movement of the Last Fifty Years*. Morey was an 1868 graduate of the university and returned in 1872 as a teacher of Latin language and literature. Beginning in 1883 and until his retirement in 1920, he taught history and political science. Morey gave a detailed description of what he called the conservative and progressive views of the purposes of higher education and curriculum that supported those views. He proudly described the first Rochester curriculum as one that sought to include the best of both perspectives: "In its general conception, it was perhaps quite as far advanced as any system adopted in an American college at that time; and was evidently intended to place the University of Rochester, at its very beginning in the rank of progressive institutions" (Morey, 1900, p. 59). That did not happen, and Morey's explanation was straightforward: We did not have enough money to hire professors and buy equipment, and Martin Anderson was our first president. Like anyone else describing the university during this era, there was recognition that Anderson had devoted his life to the institution: "During the whole period of his administration, the president was so identified with the institution that it was often said that President Anderson was the University; and conversely, it is no injustice to say, that if the University failed to place itself in perfect harmony with the educational movement of the time, such failure must also be largely attributed to him.... The unquestionable supremacy of one man undoubtedly gave vigor and efficiency to the University ...[but] friends of the institution [questioned] whether the college was keeping pace with the general advancement resulting from forty years of agitation and discussion" (p. 65).

According to Morey, the college essentially offered only one course of study, and while the scientific course was retained, the prevailing idea was the Bachelor of Science degree was not as "honorable" as the Bachelor of Arts. As a result, "the annual catalogue did not show any material

increase in the yearly attendance; and the moral and financial aid given to the University by the city of Rochester and the people of western New York was not in the highest degree gratifying” (p. 65). Indeed, throughout his career at the university, President Anderson continually complained that his health, the time to do scholarly activities, and his ability to manage the institution were compromised by the continual need to go on the road to beg for financial support. That recognition never led him to any changed strategy to improve the university’s financial circumstances. Anderson’s presidency ended in 1888 and he died in 1890. Morey was able to speak candidly in 1900 because there had been a new president whose activities and attitudes helped the university remove some obstacles to modernization and growth

What Kind of Education Did the City Need?

American cities in the 19th century hosted a variety of educating institutions that were not schools in the traditional sense. Rochester was no exception. There were various literary and mechanics institutes and associations that merged and/or disappeared, the oldest and most prestigious of which was the Rochester Athenaeum founded in 1829 and chartered by the state the next year. Famous literary and scientific lecturers and musical performers came to the city under the organization’s sponsorship and it maintained a substantial library for use by its members. The Athenaeum was successful for a long time, but deaths among its earliest supporters and changing economic conditions and tastes led to its decline. By the late 1870s, the organization existed in name only.

In 1885, a new organization was founded that was primarily the result of the work of Henry Lomb, Frank Ritter, Max Lowenthal, founder of Rochester Knitting Works, Ezra Andrews, founder of Lawyers Co-op Publishing, and the support of more than forty other Rochester business leaders. The Mechanics Institute’s purpose was clear: provide students fourteen or older (men only at first) opportunity to acquire skills necessary to work in Rochester’s increasingly technical industries. Since the late 1870s, manual training curricula had been gaining acceptance in America’s emerging high schools, but not so in Rochester. The fundamental course in this curriculum was drawing. Its goal was to promote hand-eye coordination, improved perception, visual accuracy, and manual dexterity, the kind of skills with wide applicability in a variety of trades. The Institute’s first class in November 1885 was in mechanical drawing and drew 400 evening students. To accommodate this number, a second evening section was added, as were two Saturday sections. The Institute’s *Plan of Instruction* in 1886 included mathematics and a science course dealing with properties of matter, dynamics of fluids, work and energy, and electricity and magnetism. There were also courses in architectural drawing and industrial design. During its first year, 1,065 students enrolled (Gordon, 1982, pp. 27-35).

To be clear, the Institute was not a college, was free for its first year, and subsequently was supported by tuition and the business leaders who created it. In 1891, it merged with the dormant Athenaeum which had some funds in an account and a charter that was still valid. By the time of the merger, the newly named Rochester Athenaeum and Mechanics Institute had enrolled 3,000 students (Gordon, 1982, p. 48). The new institution continued to grow, adding courses, diploma programs, and attracting the support of local philanthropists. George Eastman made his first ever contribution to higher education in 1887 when he donated \$50 dollars to the Institute. By 1890, he was on the Board of Trustees, and in 1892, he led an endowment campaign with a \$5,000 contribution to be matched by others. In 1900, Eastman donated \$200,000 to construct a new building to accommodate the growing enrollment, which, in 1900, was 2,800 students. The

Eastman Building was and remained the central building as the institution located and then expanded a downtown campus. Eastman served on the board of trustees from 1890 to 1915 and was chair during his last two years (Gordon, 1982, pp. 58-59, 74-75).

In 1889, 39-year-old David Jayne Hill began the first of his seven years as president of the University of Rochester. He was the son of a Baptist minister, graduated from the Baptist University of Lewisburg (PA) in 1874, and taught there until he was elected president in 1879. Lewisburg was in dire financial circumstances and in 1881, he was able to obtain a \$50,000 gift from William Bucknell, wealthy Philadelphia businessman who was on the university board. Hill successfully established a personal connection to Bucknell whose continued giving during that decade resulted in the university changing his name to honor him in 1886. During this same period, the governance structure of the university was substantially altered removing several conservative Baptists from its governing boards and replacing them with businessmen from the Philadelphia area whose presence helped to modernize the institution. Two science buildings and a gymnasium were built, electives added to the curriculum, fraternities permitted, and participation in intercollegiate athletics begun (Leslie, 2005, pp. 42-45). Hill was unlike Anderson in other ways as well. He was well known as scholar who had published seven books prior to his arrival in Rochester, another while he was there, and thirteen after he left.

Shortly after his arrival in Rochester, alumni arranged a reception for the new president. Hill's remarks clearly previewed what he believed needed to be done: "Times and men change, and colleges must change with them. It gives me pleasure to say that there is nothing to change at the University of Rochester, but there are a great many things to add.... No matter how brilliant a college's record may be, that college must die if it does not grow" (Rosenberger, 1927, p. 232). Free from the oversight of President Anderson, Professor Morey tells what happened almost immediately: "The Faculty were keenly conscious of the defects of the existing course of study, and at once took the initiative by appointing a committee to review the whole question of the reform of the curriculum, and to recommend a definite plan of re-organization" (1990, p. 66).

The plan, approved unanimously, created three separate degree tracks, reduced the number of required courses, and increased the number of electives allowed beginning of the sophomore year. According to Morey, this curriculum plan "brought the college ...into practical harmony with the more advanced institutions in the country" (p. 67). New departments of Biology and Astronomy were created, as was one in Physics and practical Mechanics to provide instruction "in the laws of mechanical force and their industrial applications" (p. 67). In this instance, the university was catching up to the Mechanics Institute. Laboratory work was more available and diverse. Work could be done in bacteriology, botany, optics, photography, geology, and chemistry was greatly enhanced with the purchase of new equipment. When the university opened in 1850 there was one science teacher, in the 1890s there were six, even though enrollment gains were minimal. When Hill began his presidency there were forty-seven courses in the catalogue; when he resigned seven years later, there were ninety-five (May, 1977, p. 102-103). Professor Morey (1900) was pleased to have been associated with a leader who was conscious of the need to work cooperatively with trustees, faculty, alumni, and the community. In Morey's view, "President Hill made it clear, at least to the public at large, that an institution of liberal education is not established for its own sake, or for the exclusive benefit of any particular class, but for the improvement of society" (p.69). This sentiment was similar to President Nott's Phi Beta Kappa speech in 1824.

