Cashing in on Student Data: Standardized Testing and Predatory College Marketing in the United States

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Submitted to the Program in Comparative Media Studies/Writing in Partial Fulfillment of the Requirements for the Degree of Master of Science in Comparative Media Studies
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ABSTRACT

In this thesis, I explore the ethics of educational data collection associated with standardized testing in K-12 schools in the United States. While the public has become aware of issues surrounding data collection, distribution, and analysis in online spaces, this discourse has not fully extended into education. I extend the discourse surrounding consumer data privacy to educational spaces in order to investigate how standardized testing organizations such as the College Board violate norms of privacy in an effort to profit off of the sale of student data. I argue that the College Board's operation of the Student Search Service, a service that not only provides students with marketing outreach from universities but also provides universities and other organizations with large quantities of student data, is an example of surveillance capitalism that enables predatory marketing practices surrounding the college admissions process. I rely upon historical research, policy analysis, primary source research, and interviews in order to analyze the actions of the College Board and connect those actions to predatory practices within higher education, delving into a discussion of enrollment management, predatory lending, and for-profit colleges. Ultimately, I outline a need for greater transparency around organizational data practices, greater enforcement of existing regulations, and enactment of new privacy laws in order to minimize the potential for harm on K-12 students in the United States.

Thesis Supervisor: Justin Reich
Title: Assistant Professor of Comparative Media Studies/Writing

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In the midst of a global pandemic, it feels even more important to acknowledge those who have supported me as I've embarked on this research journey over the last two years. I'm currently writing these words from my apartment in downtown Kendall Square in Cambridge, MA, where I've spent countless hours researching, outlining, writing, and editing over the last academic year. My daily routine commuting across campus for classes, lunch with classmates, and lab research has been minimized to a twice-weekly excursion for a COVID-19 test. While it feels as though my life has been turned upside down, I recognize the immense privilege I have maintained, especially to know that I have had secure employment, access to medical care, the ability to work from home, and a wealth of resources at my disposal to support me. This thesis has been the culmination of a very long two years, but two years that have been made that much easier with the support of family, friends, and colleagues.

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Glossary

California Consumer Privacy Act (CCPA): Signed in 2018 and in effect as of 2020, the CCPA is a law in California that protects consumer rights and privacy. The CCPA is informally known as the most restrictive state privacy law in the United States.

Children's Online Privacy Protection Act (COPPA): COPPA, enacted in 1998, is a federal law that protects children's privacy online. It dictates that children under the age of 13 must receive parental consent to use online websites and apps.

Data Economy: A data economy is a system based on the collection, storage, and distribution of data and data-based products (such as prediction products) exchanged for monetary gain.

Educational Technology (edtech): Edtech is a catchphrase for all kinds of technology used in the classroom, including, but not limited to, computing technology, digital apps and websites used for learning, and systems for managing student information.

Elementary and Secondary Education Act (ESEA)*:* ESEA is the largest federal education law enacted by Congress. It was signed into law in 1965. ESEA was created in order to work towards providing educational opportunities for all, regardless of socioeconomic status.

Every Student Succeeds Act (ESSA)*:* ESSA is the newest amendment of the ESEA and passed in December 2015, replacing the No Child Left Behind Act. ESSA is known for its focus on standards-based learning and for its shifting of some accountability factors related to standardized testing with relation to No Child Left Behind.

Family Educational Rights and Privacy Act (FERPA): FERPA was enacted in 1974 as the law that most broadly governs student educational data privacy. FERPA provides protections for student information and limits access to student records. Under FERPA, parents or guardians of children under the age of 18 are the primary rights-holders with regards to students' data until students turn 18 or begin study at a postsecondary institution.

Family Policy Compliance Office (FPCO): The FPCO is the federal office directly in charge of overseeing any FERPA complaints brought up by parents or students.

General Data Protection Regulation (GDPR): The GDPR is an EU regulation implemented in 2018 that protects consumer data privacy. The GDPR gives individuals control over their own

data, requiring companies to disclose how they use data and providing the option to individuals to ban the collection of their data when they use apps or websites.

Individuals with Disabilities Education Act (IDEA): The IDEA is the United States' educational law governing education for students with disabilities. It was signed into law as the Education for All Handicapped Children Act in 1975 and reauthorized as the IDEA in 1990. IDEA ensures that students with disabilities have the right to the educational supports they need in an educational setting to be successful.

