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

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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

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[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]
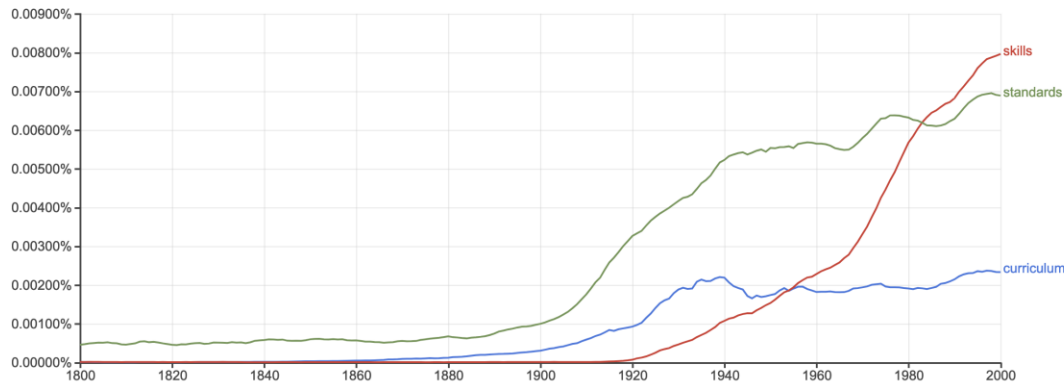
Figure 1: Google Ngram Viewer data for relative frequency of "skills", "standards" and "curriculum" 1800-2000.[4]

"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

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[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

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[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

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[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 behavior[20] — 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

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[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 Hinchliffe, "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

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[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,

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[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]

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[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 facilities 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

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[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,

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[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

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[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 misunderstood[49] — 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

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[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..

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[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).