

Public Transparency, Student Privacy, and Technological Persuasion in Education: Refining Some Concerns of Opt Out

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Abstract

Resistance to high-stakes testing was spurred by the signing of No Child Left Behind and grew rapidly with the implementation of Race to the Top and then Common Core State Standards. This paper provides a brief history for the emergence of the opt out movement in the U.S. during this era, and it explains some of the complexities that both fueled and constrained its growth. Finally, it examines some of the overarching concerns expressed by leaders in the movement, which include problems inherent to a reductionistic belief about human learning, as well as its connection to public transparency, student privacy, and technological persuasion.

Keywords: *opt out movement; student privacy; technological persuasion; high-stakes testing; student data mining; United Opt Out; competency-based education*

Introduction

Public frustration with education reforms in the U.S. has grown significantly since the signing of the *No Child Left Behind Act* (NCLB) in 2002. Not only did the policy bring on the era of high-stakes testing and oversimplified views of human learning in the public's schools, but many teachers, families, students, academics, and community activists have witnessed innumerable ways that their state and local school districts have used the data from those tests to implement increasingly inhumane policies and practices. Depending on one's locale, testing data has been used for the purposes of mandatory retention; diploma denial; punitive sanctions and cuts to school funding; school closures and turnarounds; student tracking and exclusion from vital enrichment programs; determining value added measures and teacher pay; narrowing the curricula; incessant test preparation; and many other problematic practices in schools. Critical commentators and scholars have consistently argued that the detrimental manifestations of high-stakes testing not only yield social, emotional, and intellectual consequences for children and their communities; these harms disproportionately impact students of color, English language learners, students with disabilities, and those tortured by the effects of poverty.¹

*The author is incredibly grateful to Cindy Hamilton, Morna McDermott, and Sandy Stenoff for their thoughtful feedback during the writing of this article.

1. Wayne Au, *Unequal By Design: High-stakes Testing and the Standardization of Inequality* (New York: Routledge, 2009); David Berliner, "Our Impoverished View of Education Reform," *Teachers College Record* 108, no. 6 (2006) 949-995; Jessica

Although the effects of high-stakes testing have caused concern among many, the introduction of *Race to the Top* (RTTT) in 2009 and then the *Common Core State Standards* (CCSS) in 2010 elicited public protest as well. Through RTTT, the Department of Education not only introduced a series of unprecedented, and questionable, incentives that would soon goad states into enacting federal reforms like CCSS and the construction of data systems; it provided funding to the business leaders and corporations that were interested in implementing them in the public's schools.² Of course, the opposition to Obama-era reforms has been fueled in part by arguments that the federal government overstepped the constitutional boundaries of the Tenth Amendment,³ which had historically ensured state control of public education and prohibited the adoption of a federal curriculum. At the same time, questions have been raised about the developmental inappropriateness of the standards themselves and the backgrounds and expertise of the individuals who created them.⁴ Still other critics have expressed angst about the funneling of precious public tax dollars into private corporations for expenditures related to the preparation, execution, and grading of high-stakes tests.⁵ In short, the education reforms of the last decade and a half have incited enormous frustration among the public and along all reaches of the political spectrum.

It could be said that NCLB's focus on accountability first directed an exorbitant emphasis toward the traditional paper test, its bubble sheets, and number two pencils. Then, the implementation of Common Core raised concerns about state's rights, local control, and the use of public funds for private profit. In the last couple of years, however, public schools have taken part in a rapid move from analogue to digital assessment.⁶ This development, which is symptomatic of the "digital turn"⁷ in education, has been accompanied by the proliferation of hardware (e.g. student laptops, computer labs, etc.) and commercial software programs dedicated to curricula, test prep, and behavior management. Such infrastructural changes have been spurred by the inherently dehumanizing rationale of neoliberalism and, of course, have simultaneously incurred the problem of exorbitant expenditures for states and local districts.⁸

Heybach and Eric Sheffield, eds. *Dystopia and Education: Insights into Theory, Praxis, and Policy in an Age of Utopia-gone Wrong* (Charlotte: Information Age Publishing, 2013); Jonathan Kozol, *The Shame of the Nation: The Restoration of Apartheid Schooling in America* (New York: Crown Publishers, 2005); Sharon Nichols and David Berliner, *Collateral Damage: How High-stakes Testing Corrupts America's Schools* (Cambridge: Harvard Education Press, 2007); Diane Ravitch, *Reign of Error: The Hoax of the Privatization Movement and the Danger to America's Public Schools* (New York: Basic Books, 2013).

2. Deborah Duncan Owens, *The Origins of Common Core: How the Free Market Became Public Education Policy* (New York: Palgrave Macmillan, 2015), 172-182.

3. Lyndsey Layton, "Louisiana Gov. Bobby Jindal Sues Obama Over Common Core State Standards," *The Washington Post*, August 27, 2014, https://www.washingtonpost.com/local/education/louisiana-gov-bobby-jindal-sues-obama-over-common-core-state-standards/2014/08/27/34d98102-2dfb-11e4-bb9b-997ae96fad33_story.html?utm_term=.a357976c2b52.

4. Edward Miller and Nancy Carlsson-Paige, "A Tough Critique of Common Core on Early Childhood Education," *The Washington Post*, January 29, 2013, https://www.washingtonpost.com/news/answer-sheet/wp/2013/01/29/a-tough-critique-of-common-core-on-early-childhood-education/?utm_term=.efc3da1ea7fe; Duncan Owens, *The Origins of Common Core*.

5. Morna McDermott, Peggy Robertson, Rosemarie Jensen, and Ceresta Smith, eds., *An Activist Handbook for the Education Revolution: United Opt Out's Test of Courage* (Charlotte: Information Age, 2015).

6. Ben Williamson, "Digital Education Governance: An Introduction," *European Education Research Journal* 15, no. 1 (2016): 6.

7. Manuel Souto-Otero & Roser Beneito-Montagut, "From Governing Through Data to Governmentality Through Data: Artefacts, Strategies, and the Digital Turn," *European Education Research Journal* 15, no. 1 (2016).