Beyond its limited curriculum until the 1890s, another reason for the university's stagnation was the perception that it was a Baptist institution, and it was. It was clearly non-sectarian, but with a vast majority of trustees, faculty members, and students who were Baptist, and a president who adhered to a strictly conservative Baptist perspective on religious and social issues, it is understandable why that correct impression would limit voluntary financial support from the community. The trustees and other wealthy denominational leaders from outside Rochester consistently bailed out the university when periods of financial difficulty occurred. A survey done in 1888 revealed that there were 11,658 Protestant families in Rochester compared to 6,784 Catholic ones. Presbyterians and Episcopalians each had eleven churches, with smaller numbers of Baptist and Lutheran congregations. Eight other Protestant sects established their own churches (McKelvy, 1949, pp. 306-307). Unlike Catholic leaders who were single-minded about the educational needs of their church, there were different educational perspectives among the various Protestant groups that dampened enthusiasm about a Baptist school.

Beyond curriculum change, President Hill sought to make the university more inviting for all, especially residents of the city. Twice he held baccalaureate services at Central Presbyterian Church instead of First Baptist. The university began an extension program for the Rochester community, which attracted many Rochester teachers. Hill was purposefully active in the community "to compensate for President Anderson's years of neglect in this regard.... he missed no opportunity to ingratiate himself with influential elements in the city. An urbane, engaging, and witty speaker, he was in great demand for public appearances... [where typically] he emphasized the material and cultural value of the University to the city...." (May, 1977, p. 98).

President Hill was an ordained Baptist minister but never served as pastor to any church. He was theologically liberal, and his efforts to modernize the university troubled leaders of the denomination who felt their institution slipping away. In 1895, the local Baptist ministerial association passed a resolution insisting that the University stay firmly attached to the denomination that began it, and that classrooms should reflect a Christian and specifically a Baptist perspective. The university trustees had a Baptist majority, but also non-Baptist Rochesterians and several Rochester business leaders. Following Hill's lead, the trustees rejected the ministerial resolution noting that the institution would not become an instrument for sectarian propaganda directly or indirectly. As the historian of the institution noted about this action, "For all practical purposes, the President had effectively rendered the University of Rochester independent of the denomination" (May, 1977, p. 97). A strong indicator of how much the university had changed was evident when news of Hill's intended resignation in 1896 became public. It was not surprising that all components of the university community and many members of the local community urged him to stay, but so did the Chamber of Commerce.

At the very beginning of the twentieth century, the University of Rochester was a university in name only, but under direction of its third president, Rush Rhees, it began to move in the direction of the research university it is today. Like President Anderson (1853-1888), Rhees served as president for 35 years, 1900-1935. Rhees graduated from Amherst in 1883, taught there for two years, graduated from a Congregational seminary, and then taught at a Baptist one for eight years, with two years as a pastor in between. Significantly, both seminaries were liberal in their theological orientation, and Amherst had liberalized while Rhees was a student and Julius Hawley Seelye was president. Seelye was responsible for developing what was called "the Amherst System," one that featured electives as the major component of a

student's junior and senior years, and a move away from the tradition of *in loco parentis* to student self-government in relation to rules they help establish (Tyler, 1895, pp 236-242). Seelye was an Amherst graduate, studied at the Auburn (NY) Theological Seminary, was ordained in Schenectady in 1853, and was pastor of the First Reformed Church in that city from 1853 to 1858. It is inconceivable that he was not a participant in the centennial of Eliphalet Nott's presidency celebrated in 1854 where Francis Wayland gave the major address on *The Education Demanded by the People of the United States* (Celebration, 1854). His awareness of Union's educational approach is even more likely because Union awarded him a Doctor of Divinity degree in 1862. When Rush Rhees came to the University of Rochester as president in 1900, he had studied, taught, and been in places that were not hanging on to educational traditions of the past but were part of the present leading to the future. In short, he was a good choice to succeed in the remade University of Rochester developed under the leadership of David Jayne Hill.

While this is not the place to discuss details of Rhees long presidency, it should be noted that he was able to cultivate the support and then friendship of George Eastman, who had not yet been a factor in the university's history. At the conclusion of his inaugural address, Rhees said that while we exist to serve a wide constituency, "our closest most intimate relation must be with the city which gives us hospitality" (Rosenberger, 1927. pp. 273-274). Rochester was George Eastman's city, and Rhees was able to begin a relationship with him that yielded \$78,000 to build a new science building in 1903. Between then and his death in 1932, Eastman's money created a School of Music and a state-of-the-art performance theater, a School of Medicine and Dentistry and a medical center, a new campus on the banks of the Genesee River, and more. It is estimated that Eastman ultimately gave the university \$51,000,000 (George Eastman and the University of Rochester, 1971). Much earlier in his philanthropic career Eastman received appeals from many religious groups to whom his usual reply was "I am not interested in church work" (Brayer, 2006, p. 335). Had he still been around, that response would have troubled Martin Brewer Anderson. However, those remaking the university for its role in the twentieth century did not have to deal with that issue. Contributions Hill, Eastman and Rhees made to the university's advancement paid off. Today the university consists of seven distinct schools and a laser laboratory that is a school except in name. Enrollment is robust. There are 6,800 undergraduates and 5,000 graduate students. The University of Rochester is currently ranked 29th out of 399 national research universities by the U.S. News Best Colleges report. President Anderson did not succeed in creating a vibrant college that met his educational ideals, but there is no doubt his unending effort to keep the institution alive deserves appropriate recognition.

Union College during Nott's Last Years and Beyond

The last period of President Nott's tenure was not as distinguished as those that came before. Rheumatic seizures in the mid-1850s and strokes in the early 1860s rendered him speechless and devoid of memory when he died in 1866 at the age of ninety-three. But he would not resign, and his eminence during the first fifty years of his presidency made it impossible to remove him and left the college devoid of effective leadership. While the worst effect of the college's diluted leadership was operative, the nation began a Civil War that negatively impacted many colleges and had especially dire consequences for Union. Student enrollment in 1860 was 437; in 1865 it was 219. By 1872, enrollment shrank to 89 which yielded 14 graduates in 1875 (Hislop, 1971, pp. 549, 559; Hough, 1876, p. 64). For the rest of the nineteenth century, Union was in constant crises of various sorts, especially financial ones, during which time the normal school movement was burgeoning, state university systems were created, and the university

model was transforming formerly distinctive colleges. Despite crises and competition, Union hung on, enrollment crept up, and, by the early 1890s, there was, literally, light at the end of the tunnel. Thomas Edison incorporated several smaller companies into General Electric in 1892 and headquartered the company in Schenectady, the site of one of those original companies. That company had a few hundred employees that year; by 1914, General Electric employed eighteen thousand people in Schenectady (Monroe, 1914, p. 278).

Unsurprisingly, Union College's fortunes brightened with its long-term relationship with General Electric. To attract upper echelon employees to Schenectady, a small city of 20,000, the company purchased 76 acres of wooded, unused college property on which stately homes could be built for those employees as a way to retain them. The purchase was a financial boon to the college, as was the sale of land the college owned elsewhere. More importantly, the president of Union, Andrew Van Vranken Raymond (1894-1907), the most effective manager of the five presidents that followed Nott, persuaded General Electric to allow its world famous electrical scientist Charles Steinmetz to teach at the college and reorganize the electrical engineering program. The company also donated equipment to support the program. For the first time in forty years, there was reason to view Union College as a noteworthy institution. The presence of General Electric and an influx of Italian and Polish immigrants at the turn of the century helped revitalize Schenectady, which benefitted the college. The city's population in 1890 was 20,000; by 1910 it had grown to 73,000. As President Raymond wrote in 1907, the last year of his presidency: "The general conditions are better than they have been for half a century. The College is now out of debt, is living within its income, is adding every year to its equipment and endowment, is free from internal strife, and is steadily gaining the respect and confidence of the community and of the educational world" (Raymond, 1907, p. 428).