Local Education Agency (LEA): An LEA is a board of education or collection of districts or counties that acts in an administrative capacity in the local area for public schools.

No Child Left Behind Act (NCLB): NCLB was introduced in 2001 and signed into law in 2002. NCLB's aim was to maintain accountability standards for schools receiving federal funding. This program penalized schools for not meeting adequate yearly progress in student test scores.

Personally Identifiable Information (PII): PII refers to any information that originates from an individual that is identifying in nature.

Protection of Pupil Rights Amendment (PPRA): The PPRA dictates how organizations can administer marketing surveys or other analyses to students. It was enacted in 1978.

Student Online Personal Information Protection Act (SOPIPA): SOPIPA is California's student privacy-specific privacy law that went into effect in 2016 and includes protections for student information collected via edtech in school environments. SOPIPA has been modified and enacted in a number of other states since then.

Introduction

Pervasive. Opaque. Inequitable.

The use of educational data in the American school system is deeply ingrained within our K-12 institutions. With growing awareness of the dangers of unethical collection, storage, and use of data in technological settings, how can we ensure that we promote ethical data use in our educational system? Through this thesis, I will explore three research questions as I try to shed light on the educational data practices of assessment companies and organizations.

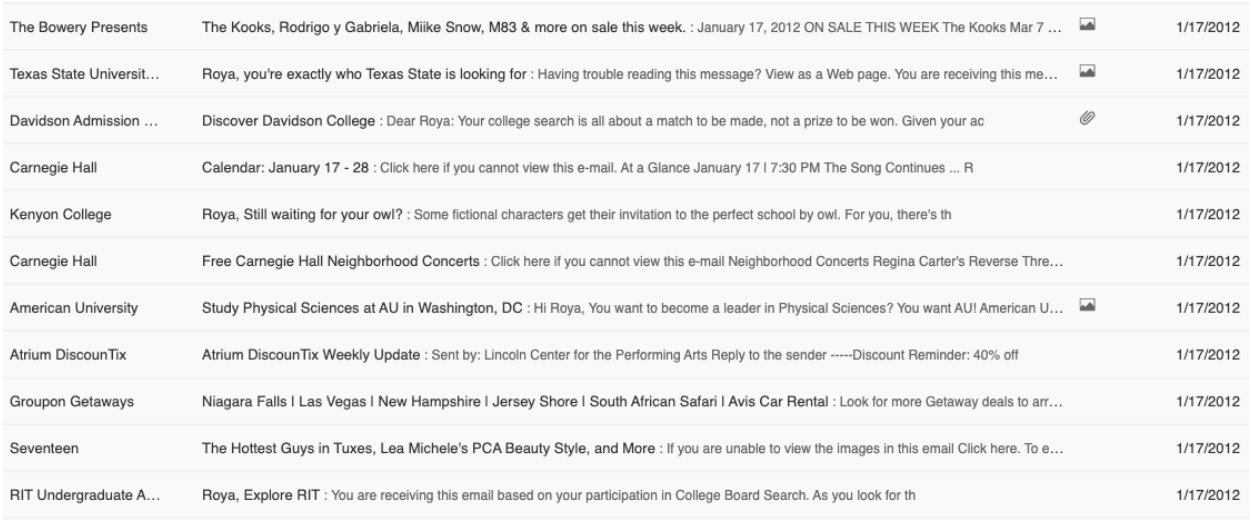
1. *How do large-scale assessment companies and organizations collect and use student data?*
2. *How is student data collected through assessments and surveys used in potentially harmful ways?*
3. *How might we model more ethical forms of data collection and use?*

My thesis research sits at the intersection of education, critical data studies, and public policy. I draw from these three disciplines to analyze the practices of a not-for-profit organization intimately connected to the college admissions process, the College Board, in their administration of a program called the Student Search Service. The Student Search Service is a program that provides students with personalized college recommendations and outreach from universities. Universities partner with the College Board through a service called the College Board Search to "lease" student information to use for marketing purposes.[1] In order to better introduce the College Board's Student Search Service, I start this thesis with a personal anecdote

[1] I use "lease" to refer to the College Board's terminology for their own actions. I will demonstrate in Chapter 3 that the College Board sells, rather than leases, student data.

to share my motivation for embarking on this research as well as to illustrate the critical perspective I bring to this work.