8. Dian Schaffhauser, "Report: Education Tech Spending on the Rise," *THE Journal*, January 19, 2016, <https://thejournal.com/Articles/2016/01/19/Report-Education-Tech-Spending-on-the-Rise.aspx?Page=1>. In 2015, it was estimated that technology expenditures in K-12 schools was approximately \$4.7 billion nationwide. Julia McCandless, "U.S. Education Institutions Spend \$6.6 Billion on IT in 2015," *Center for Digital Education*, May 22, 2015, <http://www.centerdigitaled.com/higher-ed/US-Education-Institutions-Spend-66-Billion-on-IT-in-2015.html>. Another industry association reported that those expenditures increased to \$11.7 in 2016. Justine Brown, "IT Spending is on the Rise—But Where Will the Money Go?" *e.Republic*, March 24, 2016, <http://www.erepublic.com/blog/IT-spending-is-on-the-rise--but-where-will-the-money-go.html>.

In light of these factors, it is apparent that the intersection of high-stakes testing and increased technological use in public schools has not only agitated existing concerns about the institutional, political, and financial changes of post-NCLB education reforms; it has added to this complicated mix a series of ethical questions regarding the use of these technologies, how they stand to benefit us, and where they are likely to pose harm. One specific concern—though there are so many—is in regard to the harvesting and warehousing of students’ personal data by government and corporate entities. The technological extraction of student data has drawn scrutiny because the practice often occurs without the genuinely informed consent of parents, students, and in many cases, even the teachers. Furthermore, the companies that create the technological platforms are not required to provide disclosure regarding 1) how that data will be utilized and safeguarded for student protection and 2) how it can be accessed, reviewed, and questioned by students and their families.⁹

Grassroots movements are nourished by the tumult of their time and thereby grow out of necessity. The opt out movement in the U.S. emerged from a landscape of rapidly changing education reforms that included an influx of high-stakes testing and technological implementations. The first concerted boycott of a state mandated test occurred in Scarsdale, New York in 2001. It was coordinated in one of the nation’s highest scoring districts and was in protest to unremitting test prep and the smothering of creativity.¹⁰ This action eventually became known as *opting out* and inspired a national movement that emerged in 2011.¹¹ In 2015, however, after the signing of the *Every Student Succeeds Act* (ESSA), it became obvious that a new set of reforms were altering if not jeopardizing the sustainability of this specific grassroots action. If the movement was to continue offering a viable and powerful critique of unjust educational practices and reforms, then it would need to adjust as well.

In this paper, I consider some of the salient concerns and arguments that I have both witnessed and grappled with throughout my work in the opt out movement. In doing so, I clarify what might be conceived of as slightly different, but certainly related, problems inherent to current education reform: the need for public transparency and defined boundaries regarding student privacy and technological persuasion. In bringing some clarity to these underlying problems, I hope that today’s grassroots organizations might be able to proceed in this evolving political and educational landscape in the only way that they ever have: through courageous, compassionate, and creative communal action.

A Very Brief History of Opt Out

Opt Out is Born

Discontent about the ramifications of high-stakes testing and wariness about the potentially harmful implications of student data collection have, of course, led to varied responses on the part of the public. One such tactic employed by families and grassroots organizations is an action that is commonly known as *opting out*. This is where networks of individuals across the country share

9. Jules Polonetsky & Omer Tene, “Who is Reading Whom Now: Privacy in Education from Books to MOOCs,” *Vanderbilt Journal of Entertainment and Technology Law* 17, no. 4 (2015); Omer Tene and Jules Polonetsky, “Judged By the Tin Man: Individual Rights in the Age of Big Data,” *Journal on Telecommunications and High Technology Law* 11 (2013).

10. Kate Zernike, “In High-scoring Scarsdale, A Revolt Against State Test,” *The New York Times*, April 13, 2001, <http://www.nytimes.com/2001/04/13/nyregion/in-high-scoring-scarsdale-a-revolt-against-state-tests.html>.

11. Morna McDermott, email message to author, August 6, 2017.

their varied forms of knowledge about state and district education policies in order to teach one another how to *refuse* taking and/or administering state- and district-mandated tests that do not help teachers improve the instruction of students. In effect, opting out is considered by many proponents to be a form of civil disobedience that aims at counteracting the reforms and types of harm discussed in the introduction. While this article focuses on the opt out movement in the U.S. specifically, it is important to note that similar movements have been organized in Chile and Canada as well.¹²

The idea that opting out could become a viable grassroots strategy throughout the U.S. emerged in 2011 through the pioneering efforts of an organization called United Opt Out National (UOO). Peggy Robertson, Morna McDermott, Ceresta Smith, Tim Slekar, Shaun Johnson, and Laurie Murphy each resided in different parts of the country, but they met one another through the social networks that grew out of the Save Our Schools March that took place earlier that summer in Washington D.C.¹³ According to Robertson’s account, “We came together as a result of change, timing, and necessity... We were simply a group of six who clicked, who enjoyed one another’s quirkiness, and who felt incredibly passionate about doing what is right for all children.”¹⁴ Once the co-founders formed UOO, they started creating state-by-state opt out guides to help individuals begin navigating through their own local policies and school bureaucracy. The state guides were posted on their website and shared throughout social media, thereby serving as an inspiration to, and in some cases the impetus for, other grassroots groups and actions. Also, the co-founders of UOO blogged profusely¹⁵ and created a weekly internet radio show called *@ The Chalk Face* to share insights and critiques about testing, curricula, state and federal education policy, and the corporate and philanthropic interests behind those policies. UOO’s first concerted action was called Occupy the DOE, which was a four-day long teach-in and protest that took place outside the Department of Education in the spring of 2012.¹⁶ They repeated this particular action the following year—called Occupy DOE 2.0—and then followed it with an annual conference format, which they would continue to host for the next three years.¹⁷

The movement gained traction throughout the course of a few years. Not only were localized opt out groups increasingly springing up across the country, but discontent with Common Core was building as well.¹⁸ By the spring of 2015 the grassroots efforts had finally yielded a

12. Javier Campos-Martinez, Maria Beatriz Fernandez Cofre, Jorge Luis Inzunza, Andrea Lira, Mauricio Pino-Yancovic, Serigo Alejandro Saldivia, & Ivan Salinas, “Alto al SIMCE Campaign: Challenging the Common Sense of Standardized Testing,” (paper presented at the American Educational Research Association, Chicago, April 2015); Colin Keess, “What Testing I Hiding: The Saskatchewan Teachers’ Struggle,” (paper presented at the American Educational Research Association, Chicago, April 2015).