It is beyond the scope of this article to delineate curriculum history of Union College for the last one hundred years. As one would expect, courses, requirements, majors, degrees, methods for organizing instruction, the academic calendar, etc., were continuously under review and subject to change depending on the state of knowledge at the time, perspectives of faculty and academic leaders, and emerging social needs that could be addressed by graduates properly prepared to do so. What is important to note is enrollment at the college confirmed students and their families perceived a Union College education as valuable. After the low point of the mid-1870s, enrollment increased slowly but dropped to 90 in 1888. Enrollment in the 1899-1900 academic year was 182, and then began a steady rise to around 800 in 1927. Two years later, college trustees capped enrollment at that number. World War Two interfered with that cap, first with naval trainees at the college during the war, and then with returning veterans using the G.I. Bill. In 1947, there were 1,500 students, but veteran enrollment peaked, and during the 1950s, on average, the college's enrollment was about 1,000. Trustees continued to tweak enrollment caps and by the mid-1970s set it at 2,000. Forty-five year later, the actual number is still in that vicinity (Somers, 2003, pp. 262-265).

As it was mid-nineteenth century, Union College is again a prominent educational institution. In 2016, it was one of sixty-three institutions included in a book examining the "Hidden Ivies," liberal arts colleges that offer a quality education that rivals that associated with the collection of schools known as the Ivy League (Greene and Greene, 2016). Union students have an array of about 60 majors or minors to choose from, one-third of which are in science or science related fields. The most recent fields of study available to Union students exemplify the

diverse curriculum tradition dating back to 1795: Asian Studies; Bioengineering; Film Studies; Nanotechnology, and Neuroscience. Surely, somewhere, Eliphalet Nott is smiling. “His” college is still evolving, not limiting students to what seemed adequate in the past, and now, like then, Union College’s accomplishments continue to be recognized. As is true of the University of Rochester, Union College is not likely to appear on any “endangered colleges” list in the near or distant future.

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Ecologies of Elegance to Communalize the Cult of Efficiency

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Abstract: The cult of efficiency has failed schools to the degree and regularity with which competence and organization valued by efficiency devolve into the convenience and potential impropriety of expediency. The task of this paper is to begin the work of reimagining efficiency as a less harsh master of schooling by tempering efficiency with elegance. Elegance incorporates the goals of efficiency; but adds, as an aesthetic condition, ingenuity and simplicity to their pursuit and achievement. Elegance minimizes the potential for brutality in efficiency. Elegant schools replace the daily grind of efficient school life with a problem-posing and problem-solving orientation to work in school; supplement academic attention to isolated lesson objectives with an attempt to understand structures of subject-matter thinking; and enrich curricular facts and factoids with consideration of interconnections among elements in subject-matters. Emphasis on interrelations moves our understanding of school life towards the idea of an ecology of elegance and away from a cult of efficiency, away from a belief system imposed by a few upon the many and towards a shared system of support among school personnel and students as an ideal of operative success for schools.

The cult of efficiency, the system of schooling relentlessly aimed at achieving maximum productivity with minimum wasted effort and/or expense, has failed schools.¹ Things only get worse for schools to the degree and regularity with which the competence and organization valued by efficiency devolve into the convenience and potential impropriety of expediency.² Mary Winslow ingeniously summarizes the case against efficiency in education saying in effect: Efficiency often means deficiency in school proficiency.³ While some may think the incompatibilities between efficiency and education to be so great as to make education and efficiency irreconcilable with one another, others have called for creation of a “wider and fairer form of efficiency.”⁴ The task of this paper is to begin the work of reimagining efficiency as a less harsh master of schooling by tempering efficiency with elegance.

Elegance incorporates the goals of efficiency; but adds, as an aesthetic condition, ingenuity and simplicity to their pursuit and achievement. Elegance minimizes the potential for brutality in efficiency. To demonstrate the difference elegance makes to efficiency I compare/contrast the elegant school to the efficient school on three types of collateral learning in school: attitudinal (how students feel about school in general), attitudinal-academic (how students feel about given academic subjects), and academic (how well informed students are about interconnections among elements of a subject-matter).

Elegant schools replace the daily grind of efficient school life with a problem-posing and problem-solving orientation to work in school; supplement academic attention to isolated lesson objectives with an attempt to understand structures of subject-matter thinking; and enrich curricular facts and factoids with consideration of interconnections among elements in a subject-

¹ Margaret Smith Crocco, “Crafting a Culturally Responsive Pedagogy in an Age of Educational Standards,” *Theory and Research in Social Education* 26, no. 1 (Winter, 1998): 123-130.

² C. A. Yengo, “John Dewey and the Cult of Efficiency,” *Harvard Educational Review* 34 (Winter, 1964): 33-53.

³ Mary B. Winslow, “Problem-solving Cults,” *NASSP Bulletin* 68 (1 October 1964): 104-109.

⁴ William Lowe Boyd, “Are Education and Efficiency Antithetical?” *Journal of Educational Administration* 42, no. 2 (2004): 160 and Anthony R. Welch, “The Cult of Efficiency in Education,” *Comparative Education* 34, no. 2 (June, 1998): 157-175.

matter. The change elegance renders in each area of collateral learning is increased focus on interconnections among the people and ideas contributing to the make-up of a school. Educational emphasis on interrelations moves understanding of school life toward the idea of an ecology of elegance and away from a cult of efficiency, away from a belief system a few impose upon all working in schools and toward shared systems of support as an ideal of operative success for schools.

Excesses of Efficiency

More than one hundred years ago schools in America committed to implementation of organizational patterns inspired by ideas of Frederick W. Taylor as expressed in his book, *Principles of Scientific Management*. Taylorism, as these ideas have come to be known, recommends schools operate in ways that standardize the work of teachers and students to optimize learning performance in classrooms. According to Taylorist principles, standardization in teaching and learning requires five innovations in schooling practice: 1) shifting responsibility for organizing work aimed at learning away from teachers and into the hands of school administrators, 2) development of standardized assessments to measure student learning and teacher compliance with administrator-approved modes of instruction, 3) creation of certification requirements to determine qualifications for specific teaching and learning tasks, 4) implementation of regular in-service staff development to keep teachers refreshed on required patterns of pedagogy, and 5) execution of monitoring systems to make teachers accountable for their behavior in classrooms.⁵

In the view of many, schools have not prospered under Taylor's organizational regime. Opposition towards Taylorism in schooling was codified into a slogan in 1962 when Raymond Callahan published a history of Taylorism entitled *Education and the Cult of Efficiency*.⁶ Callahan argues that commitment to efficiency creates a vulnerability of officials and personnel at virtually every level of school organization.⁷ That vulnerability increases as business people, business values, and business models and methods dominate education policy making. At risk when business thinking takes over planning for schooling is understanding of, concern for and response to diverse backgrounds of students who populate schools, especially public schools. As Mary Crocco complains, bureaucratized, centralized, standardized approaches to schooling impose a "one teacher fits all schools" and a "one lesson fits all students" mentality typically productive of failure at the point of instruction unless teachers courageously take steps to enact student-centered learning as culturally responsive instructors out to improve, on their own and in the face of system requirements, the quality of education.⁸ Rachel M. Heydon and Ping Wang go so far as to cast this forced choice about cultural sensitivity of instruction many teachers face when working in efficiency systems as a moral dilemma of curricular ethics that forces "teachers

⁵ Frederick W. Taylor, *Principles of Scientific Management* (New York: Harper & Row, 1911). For this translation of Taylorism from its original corporate context to educational settings see Deron Boyles, *American Education and Corporations: The Free Market Goes to School* (New York: Garland Publishing, Inc., 1998), 49.