When I was an 11th grader beginning my college process, I had the privilege of two parents with graduate degrees and few financial barriers to the process. I am the oldest of three children and the first of that trio to apply to and then attend college. However, I had little intimate knowledge of the college process despite my access to ample college counseling at my private high school. I chose to sign up for the College Board's Student Search Service as an 11th grader in order to hear about schools that might be a good fit for me as I started to consider my options for college. When I realized I would receive mailers from universities excited to recruit me and emails that introduced me to new universities, I was thrilled, hoping to find out more about universities beyond what I could gather from my earmarked copy of the 2011 Fiske Guide to College.



The Bowery Presents	The Kooks, Rodrigo y Gabriela, Miike Snow, M83 & more on sale this week. : January 17, 2012 ON SALE THIS WEEK The Kooks Mar 7 …	1/17/2012
Texas State Universit…	Roya, you're exactly who Texas State is looking for : Having trouble reading this message? View as a Web page. You are receiving this me…	1/17/2012
Davidson Admission …	Discover Davidson College : Dear Roya: Your college search is all about a match to be made, not a prize to be won. Given your ac	1/17/2012
Carnegie Hall	Calendar: January 17 - 28 : Click here if you cannot view this e-mail. At a Glance January 17 I 7:30 PM The Song Continues ... R	1/17/2012
Kenyon College	Roya, Still waiting for your owl? : Some fictional characters get their invitation to the perfect school by owl. For you, there's th	1/17/2012
Carnegie Hall	Free Carnegie Hall Neighborhood Concerts : Click here if you cannot view this e-mail Neighborhood Concerts Regina Carter's Reverse Thre…	1/17/2012
American University	Study Physical Sciences at AU in Washington, DC : Hi Roya, You want to become a leader in Physical Sciences? You want AU! American U…	1/17/2012
Atrium DiscounTix	Atrium DiscounTix Weekly Update : Sent by: Lincoln Center for the Performing Arts Reply to the sender -----Discount Reminder: 40% off	1/17/2012
Groupon Getaways	Niagara Falls I Las Vegas I New Hampshire I Jersey Shore I South African Safari I Avis Car Rental : Look for more Getaway deals to arr…	1/17/2012
Seventeen	The Hottest Guys in Tuxes, Lea Michele's PCA Beauty Style, and More : If you are unable to view the images in this email Click here. To e…	1/17/2012
RIT Undergraduate A…	Roya, Explore RIT : You are receiving this email based on your participation in College Board Search. As you look for th	1/17/2012

Figure 1: My email inbox as a high school junior on January 17, 2012, not long after signing up for the Student Search Service.

Figure 1 is an image of my email inbox as a high school junior not long after I signed up for the Student Search Service. It was a pretty typical day for my inbox – it was peppered with

emails from concert venues, Seventeen Magazine, Groupon, and plenty of universities. However, not too long after I signed up for the Student Search Service, I found myself overwhelmed with emails from colleges and, no more than two months later, opted out of the service. However, I continued to receive marketing emails from colleges and universities, despite having revoked my consent to the service. Did the College Board continue distributing my data after I no longer consented? Were universities legally allowed to continue to market to me as long as they received my information prior to my official revocation of consent? How would this marketing process affect someone else, someone with less financial and social capital than I had? Ten years later, this frustrating experience has contributed enormously to the motivation for this project.

In this thesis, I argue that educational data collection associated with standardized testing companies is an example of surveillance capitalism and has the ability to feed into predatory practices within the college admissions process. Surveillance capitalism, an idea developed by Shoshana Zuboff (2019), refers to the process of collecting individuals' personal information, traits, and behavior and rendering it all into analyzable data. These data, often perceived as objective factors of our human experience, can then be used for things such as targeted advertising and predictive models that help companies make predictions about individuals' future behavior. Surveillance capitalistic practices themselves are not new, but our legal infrastructure has not kept up with technological developments that have made these practices easier. We now need greater legal regulation in order to fight back against these unethical and potentially dangerous practices.