13. Valerie Strauss, “The Save Our Schools March,” *Washington Post*, July 30, 2011, https://www.washingtonpost.com/blogs/answer-sheet/post/the-save-our-schools-march/2011/07/30/gIQAhf71jI_blog.html?utm_term=.9732ed6be6a7.

14. McDermott, et. al., *An Activist Handbook*, xvii.

15. Peggy Robertson, *Peg with Pen* (blog), <http://www.pegwithpen.com/>; Morna McDermott, *Education Alchemy* (blog), <https://educationalchemy.com/>; Tim Slekar, *Busted Pencils* (blog), <http://bustedpencils.com/>.

16. Valerie Strauss, “‘Occupy’ the Ed Department Starts Friday,” *Washington Post*, March 24, 2012, https://www.washingtonpost.com/blogs/answer-sheet/post/occupy-the-ed-department-starts-friday/2012/03/21/gIQAHCfRxs_blog.html?utm_term=.b7549ce45d8e.

17. UOO hosted their 2014 conference in Denver, Colorado. The following year, the *Standing Up for Action* was conference was held in Ft. Lauderdale, Florida. The *Transcending Resistance, Igniting Revolution* conference was hosted in Philadelphia, Pennsylvania during 2016. Nicholas Garcia, “Activists Gather in Denver to Discuss Opt-out Strategy,” *Chalkbeat*, March 29, 2014, <http://www.chalkbeat.org/posts/co/2014/03/29/live-dozens-gathered-in-denver-to-discuss-opt-out-strategy/>; Liana Heitin, “Activists Share Strategies for ‘Opting Out’ of Tests,” *Education Week*, January 27, 2015, <http://www.edweek.org/ew/articles/2015/01/28/activists-share-strategies-for-opting-out-of.html>.

18. National Public Radio, “The Common Core FAQ,” *NPR Ed*, May 27, 2014, <http://www.npr.org/blogs/ed/2014/05/27/307755798/the-common-core-faq>.

significant number of testing opt outs across the country. For example, Florida saw an estimated 6,000 opt outs in 2014, but that number jumped to over 20,000 in 2015.¹⁹ Across the state of Illinois, estimates suggest that there were 2,000 refusals in 2014²⁰ but as many as 44,000 the following year.²¹ Approximately 9,600 of those in 2015 were from Chicago Public Schools,²² and much of the statewide resistance was a protest against the rollout of the Partnership for Assessment of Readiness for College and Careers (PARCC) test, a Common Core-aligned assessment created by Pearson.²³ In New York, where the grassroots mobilization had been particularly effective, the number of testing refusals quadrupled in one year to exceed 200,000.²⁴ On a national scale, it was estimated that over 670,000 students in fourteen states had opted out of high-stakes tests during the spring of 2015.²⁵ After four years of dedication and organizing, the movement had indeed garnered noticeable momentum and national attention.

There are two extraneous points about the movement's growth in 2015, however, which warrant mention. First, it should be noted that during this particularly successful opt out season, the news media—and hence the blogosphere and social media—was awash with stories about Congress' deliberations over how to proceed with the reauthorization of NCLB.²⁶ The attention paid to these political debates very likely helped fuel the engagement in the movement that year. The second point, however, is that a problematic belief had started to develop during this same time. That is, amid the reauthorization debates and the reports about the rising number of opt outs, policymakers and the news media began expressing the idea that the post-NCLB discontent was rooted in the feeling that there was too much testing.²⁷ Though excessive testing was certainly a problem for opt out communities, it was not what many in the movement considered to be *the* problem. Instead, this was merely a symptom.

UOO remained keenly aware of this shift in discourse, and Peggy Robertson prophetically attributed it to the “co-optation” of the movement's message and energy.²⁸ By that fall, the belief

19. Leslie Postal, “More FSA Tests Could Not Be Scored in 2015 Compared to FCAT Last Year,” *Orlando Sentinel*, October 9, 2015, <http://www.orlandosentinel.com/features/education/school-zone/os-fsa-scores-no-score-opt-out-post.html>.

20. Lisa Guisbond, Monty Neil, & Bob Schaeffer, *Testing Reform Victories 2015: Growing Grassroots Movement Rolls Back Testing Overkill* (Boston: FairTest, 2015), accessed October 8, 2018, <http://www.fairtest.org/sites/default/files/2015-Resistance-Wins-Report-Final.pdf>, 15.

21. FairTest, “More Than 670,000 Refused Tests in 2015” (webpage), December 12, 2015, <http://www.fairtest.org/more-500000-refused-tests-2015>.

22. Guisbond, Neil, & Schaeffer, *Testing Reform Victories*, 15.

23. Dusty Rhodes, “Education Desk: Should Kids Be Allowed to Skip Testing?” *All Things Considered*, May 10, 2016, <http://www.nprillinois.org/post/education-desk-should-kids-be-allowed-skip-testing#stream/0>. PARCC stands for the Partnership for Assessment of Readiness for College and Careers.

24. Elizabeth Harris, “20% of New York State Students Opted Out of Standardized Tests This Year,” *New York Times*, August 12, 2015, http://www.nytimes.com/2015/08/13/nyregion/new-york-state-students-standardized-tests.html?_r=0.

25. FairTest, “More Than 670,000 Refused.”

26. Maggie Severns, “The Plot to Overhaul No Child Left Behind,” *Politico*, January 2, 2015, <http://www.politico.com/story/2015/01/the-plot-to-overhaul-no-child-left-behind-113857>; Valerie Strauss, “Diane Ravitch, Former Adviser to Lamar Alexander, Sends Him New NCLB Advice,” *Washington Post*, January 21, 2015, https://www.washingtonpost.com/news/answer-sheet/wp/2015/01/21/diane-ravitch-former-adviser-to-lamar-alexander-sends-him-new-nclb-advice/?utm_term=.23c0676f0447; Diane Ravitch, “The Lost Purpose of School Reform,” *New York Review of Books*, April 2, 2015, <http://www.nybooks.com/daily/2015/04/02/lost-purpose-no-child-left-behind/>.