⁶ Raymond E. Callahan, *Education and the Cult of Efficiency* (Chicago: University of Chicago Press, 1962).

⁷ For an overview of the vulnerability thesis and its ramifications for schools and schooling see Frank W. Lutz' editor's introduction to the symposium on The American Superintendency and the Vulnerability Thesis published as "The Purpose of Inquiry" in *Peabody Journal of Education* 71, no. 2 (1996): 15-23.

⁸ Crocco, "Crafting a Culturally Responsive Pedagogy in an Age of Educational Standards," 123.

to consider the kind of person they must become in order to develop a non-violative relationship” with students.⁹

Callahan’s reassessment of the vulnerability thesis, published in 1996 as the foreword to a special issue of *Peabody Journal of Education* on The American Superintendency and the Vulnerability Thesis, argues that the power of the cult of efficiency is waning as business outlooks on education have lost automatic acceptance among educators and education policymakers, especially as school boards have diversified in membership beyond the business elite.¹⁰ However, facts tend to belie his optimism. For instance, years of test-tampering practices in the Atlanta, Georgia, Public Schools have been directly traced to thinking indicative of a cult of efficiency imposed by the Office of the Superintendent of Schools.¹¹ Corporate chickens have come to roost in contexts of post-secondary education as well, as American colleges and universities become more and more centers of profit and less and less centers of inquiry.¹² Tina Trujillo studied an intermediary educational organization specializing in Education Management; and found the organization committed to a discourse of efficiency as it enacted managerial data monitoring systems to guide development of recommended reforms; framed leadership and teaching in reductive, managerialist ways; and relied on business-inspired logics to compete in a marketplace and preserve its industry niche.¹³ Federal education initiatives, beginning at least with “A Nation at Risk,” rely heavily on the language of efficiency to justify and articulate their agendas for education.¹⁴ Moreover, Anthony R. Welch’s comparative study of education reform in Australia, Great Britain, and the United States found the language of efficiency at the center of discussion worldwide; and deployed in arguments amounting to little more than economic, technist conceptions of education that left no room at all for consideration of equity or personal and social development as valid educational goals.¹⁵

Found the world over, expanding into new areas, gaining foothold in school support organizations, and with a long history of entrenchment in educational debate, the cult of efficiency seems resistant to Callahan’s rosy predictions of decline. More likely, Frank W. Lutz is right to say Callahan was “well received but not well heeded. Instead of the vulnerability thesis becoming the stimulus for change, as Callahan intended, it became an excuse for powerful individuals in education administration, helping them to survive. Perhaps the vulnerability thesis has provided an excuse for those superintendents who cared more for their job than they did for what was right for education.”¹⁶ A classic example of such a schoolman is Ernest Clark Hartwell who in his 1914-1922 heyday “as an active and long-time influential member of the Department

⁹ Rachel, M. Heydon and Ping Wang, “Curricular Ethics in Early Childhood Education Programming: A Challenge to the Ontario Kindergarten Program,” *McGill Journal of Education* 41, no. 1 (Winter, 2006), 29.

¹⁰ Raymond E. Callahan, “Foreword,” *Peabody Journal of Education* 71, no. 2 (1996): 1-14.

¹¹ Steven K. Khan, “Fear and Cheating in Atlanta: Evidence for the Vulnerability Thesis,” *Transnational Curriculum Inquiry* 11, no. 1 (2014): 1-12.

¹² Frank W. Lutz and Robert W. Field, “Business Valuing in Academia: The American University as a Center for Profit or Inquiry?” *Higher Education* 36, no. 4 (December, 1998): 383-419.

¹³ Tina Trujillo, “The Modern Cult of Efficiency: Intermediary Organizations and the New Scientific Management,” *Educational Policy* 28, no. 2 (March 2014): 207-232.

¹⁴ See, for a classic source, Jay D. Scribner, “Defending “A Nation at Risk”: Excellence Costs,” *Education Digest* 49 (December, 1983): 10-12.

¹⁵ Welch, “The Cult of Efficiency in Education.”

¹⁶ Frank W. Lutz, “Vulnerability of the Vulnerability Thesis,” *Peabody Journal of Education* 71, no. 2 (1996), 24.

of Superintendence of the National Education Association ... typified a stalwart, modern-day, career-bound superintendent who consistently controlled school affairs during his administration. More than merely surviving as a school executive, he built an educational empire by aligning himself with managerial elites and fellow career-bound superintendents, ... [thus] winning the right to dominate the affairs of schools, [he] systematically applied a business ethos to his work, adopted antilabor practices to dash militant teachers' hopes for democratic control, and enlarged a state-sanctioned school bureaucracy to shield himself from public criticism."¹⁷ Of course, history holds its fair share of heroes of anti-efficiency, too. For example, Superintendent A.C. Barker in Oakland, California between 1913 and 1918, Superintendent Charles Chadsey in Denver, Colorado, 1907-1912, and Superintendent Jesse Newlon also in Denver (1920-1927) were sometimes able creatively to resist the cult of efficiency by remaining grounded in notions of scholarly skepticism, democratic engagement, and the compassionate care of children.¹⁸

One reason for the contrast between the imperial reign of Hartwell's career across three very different cities (Sault Ste. Marie, MI; St. Paul, MN; and Buffalo, NY) and the significant but sporadic successes of his sentimentally progressive counterparts in their home cities is that the cult of efficiency operates as an ideology. Operating as an ideology, enactable everywhere and anywhere the same, efficiency becomes more an article of faith about simplistic, technist solutions to social issues than a reasoned approach to resolving complex problems surrounding organization of schools and schooling. Adhering to articles of faith, as in the case of the cult of efficiency, is likely to lead proponents to proposals of panaceas, instead of putting earnest effort into genuine attempts to solve pressing and fundamental problems. Articles of faith may even go beyond ideology and lead to a sort of educational idolatry with efficiency taking on the form of what Lloyd G. Cooper calls "the current in-god."¹⁹

Even though hyperbolic in expression, Cooper's concern about the apotheosis of efficiency is well taken. The central problem with efficiency, like any dogma of any cult, is that the idea is rarely, if ever, subject to criticism from inside the frame of reference in which it is embedded. Historian of Education, Edward M. Miggins, writing in 2014 makes this point when summarizing his study of Cleveland's public schools during the rise of administrative progressivism at the beginning of the 20th century. Says Miggins, "The results of progressive school reforms did not often match their promises, but failure and disappointment did not lead to introspection and analysis of their remedies.... Centralized management, social efficiency, vocational and technical education, recreation, Americanization, specialization, intelligence testing, tracking, and quantification became the popular national model for public education between 1900 and 1930. They still constitute the paradigm for public schooling in America."²⁰ Miggins' suggestion that urban historians analyze educational change by studying local schools within their historical context resonates with similar claims at both the micro- and the macro-levels of educational research. For example, Alison Cook-Sather argues that listening to students

¹⁷ William B. Thomas and Kevin J. Moran, "Reconsidering the Power of the Superintendent in the Progressive Period," *American Educational Research Journal* 29 (Spring, 1992), 22.

¹⁸ David A. Gamsom, "The Infusion of Corporate Values into Progressive Education: Professional Vulnerability or Complicity?" *Journal of Educational Administration* 42, no. 2 (2004): 137-159.

¹⁹ For the quote see, Lloyd G. Cooper, "Decision Ability, Not Accountability," *Journal of Higher Education* 43 (November, 1972), 655. Trujillo, "The Modern Cult of Efficiency," and Scribner, "Defending a "Nation at Risk", make the claims about ideological faith and proposal of panaceas, respectively.

²⁰ Edward M. Miggins, "No Crystal Stair:" The Cleveland Public Schools and the Struggle for Equality, 1900-1930," *Journal of Urban History* 40, no. 4 (July, 2014), 671.

about their learning differences is essential to finding the many forms that learning can take and constructing useful responses to those differences.²¹ Broadening the scope of Cook-Sather's concerns and echoing Miggins' historicized recommendation, Richard Bates sagely argues a more appropriate basis for understanding both leadership and the culture of schools can be derived from ethnographies of schooling which show the complex interactions of internal and external cultures in the construction of leadership and the culture of the school.²²

I see good sense in these recommendations for ethnographic understanding of school and student contexts and elsewhere have argued that we move beyond historical appreciation of ethnographic processes and install ethnographers as staff members in schools to act as liaisons between schools, their students, and the communities schools serve, in order to carry out an ongoing process of professional development for teachers.²³ However, these ideas and other calls for a wider, more inclusive, and fairer, more humane efficiency are likely to fall on deaf ears should they in any way sound as if coming from outside the narrative laid down by the cult of efficiency. A better strategy, or at any rate one worth exploring further, is to think of ways to enrich ideas of efficiency from the inside to make them more amenable to goals of education as a process of personal and social development. In taking up this approach to the issue of efficiency in schooling I follow suggestions and arguments made by some forward-thinking scholars of educational administration. Paul T. Begley and Jacqueline A. Stefkovich, for instance, insist that "traditional parameters of managerialism and efficiency-focused responses to administrative situations must now be *augmented* with more creative, sophisticated and morally defensible approaches to leadership."²⁴ Similarly, William Lowe Boyd, proceeding issue by issue and stepwise in resolution of seeming incompatibilities between efficiency and democratic education, observes "if we want to use educational resources as wisely and effectively as possible, to benefit as many students as possible, we must evaluate the efficiency of *alternative* policies and practices."²⁵ Following these lines of thinking, however, I want to consider augmentation of the idea of efficiency and evaluation of the effectiveness of efficiency from a distinctively Social Foundations of Education point of view. The theoretical construct with which I will attempt to evaluate and augment ideas of efficiency in education is what I call an ecology of elegance.

Ecological Elegance

Elegance is a useful additive to the ideology of efficiency in that it provides a standard of tastefulness for the enactment of efficiency. Efficiency becomes excessive and expensive, an exorbitant luxury or wasteful ostentation, when it strips away from experience elements that add value at no extra cost. Elegance, especially when considered as a characteristic of an operating system, is a kind of beauty that exhibits unusual effectiveness in achieving goals of the system. Outstanding effectiveness, in its turn, indicates maturity of understanding, a refined grace of mind, among those who carry out operation of the system. Lack of elegance is what describes the

²¹ Alison Cook-Sather, "Listening to Students about Learning Differences," *Exceptional Children*, 35, no. 4 (March/April, 2003): 22-26.

²² Richard Bates, "Culture and Leadership in Educational Administration: A Historical Study of What Was and What Might Have Been," *Journal of Educational Administration and History* 38, no. 2 (August, 2006): 155-168.

²³ Greg Seals, *Teachable Moments and the Science of Education* (New York: Routledge, 2019). See, especially, Chapter 9 "A Well-Functioning Ethnographic Infrastructure," 125-133.

²⁴ Paul T. Begley and Jacqueline A. Stefkovich, "Introduction: Education, Ethics, and the "Cult of Efficiency:" Implications for Values and Leadership," *Journal of Educational Administration* 42, no. 2 (2004): 132-136. Emphasis added.

²⁵ William Lowe Boyd, "Are Education and Efficiency Antithetical?", 160. Emphasis added.

brutality of Taylorist tendencies in the operation of schools. Thus, elegance seems a reflective surface closely related enough to the idea of efficiency that we may introduce it into the discussion as a way of making efficiency self-critical and so less cultist.

As an historical observation, the sort of brutal efficiency endemic to Taylorist approaches to operation of schools might have been avoided had Taylor and other efficiency experts paid attention to a contemporary in the field of the study of human movement, French aesthetician, Paul Souriau.²⁶ Souriau sought to find the ease, naturalness, and rhythm of human movement as a way of building greater energy into systems guided by concern with efficiency. His studies, aimed for the most part at movements of individuals in the fields of dance and gymnastics, may be extrapolated to human movement through organizational and institutional contexts²⁷. While Souriau would have resisted the words ‘elegant’ or ‘elegance’ as used here, since part of his project was reaction to a reduction of elegance in his day to an elitist and posturing lack of concern with achievement, he and I may be able to find a point of agreement in describing his analyses as an attempt to reanimate elegance and reintroduce it as a activity incorporable into everyday life. When we consider elegance as a re-energizing of effort in a system of operation then we may talk of the dance of life in schools and begin to look for ways to enhance efficiency of schooling by enhancing the significance and value of learning in school. To keep the focus of the discussion clearly on academic matters I consider the elegance of a system of learning in terms of three types of collateral learning: attitudinal collateral learning, attitudinal-academic collateral learning, and academic collateral learning.

The idea of attitudinal collateral learning derives from a comment made by John Dewey in *Experience and Education* that “Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time. Collateral learning in the way of formation of enduring attitudes, of likes and dislikes, may be and often is much more important than the spelling lesson or lesson in geography or history that is learned.”²⁸ This comment became a principle of educational analysis when Philip W. Jackson described crowds, praise, and power as “a hidden curriculum which each student (and teacher) must master if he is to make his way satisfactorily through the school.”²⁹ Since then the hidden curriculum has come to refer commonly to attitudes learned and developed towards schools and schooling as students, teachers, and other school personnel go through, to use another of Jackson’s catchphrases, “the daily grind” of day to day operation of schools.

Moving towards a more specifically academic sense of the hidden curriculum there is also a way to talk about the hidden side of the curriculum that students explicitly study in schools. In this sense the hidden curriculum is the set of norms, values, and dispositions assumed by the

²⁶ Paul Souriau, *The Aesthetics of Movement*, Manon Souriau, trans. and ed. (Amherst: The University of Massachusetts Press, 1983/1889).

²⁷ These arguments are made by Francis Sparshott, in his “Foreword” to Souriau’s *The Aesthetics of Movement*, vii-xv.

²⁸ John Dewey, “Experience and Education,” in John Dewey, *The Later Works, 1925-1953*, Volume 13, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1988), 29. Ronald Lee Zigler, “John Dewey, Eros, Ideals, and Collateral Learning: Toward a Descriptive Model of the Exemplary Teacher,” in *Philosophy of Education Yearbook 2001*, ed. Suzanne Rice (Chicago: Philosophy of Education Society, 2001): 276-284 discusses Dewey on attitudinal collateral learning.

²⁹ Philip W. Jackson, *Life in Classrooms* (New York: Holt, Rinehart and Winston, Inc., 1968): 33-34.

curriculum or instilled by its use.³⁰ On this description the hidden curriculum reaches beyond the day to day operation of schools to include concern with attitudes students develop towards the world or towards subject matters as they engage with material presented in lessons. Thus, for example, Lief Ostman writes about the development of attitudes towards environmental ethics among students in classes concerning sustainable development.³¹ Similarly, Ashley Casey and Mikael Quennerstedt express concern that students in Physical Education classes are more likely to remember games they played than they are to take from their PE courses a deep appreciation for sports as social practices.³²

Finally, trading on a happy ambiguity in Dewey's original comment about collateral learning, Sergei Abramovich takes the idea of the hidden curriculum in a distinctively academic direction when he points out that any lesson involves more than the stated objectives it concerns. The idea of the hidden curriculum, Abramovich points out, "can be extended to include collateral learning that may take place within a pure academic domain when one is expected and even encouraged to make connections among seemingly disconnected ideas and concepts related to a particular subject matter. Thus, one can talk about [for example] hidden mathematics curriculum — a didactic approach to the teaching of mathematics that motivates and encourages collateral learning to occur in a broader context than one "is studying at the time."³³ No lesson, academically speaking, is an island; but connects to other ideas in the webs of knowledge, belief, and patterned thinking that describe and characterize any academic subject matter or the structure of any curriculum.