27. Kimberly Hefling, “Do Students Take Too Many Tests? Congress to Weigh Question,” *PBS NewsHour*, January 17, 2015, <http://www.pbs.org/newshour/rundown/congress-decide-testing-schools/>.

28. Peggy Robertson, “Regaining Our Humanity and Co-optation,” *Peg With Pen* (blog), March 7, 2015, <http://www.pegwithpen.com/2015/03/regaining-our-humanity-and-co-optation.html>; Peggy Robertson, “So Here We Stand: Opt Out in Dangerous Times,” *Peg With Pen* (blog), September 26, 2015, <http://www.pegwithpen.com/2015/09/so-here-we-stand-opt-out-in-dangerous.html>; Peggy Robertson, “Opt Out Revolution: The Next Wave,” *Peg With Pen* (blog), October 27, 2015, <http://www.pegwithpen.com/2015/10/opt-out-revolution-next-wave.html>.

about testing quantity had finally permeated the Obama administration’s rhetoric,²⁹ and the U.S. Department of Education released the following statement: “In too many schools, there is unnecessary testing and not enough clarity of purpose applied to the task of assessing students, consuming too much instructional time and creating undue stress for educators and students.”³⁰ A few short months after this statement, the yearlong debates over the reauthorization of NCLB culminated into the signing of the *Every Student Succeeds Act* (ESSA).

By the spring of 2016, the co-optation Robertson warned of had manifested in one of the most paradoxical, if not insulting, places. Pearson—the megacorporation that has lobbied for testing policies and profited immensely off curricula, testing materials, and teacher preparation programs since 2000³¹—posted the following statement on its website:

The nation is unhappy with educational assessment, at least in its current form... Test critics claim that the burdens of testing are great and include instructional time loss, anxiety for students, and resources spent on the process... Test advocates claim that we need feedback on student progress, feedback that is fair across schools. They argue that a systematic evaluation of student learning against education goals is important for monitoring and improving education in the US. Frankly, both sides have legitimate arguments and as is often the case, the truth is somewhere in the middle.³²

In many ways, their statement constituted a market-based sleight of hand that is consistent with both corporate and neoliberal rationales. That is, Pearson read the angst of swaths of irate communities and then conflated them with “customers” who were merely unhappy with their company’s “products.” The statement then pitted the federal and state governments, foundations, and corporations (i.e. test advocates) against families, students, and teachers (i.e. test critics). In doing so, Pearson not only cast itself as the mediator of assessment discontent; it simultaneously misconstrued the resistance and the underlying concerns of the opt out movement, just as the news media and policymakers had done a few months earlier.

Opt Out is Dead

Under NCLB, the process of opting out was not overly complicated because many states tended to offer their tests annually, in a series, on paper, and during a finite testing window. The characteristics of analogue assessment allowed families and communities to anticipate and then organize their social media campaigns, teach-ins, community forums, and support networks around their annual school calendars. By 2015, however, the numbers of students taking paper

29. Kate Zernike, “Obama Administration Calls for Limits on Testing in Schools,” *New York Times*, October 24, 2015, <https://www.nytimes.com/2015/10/25/us/obama-administration-calls-for-limits-on-testing-in-schools.html>.

30. U.S. Department of Education, “Fact Sheet: Testing Action Plan,” press release, October 24, 2015, <https://www.ed.gov/news/press-releases/fact-sheet-testing-action-plan>.

31. Jennifer Reingold, “Everybody Hates Pearson,” *FORTUNE Magazine*, January 21, 2015, <http://fortune.com/2015/01/21/everybody-hates-pearson/>. According to one estimation from 2015, the testing industry alone was a \$2.5 billion industry, and much of the market has been dominated by Pearson. Another estimation suggests, “Half its \$8 billion in annual global sales comes from its North American education division.” Stephanie Simon, “No Profit Left Behind,” *Politico*, February 10, 2015, <http://www.politico.com/story/2015/02/pearson-education-115026>.

32. Kimberly O’Malley, “The Every Student Succeeds Act: Balancing Assessment’s Burdens and Benefits,” *Pearson* (website), March 8, 2016, <http://www.pearsoned.com/education-blog/the-every-student-succeeds-act-balancing-assessments-burdens-and-benefits/>.

tests in public schools was rapidly declining.³³ This change is primarily owed to the rollout of adaptive digital assessments that were aligned with Common Core State Standards. These tests were developed under the SMARTER Balanced Assessment Consortium (SBAC) and the Partnership for Assessment of PARCC. Both groups were awarded federal funding to develop the assessments in 2010 through President Obama’s *Race to the Top* initiative,³⁴ but it took a few years to develop and deploy these technologies. As they made their way into the schools, localized opt out groups adapted their strategies accordingly. But when the signing of ESSA followed this influx of technological transitions, it became apparent that the movement’s primary strategy would have to change.

Opt out communities across the country were taken aback in September of 2016 when Robertson, one of UOO’s visionary co-founders, declared in her blunt and thought-provoking blog post that “opt out is dead.” Her essay immediately incited a gust of dialogues and critiques among educational activists, which then spread rapidly throughout the underworld of social media networks. She reiterated her concerns from earlier blog posts, arguing that the movement’s direct action—testing refusal—had been co-opted into more problematic policies and, hence, *by* the very same corporations that have reaped immense financial benefits from test-based reforms. She explained her realization as follows:

The end goal—all along—was daily online testing—via online modules that break down learning into discrete skills that must be mastered—all under the guise of personalizing learning to better meet the needs of individual learners. Not only did they plan to personalize the academic skills per child, they also planned to tap into a child’s emotions and behaviors to further tailor the learning to the child’s needs (look up SEL/social-emotional learning)—all with the end goal to create more profit for the .01%.³⁵

To readers who may be unfamiliar with the field of learning analytics or the research on social-emotional learning, this statement might seem as though it were referring to the dark depths of a dystopian novel. But in effect, Robertson explained that many of the most problematic components of post-NCLB reforms had fused together in the federal and corporate push for a *competency-based education model* (CBE), a component written into ESSA.³⁶

In order to understand the alarm Robertson was raising about CBE and to clarify what might be some of the foundational problems critiqued by the opt out movement in general, it is necessary to unpack this. To do so, I turn to the issue of CBE, its ties to the fields of educational data mining and learning analytics, and a problem that *private R&D* in *public institutions* poses for public transparency. I then address how recent changes to *Family Educational Rights and Privacy Act of 1974* (FERPA) and the use of *technological persuasion* raise a series of vital philosophical questions about student privacy, data security, and end use of student data.

33. Hefling, “Do Students Take Too Many Tests?”

34. U.S. Department of Education, “U.S. Secretary of Education Duncan Announces Winners of Competition to Improve Student Assessments,” press release, September 2, 2010, <https://www.ed.gov/news/press-releases/us-secretary-education-duncan-announces-winners-competition-improve-student-asse>.

35. Peggy Robertson, “Opt Out is Dead,” *Busted Pencils* (blog), September 15, 2016, <http://bustedpencils.com/2016/09/opt-out-is-dead/>.

36. *Every Student Succeeds Act of 2015*, Public Law 114-95, *U.S. Statutes at Large* (2015): 1801-2192. <https://www2.ed.gov/documents/essa-act-of-1965.pdf>.

The Problems of Student Data Mining and Transparency via CBE

Over the last several years, developments in cloud technologies and *data science* (a field that is also commonly referred to as *big data*) have undoubtedly influenced teaching, learning, and education research. These changes have been exemplified by the post-NCLB overproduction of student data,³⁷ but also by the emergence of two particular areas of research. According to Roy Pea, the field of *educational data mining*³⁸ became a cohesive international discipline in 2008, and then three years later the more interdisciplinary field of *learning analytics* followed suit.³⁹ Since 2011, both fields have been part of a concerted effort—one that has been convened and funded by the Bill & Melinda Gates Foundation—to alter educational practice by merging teaching and learning with data science.⁴⁰

Needless to say, these two disciplines are not only interrelated, they are incredibly similar and both deeply informed by a neoliberal rationale that human beings can be measured and understood in economic terms. Educational data mining is informed by machine learning and statistics. It examines the discrete details of learning behaviors, seeks to define the “differences between successful and unsuccessful students,”⁴¹ and “emphasizes system-generated and automated responses to students” through technological applications (i.e. software programs, websites, online course platforms, etc.). Learning analytics, on the other hand, is an offshoot from the field of learning science, and through macro analyses of systems and organizations, it “enables human tailoring of responses, such as through adapting instructional content, intervening with at-risk students, and providing feedback.”⁴² In addition to machine learning and statistics, learning analytics also draws from information science, sociology, and psychology. According to the Department of Education, “a key application” of this field of research “is monitoring and predicting students’ learning performance and spotting potential issues early so that interventions can be provided...”⁴³ By virtue of their emphases on classification and prediction, educational data mining and learning analytics also have in common sets of assumptions about how a student’s learning process should function and what it means to be “successful” or “at-risk.”

For both fields, this work involves utilizing emergent technological devices, software programs, and their data capturing capabilities in order to extract an array of multimodal information from students about 1) individual learning processes and 2) technologically-constructed learning environments. As its name suggests, multimodal data is taken from a variety of sources, “such as

37. I use the term overproduction here because the interest in merging learning analytics with public education stemmed from the ironic problem that “the growth of data in education surpass[e]d the capacity to make sense of it...” Pea, *The Learning Analytics Workgroup*, 2.

38. Sheila MacNeill, Lorna M. Campbell, & Martin Hawksey, “Analytics for Education,” *Journal of Interactive Media in Education*, (2014): 1.

39. K-12 computerized learning programs grew alongside the proliferation of the personal computer, the Internet, and software tutoring systems during in the 1990s. The International Educational Data Mining Society was formed in 2008, and the Society for Learning Analytics Research was created in 2011. See Roy Pea, *The Learning Analytics Workgroup: A Report on Building the Field of Learning Analytics for Personalized Learning at Scale*, (Stanford: Stanford University, 2014), https://ed.stanford.edu/sites/default/files/law_report_complete_09-02-2014.pdf: 8; U.S. Department of Education, *Enhancing Teaching and Learning Through Educational Data Mining and Learning Analytics: An Issue Brief* (Washington, D.C., October 2012), by Marie Bienkowski, Mingyu Feng, Barbar Means, <https://tech.ed.gov/wp-content/uploads/2014/03/edm-la-brief.pdf>: 9.

40. Pea, *The Learning Analytics Workgroup*, 2.

41. U.S. Department of Education, *Enhancing Teaching and Learning*, 14.

42. *Ibid.*, 13.

43. *Ibid.*, 14.

image, writing, gesture, gaze, speech, posture.”⁴⁴ With this data in hand, the research then aims to analyze and interpret the impulses, needs, and interests of learners so as to provide them with a technologically personalized,⁴⁵ and therefore more efficient, learning experience. To some people, the outcome of a personalized education might sound ideal. But it is the *type* of personalization, and the *means* for creating it, that raise concern.

For example, videography is one such method used to harvest multimodal data. Researchers and reflective practitioners alike often analyze video data in order to understand and improve teaching and learning scenarios. Though this technique has long been used to study classroom dynamics, the development of small digital cameras inside personalized technological devices (i.e. laptops, tablets, phones, etc.) has both altered and complicated this practice in recent years. One specific example that has elicited concern about this conjunction between the technology and the practice of data mining is the case of eye tracking, wherein devices are used to measure “eye fixation times, number of fixations, eye saccades, blink rates, [and] pupil dilation...”⁴⁶ Researchers believe eye tracking data not only enables them to interpret the length of users’ attention spans during their interactions with programs; it allows them to detect and then refine the types of screen features that best capture and hold a child’s interest. Other data mining tools include built-in software analytics that provide information about students’ clickstreams (i.e. where they use their mouse to click or hover) during their interactions with learning programs or websites. Finally, one particular tool that has stoked public outrage is biometric bracelets (also called Q sensors and galvanic skin response bracelets). These devices are designed to measure the “skin temperature and conductivity” of students, and with these researchers aim to draw conclusions about the arousal, emotional states, and cognitive engagement of learners.⁴⁷

The examples listed here represent only a few of the innumerable means of data extraction in use today, and of course these are not all being used prolifically in schools. But, public awareness about educational data mining, learning analytics, and the means being employed to research human behavior and learning has grown with the expansion of the opt out movement’s communication networks. Of equal value has been the increasing number of people who have inquired into and blogged about the projects pursued by education policy’s heaviest influencers (e.g. private foundations, think tanks, corporations, and politicians’ ties to them). In light of the increased communication of this knowledge, families and educators have continued to grow critical of the changes they see moving into their schools and, therefore, being forced into the lives of children.