In taking up the search for elements of elegance in the life of schools, I concede the overt curriculum to the efficiency experts. Granted, students are in school to acquire that set of facts that describe some required curriculum. However, learning always occurs in a context. That context of learning describes what we may call the set of ecological variables in the system. Ecologies of learning are of great importance to the effectiveness of any system of schooling. This fact makes possible a causal claim about schooling from the perspective of the Social Foundations of Education: The more elegant the ecology of learning, the more efficient learning becomes. Looking at these ecological variables is what I mean by communalizing the cult of efficiency with ecologies of elegance. That the examination comes from an ecological perspective of attention to opportunities for collateral learning is what makes the approach to the problem distinctively foundational.

Energy, Expertise, and Interconnection

Attitudinal collateral learning, the set of attitudes students develop towards schooling as a social process, may be improved if the work of teachers is seen as the creation of educational energy among those they instruct. The idea of educational energy may sound strange or unfamiliar. However, it expresses with exactitude the metaphorical ways in which most people

³⁰ Robert V. Bullough and Andrew D. Gitlin, *Becoming a Student of Teaching: Linking Knowledge Production and Practice* 2nd ed. (New York: Routledge Falmer, 2001): 139.

³¹ Leif Östman, "Education for Sustainable Development and Normativity: A Transactional Analysis of Moral Meaning-making and Companion Meanings in Classroom Communication," *Environmental Education Research* 16, no.1 (2010): 75-93.

³² Ashley Casey and Mikael Quennerstedt, "I Just Remember Rugby": Re-memembering Physical Education as More than a Sport," *Research Quarterly for Exercise and Sport* 86, no. 1 (2015): 40-50.

³³ Sergei Abramovich, "Collateral Learning and Mathematical Education of Teachers," *International Journal of Mathematical Education in Science and Technology* 43, no. 3 (2012), 316.

seem to talk about teaching and learning already. Teachers commonly speak of students having “aha moments” in which “the light bulb comes on.” This language connects an idea of what we might call psychological energy to what we clearly call electrical energy. More general expressions like “being hit by a ton of bricks” when learning important facts or encountering life-changing ideas seems more than mere metaphor for energy, at least to the extent that it may be taken poetically to express the physicist’s formula for energy in which energy is said to equal the mass of an object times the square of the velocity at which the object is moving. Finally, the widely and favorably quoted philosophical observation, frequently but falsely attributed to Socrates, that “education is the kindling of a flame, not the filling of a vessel” expresses the warm glow that often accompanies occurrences of coming to know.

If the work of the teacher is understood to be creation of educational energy, then philosopher John Dewey provides a gateway to a theory of how to create educational energy when he says, “Continuity and interaction in their active union with each other provide the measure of the educative significance and value of an experience.”³⁴ *Continuity* points out the fact that all experiences come out of the past, occur in the present, and move into the future. *Interaction* points out all experiences involve transaction between the psychology of the person having the experience and the physical and social environment in which the experience takes place. Organizing the four variables provided by Dewey’s comment about continuity and interaction as the *measure* of educational energy we can come up with what looks like a natural law about teaching: the universal law of educational energy or, for short, Dewey’s law:

$$E = P \frac{c_1 c_2}{i^2}$$

Dewey’s law is a watershed moment in educational theory. Teaching becomes the science of creating educational energy.³⁵ This genuinely general theory about how to create educational energy warrants its variables, however widely or wildly their content may change from context to context, as relevant variables in scientific treatment of every case of teaching and learning. Here we are presented with a scientific approach to schooling broader, deeper, more relevant, and promising of learning success than any inductive generalizations or definitional statements about efficiency of movement and time management. The universal law of educational energy describes learning in the same way teachers tend to — as the awakening of a new perspective on the world coupled with an act of recognition that an awakening has occurred — and promises to improve learning in classrooms, to perpetuate the sense of shared renewal provided by educational energy, and to propagate that energy across classrooms of all sorts.

Attitudinal-academic collateral learning may be enhanced by teaching students in terms of the proof structures descriptive of academic areas of study. In general, a proof is any effort, process, or operation that attempts to establish truth or fact. Successful proofs do actually establish truth or fact; but what counts as proof-success differs from discipline to discipline. This is due to the fact that “proofs are,” borrowing words from Douglas Hofstadter,

³⁴ Dewey, *Experience and Education*, 26.

³⁵ For a full statement and defense of Dewey’s law see Seals, *Teachable Moments and the Science of Education*.

“demonstrations *within fixed systems of propositions*.”³⁶ In such propositional systems, facts of the curriculum appear as premises in arguments constructed on the basis of or about the subject-matter under study.

Insofar as different disciplines concern themselves with different subject matters, criteria of proof vary from field to field.³⁷ Nonetheless, whatever may constitute “proof” in a given subject matter or area of endeavor, proofs provide students the opportunity to engage with course material as disciplinary experts. Howard Gardner defines a disciplinary expert or skillful person as “an individual of any age who has mastered the concepts and skills of a discipline or domain and can apply such knowledge appropriately in new situations.”³⁸ Thus, Gardner agrees with the old adage: ‘Experts are people who know what to do even when they don’t know what to do.’ Ability to perform the operations of proof in a discipline on any set of data relevant to that discipline marks the difference between the person who knows a discipline and the person who understands a discipline. Education for understanding parallels Deweyan recommendations that students study more than facts segregated and disconnected from their use in actual conditions of life.³⁹ Asking students to think in accordance with the disciplinary styles of historians, literary critics, mathematicians, scientists, etc., reconstructs in the classroom the professional lives of disciplinary experts in these fields of endeavor. Learning curriculum under the auspices of proofs, students will form habits of mind useful outside the schoolhouse when confronted with problems resolution of which requires application of relevant disciplinary methods of proof.

Finally, studying course material as an interconnected set of ideas enhances strictly academic collateral learning. Kieran Egan decries preservice “methods” or curriculum and instruction courses that train teachers-to-be in the use of lesson plans based on objectives. Objectives, Egan argues, prejudicially limit the range of topics that may be addressed in any lesson, or, as a brilliant student of mine once summarized Egan’s argument in a phrase so compelling that I promised, upon hearing it, I would use someday in a published paper, “Lessons suck because objectives blow!” However, criticism of factory model planning frameworks, Egan continues, suffers from lack of attempts to suggest alternative planning methods that may improve lesson construction, delivery, and success.⁴⁰

To address this issue, Egan offers a set of imaginative planning frameworks designed to turn lessons into stories that speak to students’ age-appropriate level of imaginative development. In Egan’s developmental theory of the imagination, ‘imagination’ is understood along the lines of ‘the capacity to make meaning’ rather than ‘the ability to think extraordinary thoughts’. Story-lessons designed to appeal to ways students understand the world also provide

³⁶ Douglas Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid* (New York: Vintage Books, 1979), 18.

³⁷ This issue is complicated by the fact that different disciplines can and sometimes do share subject matters. Nonetheless, disciplines tend to identify themselves by reference to specific problems or issues associated with a subject matter and disciplinarity tends towards definition in terms of what Julie Thompson Klein, *Crossing Boundaries* (Charlottesville: University of Virginia Press, 1996), 212, calls “requisite disciplinary knowledge.” For more, see William H. Newell, “Academic Disciplines and Undergraduate Interdisciplinary Education,” *European Journal of Education*, 27, no.3 (1995): 211-221.