In contrast to the video data of yesteryear that required parental consent, tended to focus on whole classroom interactions, and maintained a reasonable distance from the child, the techno-

44. Carey Jewitt, *The Routledge Handbook of Multimodal Analysis* (New York: Routledge, 2009), 1.

45. Pea, *Learning Analytics Workgroup*, 46.

46. Shakila Shayan, Arthur Bakker, Dor Abrahamson, Carolien A.C. Duijzer, & Marieke van der Schaff, “Eye-Tracking the Emergence of Attentional Anchors in a Mathematics Learning Tablet Activity,” in *Eye-Tracking Technology Applications in Educational Research*, eds. Christopher Was, Frank Santosti, & Bradley Morris (Hershey: IGI Global, 2017), 381. This article provides an example for how this technology and others are being used by some researchers in higher education institutions.

47. Pea, *Learning Analytics Workgroup*, 46. See the following for examples of how researchers as well as the Bill & Melinda Gates Foundation have been involved in studies to gauge student attentiveness via the physiological data harvested from devices called Q sensors and galvanic skin response bracelets. Martha Crosby & Curtis Ikehara, “Feedback from Physiological Sensors in the Classroom,” in *The Impact of Pen Touch Technology on Education*, eds. Tracy Hammond, Stephanie Valentine, Aaron Adler, & Mark Payton (New York: Springer, 2015); Luisa Kroll, “Gates Foundation Responds to GSR Bracelets Controversy,” *Forbes Magazine*, June 13, 2012, <https://www.forbes.com/sites/luisakroll/2012/06/13/gates-foundation-responds-to-gsr-bracelets-controversy/#42e0d53d7bb0>.

logical changes and research fields inspired by data science have substantially increased the invasiveness of data collection. That is, such tools and methods are used to increasingly focus on the unconscious behaviors and physiological responses of the child. This fact not only gives way to concerns about the issue of surveillance and students' rights to emotional, physical, and cognitive privacy. It also raises questions about the potential for discrimination, manipulation, and the uncritical habituation of children to the technologies and programs being used in their schools. In this age of big data where nothing ever truly disappears, such questions and debates have probably never been more necessary.

Yet with ESSA's push for CBE, Robertson pointed out, this research trajectory and its concerning elements are not likely to yield without substantial public intervention. CBE, which is also referred to as competency-based learning or competency-based assessment, is only mentioned twice throughout the language of ESSA, and in both cases it falls under the section that addresses State Assessment Grants. Here the federal government identifies CBE as the premier "innovative assessment system" of the future because it is capable of providing "an annual summative determination for a student, which may be administered through computer adaptive assessments."⁴⁸ This component of ESSA effectively marks the commitment on the part of the federal government to provide funding to those states that are interested in further developing these types of technologized assessments.

One major problem with this arrangement is that, contrary to the wording in the law, the states themselves do not actually *design* these assessments. CBE is considered an "optimization platform," which means the assessments are written into software programs that are designed to "adapt to students' behavior and reactions as they interact with digital content." This creates a scenario where, according to Jules Polonetsky and Omer Tene, the programs are "essentially 'reading' the students as they read their books."⁴⁹ Such programs require a programming expertise that is uncommon and, until very recently, has been unnecessary in state and local departments of education. Thus, because of their technological and engineering complexities, CBE programs are in fact designed by educational technology companies (ed tech)⁵⁰ that merely work *in conjunction with* state and/or school officials. To clarify, this means that the states and educators are responsible primarily for the *implementation* of CBE programs and not for the design of them.⁵¹

While this might be a seemingly simple nuance, it has a jostling effect upon the responsibilities of and relationships between the state, ed tech corporations, and the public. That is, the public is required to fund these experimental projects by virtue of its tax dollars; the public's schools are used to provide the institutional infrastructure and the human subjects (i.e. students, teachers, and families) by which to data mine and conduct market testing for CBE and digital curricular programs; and this process results in publically-funded but *privately owned*, ed tech products that can then be sold back to the public.⁵² Thus, the public is put in service of the private

48. *Every Student Succeeds Act of 2015*, Public Law 114-95, *U.S. Statutes at Large* (2015): 1801-2192. <https://www2.ed.gov/documents/essa-act-of-1965.pdf>.

49. Polonetsky & Tene, "Who is Reading Whom Now," 933.

50. I follow Polonetsky & Tene here and assume the simplified term "ed tech."

51. This transition in the management of schools is occurring internationally and transnational organizations like the Organization for Economic Cooperation and Development (OECD) have gained greater influence over national education policies. Souto-Otero & Beneito-Montagut, "From Governing Through Data," 16.

52. This process has reaped enormous financial benefits for ed tech companies. According to one report, "U.S. edtech companies raised an estimated \$1.03 billion" in 2016, which it anticipated to rise to "\$252 billion globally by 2020." Robin Shulman, "Global EdTech Investments and Outlook: 10 EdTech Companies You Should Know," *Forbes Magazine*, May 17, 2017,

sector while the private mines, manages, and manipulates the data that is then used to drive public education policy.⁵³

Ben Williamson has written quite extensively about the use of such technologies for what he calls the “digital governance of education.” Through the mobilization of technologies and increased data extraction, he explains, the institution is “managed by actors and manipulated using software technologies that remain hidden and little understood.”⁵⁴ These points are undoubtedly problematic, but I argue further that digital assessments and CBE programs are not merely hidden. Rather, because they are designed in the private sector, the programs are proprietary, protected as intellectual property, and therefore virtually inaccessible to the public. This conjunction of student data mining with the growing trend of *publicly funded, privately owned programs and means of analysis* has fostered a strong sense of distrust on the part of families, students, and teachers. It simultaneously prevents the type of transparency that is essential for democratic ends.