³⁸ Howard Gardner, *The Unschooled Mind: How Children Think & How Schools Should Teach* (New York: Basic Books, 1991), 7.

³⁹ Dewey, *Experience and Education*, 48

⁴⁰ Kieran Egan, “Metaphors in Collision: Objectives, Assembly Lines, and Stories,” *Curriculum Inquiry* 18, no. 1 (Spring, 1988): 63-86.

ample opportunity for connection of lesson specific material to related material and encourage teachers and students to think in terms of interconnected sets of facts rather than isolated learning objectives. Interest in meta-cognitive explorations such as curriculum mapping and concept mapping guided by concern with student imaginative development confirm the importance of Abramovich's insight into academic collateral learning as the drawing of interconnections among ideas related to even the seemingly most insular learning objectives.⁴¹

Exploding Efficiency from the Inside Out

When it comes to getting the most bang for the buck educationally, elegance is far better than efficiency because efficient production of educational energy in teaching and learning requires elegance in the operation of schools. However, as systems engineers Mahmoud Efatmaneshnik and Michael J. Ryan point out, sometimes clients are not particularly interested in elegance.⁴² Political interest in educational inequalities produced by ideological adherence to efficiency in education may be a stronger set of obstacles to implementation of elegant schooling than any scientific misconceptions, philosophical mistakes, or unforced errors of government.

Still, the idea of educational ecologies of elegance positions us to fight against commitment to educational inequality in ways we have not been able fully to explore heretofore. Ecologies of elegance, as part of an argument for improvement in educational energy, raises the bar when it comes to claims about scientific management of schools. Biomedical scientists Marco J. Nathany and Diego Brancaccio endorse and defend the view that elegance is an intrinsic feature of successful scientific practice and empirical observation because elegance serves as a benchmark demarcating between good experiments and bad ones.⁴³ The role of elegance in scientific understanding, explanation and prediction of desirable outcomes puts elegance in the driver's seat when setting scientifically supported educational policy. Public administration scholars Karen Evans and Daniel Lowery explain the role elegance plays in winning acceptance of facts of empirical inquiry or positive response to recommendations to act: "Expressive or aesthetic truth claims are not merely used to heighten emotions or enhance sensory experience; more importantly, they can also contribute to the efficacy of an empirical or normative truth claim."⁴⁴

Therefore, if elegance is marked as an undesired quality in schooling in favor of mere efficiency, we will want to know why we are made to settle for less when we know we could enjoy more at no extra cost. Elegance exposes claims to efficiency as ideologically ironic expressions of political ill will. Elegance advantages us in argument and action against the cult of efficiency because: 1) Elegance is demonstrably more effective than efficiency; and, 2) while efficiency can get ugly, elegance, when connected to the idea of student achievement, never can.

⁴¹ For useful critiques of these techniques see Leon Benade, "A Critical Review of Curriculum Mapping: Implications for the Development of an Ethical Teacher Professionalism," *New Zealand Journal of Teachers' Work* 5, no. 2 (2008): 93-104 and Thomas J. J. McCloughlin and Philip S. C. Matthews, "Repertory Grid Analysis and Concept Mapping: Problems and Issues," *Problems of Education in the 21st Century* 48 (2012): 91-106.

⁴² Mahmoud Efatmaneshnik and Michael J. Ryan, "On the Definitions of Sufficiency and Elegance in System Design," *IEEE Systems Journal* 24 October 2018: 1-12.

⁴³ Marco J. Nathany and Diego Brancaccio, "The Importance of Being Elegant: A Discussion of Elegance in Nephrology and Biomedical Science," *Nephrology, Dialysis, Transplantation* (2013). DOI 10.1093/ndt/gft005

⁴⁴ Karen G. Evans and Daniel Lowery, "The Scholarship of Elegance and Significance: Expressive and Aesthetic Truth Claims," *Administration and Society* 40, no. 1 (March, 2008): 3-24.

Unstoppable Resistance to Charter Schools

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Abstract: Exploring the large chasm between charter school hype and charter school reality reveals changes in criticism of charter schools. A wave of critique from within charter school education has produced a rising tide of widespread concern about, opposition towards, and activism against charter schools. The emerging movement against charter schools seeks to replace an education system guided by ideologies of individualism, consumerism, behaviorism, Social Darwinism, and the “free market” with a pro-social human-centered education system and society. Join the fight to free public education!

In 2015 the *Washington Post* shared this observation by a veteran public school official about privately-operated charter schools: “David Hornbeck was the Maryland State Superintendent of Schools from 1976 to 1988 and the superintendent of the Philadelphia school district from 1994 to 2000. For years he was a supporter of charter schools, seeing them as an important tool in the school reform arsenal, and as Philadelphia’s superintendent, he recommended that more than 30 charter schools be allowed to open. Now, in a reversal that is rare in education, he said this: “The last 20 years make it clear I was wrong.”¹ Hornbeck is one of many who have traveled this increasingly non-rare road of awakening. Many others have also experienced rude awakenings due to the large chasm between charter school hype and charter school realities.

In 2019, commenting on chronic problems with charter schools and the growing backlash against them, Eliza Shapiro, a New York City education reporter, had this to say in a *New York Times* article titled “How Did Charter Schools Lose Their Luster?”: “I have been writing about charter schools in New York for the last six years. I had been hearing from some of my sources who run charter schools, work in charter schools, think about charter schools, that there had been sort of this sea change in how willing leaders of charters were to acknowledge shortcomings in their schools.”² Although this is superficially true, it is still an important conclusion. Charter school promoters have always been averse, even hostile, to admitting to problems with charter schools, even when numerous popular and scholarly reports, books, and articles have documented many persistent problems in the sector. A deep anti-intellectual disposition has long characterized the orientation of charter school supporters and promoters, which makes them continually dismissive of anything critical of charter schools.

But perhaps more damning and indicting than Hornbeck’s and Shapiro’s statements is this stunning 2014 comment from Margaret Raymond, Director of the neoliberal Center for Research on Education Outcomes (CREDO) at Stanford University, which enthusiastically promotes charter schools:

This is one of the big insights for me because I actually am a kind of pro-market kind of girl, but the marketplace doesn’t seem to work in a choice environment for education... I’ve studied competitive markets for much of my

¹ Strauss, V. (2015, March 4). A stunning reversal on charter schools. *Washington Post*.
<http://www.washingtonpost.com/blogs/answer-sheet/wp/2015/03/04/a-stunning-reversal-on-charter-schools/>

² How did charter schools lose their luster? Our reporter explains. (2019, July 26). *New York Times*.
<https://www.nytimes.com/2019/07/26/insider/charter-school-backlash-new-york.html>

career... Education is the only industry/sector where the market mechanism just doesn't work... I think it's not helpful to expect parents to be the agents of quality assurance throughout the state. There are other supports that are needed... I think we need to have a greater degree of oversight of charter schools, but I also think we need to have more oversight of the overseers... the authorizers.³

Thus, even though she does not call for a stop to charter school expansion or an end to organizing society on the basis of the outmoded and discredited "free market," Raymond, a major and long-time promoter of "free market" ideology, is openly and publicly stating that the "free market" doesn't work in education. The fact is that social programs and public enterprises like education, which are germane to the extended reproduction of society, simply do not lend themselves to consumerism and commodity logic.⁴ Passing on the accumulated knowledge of humanity to the next generation is a social responsibility, not a business. Schools should not operate on the basis of the chaos, anarchy, and violence of the "free market." As for the issue of charter school oversight and accountability, both remain largely absent in the crisis-prone charter school sector. Charter schools are notorious for lack of transparency. It should be noted that CREDO is heavily funded by major billionaires and venture philanthropists such as Bill Gates, Sam Walton, Eli Broad, and others; all have been actively promoting charter schools for decades.