The Problems of Student Privacy and Persuasion via Private R&D

The problems outlined thus far are owed largely to the fact that the lines between *public institutions* (e.g. government-, school-, and university-based) and *private R&D* (e.g. research conducted by private corporations, foundations, and policy think tanks) have been increasingly blurred in the post-NCLB era. Recall that private corporations were invited to create the analogue assessments of NCLB; they also produced the curricula, digital assessments, and technological infrastructures necessary to implement Common Core. And of course, the most recent example resides in the fact that the State Assessment Grants section of ESSA entices these two sectors—with their significantly different aims and ethical understandings—to collaborate expressly for the purpose of creating and installing CBE models into the public’s schools.

This technological crossover of private R&D in the public K-12 setting, Polonetsky and Tene explain, was not always possible in the past. The federal government had long protected sensitive student data under the *Family Educational Rights and Privacy Act of 1974* (FERPA), a law that ensured access to such information could only be attained by families and those individuals who were classified as “school officials.” As the push for school-related data and digitized assessments grew in the wake of the NCLB, however, this protective measure for children and families came to be viewed by some as an obstacle. Thus, amendments were made to FERPA in 2009 that redefined the term “school officials” so that it could also include vendors—like ed tech companies and contractors, for instance – as long as they do work *with* district and state officials.⁵⁵ With these changes to FERPA and the recent federal incentives for implementing CBE in the public’s schools, this crossover between public institutions and private R&D is now as inevitable as it is messy.

Along with concerns about student privacy and the security of their data, this scenario raises crucial questions about end uses of student data. While it is true that no researcher, theorist, or innovator can ever fully predict or control how their findings, ideas, or tools will be used, the

<https://www.forbes.com/sites/robbynshulman/2017/05/17/global-edtech-investments-and-outlook-10-edtech-companies-you-should-know-about/#293c02865bb3>.

53. Gavin Kendall, “What is Neoliberalism?” In *TASA 2003 Conference Proceedings*, 1-7. University of New England, 2003.

54. Ben Williamson, “Governing Software: Networks, Databases and Algorithmic Power in the Digital Governance of Public Education,” *Learning Media and Technology* 40, no. 1 (2015): 84; Ben Williamson, “Digital Education Governance.” For a similar argument made through a Foucauldian analysis, see also Souto-Otero & Beneito-Montagut, “From Governing Through Data.”

55. Polonetsky & Tene, “Who is Reading Whom Now,” 964.

fact remains that there is a distinct moral difference between research that aims at *understanding* and research that aims at *understanding for the purpose of persuasion*. Private R&D, which is perpetually tied to marketing, competition, and consumption for the sake of corporate profit, cannot be absolved from the fact that in some capacity it aims at the latter end.⁵⁶ Such a view of private R&D might seem overly harsh to some readers, but the perspective of Tristan Harris, a former technological design ethicist and product philosopher from Silicon Valley,⁵⁷ can help clarify this point:

Just like the food industry manipulates our innate biases for salt, sugar, and fat with perfectly engineered combinations, the tech industry bulldozes our innate biases for Social Reciprocity (we're built to get back to others), Social Approval (we're built to care what others think of us), Social Comparison (how we're doing with respect to our peers) and Novelty-seeking (we're built to seek surprises over the predictable).⁵⁸

In other words, the technology industry is astute at reading mined data against the knowledge from behavioral and psychological sciences. It is through this understanding that the most profitable technology companies utilize the power of suggestion to exploit conscious and unconscious human tendencies in order to gain market share. This practice has, in effect, given way to an era of *technological behaviorism*.

It can be debated whether suggestive and persuasive approaches could indeed be put to good ends, but it must be acknowledged that there are precariously fine lines between persuasion, manipulation, and coercion. The advancement of big data, Tene & Polonetsky point out, "is often driven by entrepreneurs, app developers, or data scientists who seek innovation at any cost." While it may be true that "in many large companies chief privacy officers and legal teams play an oversight role,"⁵⁹ that oversight is conceived out of a legal capacity and not in an ethical or philosophical capacity. Thus, in most cases the job of the legal team is to interpret what R&D *can* do according to the law, and not necessarily what they *should* do according to a defined framework of ethical principles.

The technology industry, Harris argues, has yet to define an ethical framework to guide how it might responsibly incorporate the knowledge about human behavior and psychology into

56. Consider the influence of neuromarketing and persuasive technology research on business tactics over the last two decades. Similar to practices in educational data mining and learning analytics, the neuromarketing sector utilizes medical technologies (like EEG, MRI, and PET scans) and biometrics like "eye tracking, skin conductance response, electrocardiography [and] facial coding" to make sense of "consumers' unconscious and emotional reactions to marketing messages to better understand the role emotion plays in advertising effectiveness." See Horst Stipp, "The Evolution of Neuromarketing Research: From Novelty to Mainstream, How Neuro Research Tools Improve Our Knowledge About Advertising," *Journal of Advertising Research* (June 2015): 120-122; Yesim Isil Ulman, Tuna Cakar, & Gokcen Yildiz, "Ethical Issues in Neuromarketing: 'I Consume, Therefore I Am!,'" *Science and Engineering Ethics* 21 (2015). Consider also how persuasive technology was used to target voters in the 2016 U.S. presidential election. By using social media data to psychologically profile individuals, the company "serve[d] different ads to different potential voters, aiming to push the exact right buttons for the exact right people at the exact right times." See McKenzie Funk, "The Secret Agenda of a Facebook Quiz," *New York Times*, November 19, 2016, https://www.nytimes.com/2016/11/20/opinion/the-secret-agenda-of-a-facebook-quiz.html?_r=0; Andreas Spahn, "And Lead Us (Not) into Persuasion...? Persuasive Technology and the Ethics of Communication," *Science and Engineering Ethics* 18 (2012).

57. Bianca Bosker, "The Binge Breaker," *The Atlantic*, November 2016, <https://www.theatlantic.com/magazine/archive/2016/11/the-binge-breaker/501122/>.

58. Tristan Harris, "Tech Companies Design Your Life, Here's Why You Should Care," *Essays* (blog), March 7, 2016, <http://www.tristanharris.com/essays/>.

59. Tene & Polonetsky, "Judged By the Tin Man," 353.

its product designs.⁶⁰ If the industry has yet to take up ethical considerations about the effects of technological persuasion on the general populous, then there is very little reason to suspect it has done so in regard to the well being of children specifically. This problem, along with a lack of debate about the fine line between persuasion and coercion, is one of the greatest reasons that education scholars⁶¹ and many in the opt out movement continue to question whether the aims and rationales of business should ever be welcomed uncritically into the spaces of children. The infusion of private R&D into public institutions is concerning enough. But when this is combined with the proprietary rights of CBE and the alterations to FERPA, it is all the more apparent that there is a gaping hole in the types of safeguards needed to protect students, their psychological and cognitive privacy, and the data that they are unwittingly but persuasively being asked to give up.