To be sure, there is nothing grassroots about privately-operated charter schools which have been around for nearly three decades and enroll about three million youth. This is one reason why more than 95% of the 7,000 privately-operated charter schools in the U.S. are not started, owned, or operated by teachers, even though the public has long been led to believe that a main reason for launching "innovative" privately-operated charter schools was to empower teachers and unleash pedagogical creativity to reach those students the public education "monopoly" was "not reaching."

It has taken a while, but today more individuals, groups, and organizations in many different spheres are actively taking up efforts to oppose charter schools in one way or another. They are not just passively opposing charter schools. Social consciousness of charter school problems is not what it used to be; it has developed and matured in many ways and will grow more profound and sophisticated in the coming months and years. This priceless social consciousness has reached a level of consolidation which cannot be breached.

Gone are the days of automatic, uncritical, and drive-by assertions of support for charter schools. Currently, few people blindly and spontaneously praise charter schools. There are now enough high-quality articles, books, and reports (thousands) on charter school problems that everyone, at a minimum, thinks and speaks about charter schools with numerous caveats. Many have even taken the initiative to actually investigate charter schools on a systematic basis and completely reject and condemn charter schools. Even many individuals who work in charter schools are aware of and do not dispute many of the growing criticisms of charter schools. In fact, some of the most trenchant critiques, exposures, and condemnations of charter schools

³ Raymond, M. Speech to City Club of Cleveland. (2014, December 10).
<https://www.youtube.com/watch?v=H1-mPiSQLfc>

⁴ Kuttner, R. (1997). *Everything for Sale: The Virtues and Limits of Markets* (New York: Knopf).

have come from those who have worked in or attended a charter school. They have witnessed firsthand the many problems plaguing charter schools and have even become whistleblowers.

In a sign of the times, sanitized declarations of the virtues and promises of charter schools no longer seem to have a strong hold on many. Decades of ceaseless government and media disinformation about charter schools has not stopped the steady growth of critical consciousness of charter schools. Anti-consciousness about charter schools has slowly eroded and will keep eroding. The force of history is not with privatizers and neoliberals, which is why the charter school sector has experienced notable setbacks in recent years. This quality of social consciousness is what is most precious and valuable in the current situation. It is a force gathering steam because of the conditions we find ourselves in. It is a trend that is new, rising, and growing because it is part of the new outlook and new arrangements needed for society to move forward. Charter school ideology, on the other hand, is part of the old and decaying outlook and way of organizing education and society. Charter schools do not represent a modern human-centered way of educating large societies based on mass industrial production. One might say a sort of turning point has been reached in the fight to defend public education and oppose education arrangements based on the ideologies of individualism, consumerism, behaviorism, Social Darwinism, and the “free market.”

This is why, even though charter schools keep multiplying in various communities, charter school advocates are more defensive and worried about the future of charter schools. They do not cherish the reality of growing opposition to privatized education arrangements and have become increasingly oversensitive and desperate in their defense of school privatization. From the perspective of charter school owners and operators, pay-the-rich schemes like charter schools, both nonprofit and for-profit, are far too lucrative to forfeit without an intense fight.

The endless serious problems plaguing charter schools are too numerous to highlight and describe here. However, they have been well-documented by me⁵ and hundreds of others in many places and are available to anyone who engages in a conscious act of finding out. The main issue in the current context is to join forces with all those analyzing and opposing school privatization. Today these include a large swath of individuals and organizations:

1. School boards
2. Teacher unions
3. A large and growing number of teacher educators, parents, and students
4. Most teacher education students (pre-service teachers)
5. Dozens of education advocacy organizations
6. Numerous rights and justice groups
7. More city, state, and federal legislators
8. A growing section of the general population

Together, these individuals and organizations consist of, shape, and influence millions around the country. This was not the case 5-10 years ago. In its early stages, the top-down charter school movement faced little resistance. The movement against privatized education has come a long way in a relatively short period of time. And there is no reason to believe that this

⁵ Tell, S. (2015). *Charter School Report Card* (Charlotte, NC: Information Age Publishing, Inc., Critical Consciousness Series).

trend can be stopped or reversed. The train has left the station, as the saying goes. If anything, in this fluid period, resistance to charter schools, vouchers, and all privatized education arrangements will likely grow.

In the final analysis, defending public education and the public interest means depriving powerful private interests of the ability to decide the use and destiny of public funds, assets, and enterprises. Funding for public education and other public enterprises must be increased and kept out of the hands of the rich. Major decisions about the wealth produced by society, and the public institutions and social programs that rely on these funds, must be made by the people themselves. Major owners of capital are only interested in maximizing profit as fast as possible no matter the damage to the social and natural environment. They are not interested in advancing the general interests of society or establishing a pro-social direction for society and its institutions. They are not concerned with the common good or building a modern nation. They have been using pay-the-rich schemes such as charter schools to annually funnel billions of public dollars into private hands. This, in turn, has damaged public schools, the economy, society, and the national interest.

Control of public authority by powerful private interests is retrogressive. Private entities like cyber charter schools and brick-and-mortar charter schools should secure funds through non-public sources because they have no valid or legitimate claim to public funds or assets. They must not be allowed to wield public authority to enrich themselves. Public institutions and funds must remain under public control, free of the alien claims of owners of capital. Forty years of the neoliberal antisocial offensive has starved public schools and social programs of much-needed funds produced by working people. In addition to being setup to fail, public schools have been scapegoated by the ruling elite for every problem in society.

It does not have to be this way. There is an alternative. A brighter future is possible. A pro-social human-centered education system and society can and must be brought into being by organizing and mobilizing ourselves. This is the only way to advance the public interest and defeat the neoliberal anti-social offensive. In the complicated here and now, new forms of self-organizing and new energies have already arisen. More people from all walks of life are connecting more dots and merging different struggles to advance the public interest. A shift in consciousness is palpable. The current crisis, which will continue to deepen, offers some openings that hold the promise of combating charter schools even more effectively.

Join the growing and vibrant movement against privatization and neoliberalism! Fight for a new society where the people themselves decide the main affairs of society and where the rich are no longer allowed to distort and hijack consciousness, public enterprises, the economy, and society for their self-serving interests. The rich and their conscious and anti-conscious representatives and allies can and must be blocked. Our best strategy is to avoid diversionary debates and false dichotomies surrounding charter schools. There is no shortage of such distractions and rabbit holes, whether it is the severe obsession with test scores, self-serving notions of “choice,” or the for-profit versus nonprofit status of a charter school. The main issue must remain our focus: Public funds, assets, and authority must remain firmly in public hands and under full public control.

Educational Abundance

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Note on presenters at the 2019 Conference: Others at the NYSFEA 2019 conference who joined in pursuit of educational abundance with the authors of the papers published here include Sarah McGinnis and Zhe Chen, *University of Rochester*, “Challenges Facing the Opt-Out Movement in New York State;” A. Tina Wagle and Patricia Isaac, *SUNY-Empire State College*, “Highlighting the Tension Between Reflection and Compliance in Teacher Education Accreditation;” Paul Theobald, *University of Southern Indiana*, “Reflections on an Academic’s Run for Congress;” Richard Ognibene, *Siena College*, and Jack Hampton, *St. Peter’s University*, “Higher Education Innovation in the Past and What’s Needed for the Future;” and Madhu Narayanan, *Graduate Center/City University of New York*, “Teacher Authority within Structures of Power.”