Conclusion

As I explained in the introduction, there has been no shortage of reasons for people to be incensed about the direction public education has been taken in the post-NCLB era. High-stakes testing yielded reductionistic views of human learning and abhorrent consequences that disproportionately affected the nation's most underserved youth. The creation and implementation of Common Core drew scrutiny about the federal control of local schools and awareness for the prolific corporate involvement in the public institution. Then the emergence of technological assessments like PARCC, SBAC, and the impending CBE escalated existing levels of distrust among the public. These concerns, as well as many others related to the wellbeing of children and the public's schools, circulated throughout the opt out movement's communication networks and helped shape the work of grassroots organizations.

One of the biggest problems faced by opt out, perhaps, was its timing. When UOO came together in 2011, the framework for Common Core had already been laid, and the development for CBE had also been set into motion (it may not have been called 'competency-based education' at that time, but the concept was certainly being developed via the funding and creation of PARCC and SBAC in 2010, and the notion of a "common core" emerged via UNESCO as early as 1984).⁶² In addition, the Gates Foundation had already planned to utilize educational data mining and learning analytics for future education reforms, and the federal government got on board with this concept in 2012. By that point, UOO and local opt out groups had only been working together for a year at best. With so much momentum already forcing the institution into the digital turn, the opt out movement stood little chance of immediately effecting this direction. Given the timing, though, it appeared to some that the greater opt out movement was fighting against analogue testing alone. Of course, this helped open the door to digital testing while simultaneously distracting from the more important arguments the movement was making about discrimination, corporate involvement in school policies, and reductionistic views of children and human learning.

60. Tristan Harris, "About Tristan Harris," *Essays* (webpage), accessed August 3, 2017, <http://www.tristanharris.com/>.

61. This is related to the problems associated with the commercialization of schools in general. See Alex Molnar, *School Commercialism: From Democratic Ideal to Market Commodity*, (New York: Routledge, 2005); Deron Boyles, ed., *Schools or Markets?: Commercialism, Privatization, and School-Business Partnerships*, (Mahwah: Routledge, 2009); Deron Boyles, *American Education and Corporations: The Free Market Goes to School* (New York: Falmer Press, 2000).

62. The idea, or at least the discourse, for a "common core" might be attributed to United Nations Educational, Scientific and Cultural Organization (UNESCO) as far back as 1984. Morna McDermott, "UNESCO and the Educational Technology Industry: A Recipe for Making Public Education a Profiteering Enterprise Part I," *Education Alchemy* (blog), October 18, 2014, <https://educationalalchemy.com/2014/10/18/unesco-and-the-education-technology-industry-a-recipe-for-making-public-education-a-profiteering-enterprise-part-i/>.

Despite the timing of the movement's emergence, though, not all is lost. Testing refusal may no longer be a viable action, but many opt out groups have continued to work together by paying close attention to local and state politics and partnering with other grassroots organizations on similar causes. Members of the movement have also been actively engaging the philosophical questions that are likely defining the next wave of opt out, which appears to be opting out of digital curriculum. Alison Hawver McDowell, in particular, has done a significant amount of inquiry and writing on this topic.⁶³ Now, strength lies in the fact that the networks are built, the critiques are just as strong as they have ever been, and the concerns about student privacy and technologized learning are increasingly receiving support by scholarship. Given the changes brought on by the digital turn in education, perhaps the opt out movement and other grassroots organizations might consider pursuing the specific problems of public transparency, student privacy, and technological persuasion.

Software and digital technologies are designed to be seamless. They are supposed to function so smoothly that users barely notice their existence, much less how their code and innerworkings are constructed. Thus, by default, they are not designed to be transparent. This characteristic, needless to say, is not conducive to parental trust, healthy school-home partnerships, or democratic ends. The lack of transparency has led to concerns about what data extraction means for students' rights to emotional, physical, and cognitive privacy. Also, because of the evidence of inhumane data use in the post-NCLB era, concerns about data extraction have caused people to further question the types of damaging ends that could result if legal and ethical safeguards are not intact. In this regard, public transparency about the creation and use of technologies and data in schools can certainly help meliorate some of these problems, but this is not enough.

It would be nice to assume that anyone working with the public's schools should be expected to philosophically interrogate their own aims and question the best *and worst* possible outcomes of their work. But, of course, this is not the case, and it is likely to be less so with the way that private R&D has become so deeply entrenched in schooling. Technology companies could indeed change this, as Tristan Harris suggests, if they engaged in a philosophical exploration into the ethics of technological design. However, it will never be sufficient to rely on industry and government to do this alone, especially when it comes to exploring the safeguards of student privacy and to defining the boundaries for persuasion and technological use. Individuals rarely see their own conflicts of interest, and because of this, the perspectives of students and their families are integral to such debates.

As other scholars have suggested, there is definitely a need to update legislation so that it can better protect students and their schools in the current technological landscape. FERPA would need to be revised in order to restore student and family protection, and it would have to be updated to meet the technological changes being implemented in schools. But before that can happen, I believe grassroots organizations would need to work together and grapple with the philosophical questions pertaining to the needs for public transparency and the boundaries for student privacy and technological persuasion. There is a desperate need to know more about how technologies are being used by local school districts and how they are affecting the individuals within. In order to understand this better, such work would likely include enlisting the partnership of student organizations, local teacher unions, and district personnel. With a better technological understanding in hand and with some clarity about appropriate boundaries, this work might then coalesce around

63. Alison Hawver McDowell, *Wrench in the Gears: A Skeptical Parent's Thoughts on Digital Curriculum* (blog), <https://wrenchinthegears.com/>.

district-based, privacy councils. To preserve the democratic integrity, the councils would need a broad representation with student, parent, teacher, and district membership. At the very least, this could provide localized, democratic oversight on issues and grievances related to school technology, and it could result in public spaces by which to pursue thoughtful debates and educate the public about the ethical quandaries that will assuredly accompany the changes yet to come.

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