Today, the College Board reaches nearly 2.2 million students a year with its administration of the SAT, and 49% of those students took the SAT in an SAT School Day administration of the exam, where the SAT counts as a state's mandatory standardized testing

exam (College Board, 2020). Each year, the vast majority of students taking a College Board exam sign up for the Student Search Service, the service I signed up for as a high schooler, turning over large quantities of personal data to the College Board, such as their contact information, address, and academic aspirations.[2] The College Board claims that the service has the ability to introduce students to schools they might not have heard of before or scholarship programs for which they might be eligible. However, by distributing this data through what the College Board calls the "largest, most effective admissions search database in the U.S.," the College Board is feeding into an act of surveillance capitalism that has the ability to reduce students' autonomy and decision making around the college process. This creates an opportunity for the College Board to indirectly enable the for-profit college and predatory lending industries. As I outline in more detail in Chapter 4, these industries disproportionately impact students of color and students impacted by poverty, students who are most vulnerable to inequities present within the college admissions process.

I will begin my analysis of the College Board's practices by developing a theoretical framework for privacy that I will use to evaluate the ways in which standardized testing companies such as the College Board act in a surveillance capitalistic manner with students' data. I will then look at the history of large-scale educational assessment, identifying the ways in which it was, from its initiation in the latter half of the 19th century, designed to collect data on students to separate them by ability in an efficiency-driven school environment. I will explore, historically speaking, intelligence testing in tandem with the creation of the College Board in order to understand the ways in which development of these organizations happened alongside major movements in intelligence testing from the turn of the 20th century to the present.

[2] Between 2014 and 2017, at least 80% of students taking a College Board exam signed up for the Student Search Service. The College Board has not reported this statistic on its more recent Form 990 tax filings.

Following this, I will provide a deep dive into the practices of the College Board in order to demonstrate the ways in which the organization's college admissions recommendation system, the Student Search Service, misleads students into turning over large amounts of private information to the organization. I will use three case studies to identify violations of my model of privacy for appropriate sharing of student data (or even more broadly, consumer data). I will explore other forms of student marketing tied to the college application process to think critically about the data collection practices of large educational organizations and companies at scale. I will explore the ramifications of data collection in education, speaking to marketing done by universities, predatory lending, and other practices involving the collection, analysis, and dissemination of student data. Finally, I will provide a set of recommendations on how to move forward aimed towards educational stakeholders: students, parents or guardians, educators, and administrators.

Situating this Thesis: An Interdisciplinary Approach to Data Ethics in Education

Throughout this thesis, I delve deeply into education with the structural lens of critical data studies while considering the legal and policy-driven ramifications of the College Board's actions. I write this thesis at a time when aspects of all three of these fields are changing rapidly. Faced with the COVID-19 pandemic, the field of education is at a point of reckoning. What does the fight for racial and socioeconomic equity in school look like after a period of time in which the educational inequities created by the shaky foundation of American society have been magnified during the pandemic? After many universities have gone test-optional or test-blind in their admissions processes, how will the reliance on standardized testing change? These are some of the questions that have motivated me to think about standardized testing and associated data

collection within schools at this exact point in time in order to understand our current landscape and plan for the future.

Similarly, in the last decade, much has been published both in academic and public discourse on consumer data privacy. As the opaque data practices of large technology companies have become slightly more transparent, advocacy has begun to improve upon protections for consumers online. Law has similarly followed, most notably with the enactment of the General Data Protection Regulation (GDPR) in Europe in May of 2018 and the California Consumer Privacy Act (CCPA) in 2020. In the last ten years, scholars such as Shoshana Zuboff, Safiya Noble, Cathy O'Neil, Leah Plunkett, Frank Pasquale, and Justin Reich have explored the ramifications for data collection and analysis in online spaces, many with special regards to the ways in which such collection and analysis disproportionately impact individuals of color and individuals impacted by poverty.

Within education, organizations such as the Parent Coalition for Student Privacy and the more policy-oriented Future of Privacy Forum have been advocating for student privacy for a number of years. More recently, organizations have cropped up around pledge programs involving student data privacy such as the Student Data Privacy Consortium and the Student Privacy Pledge, both seeking to have direct impact on educational organizations' privacy practices through binding pledges centered around student data use. While some scholars have looked at the impacts of educational technology within the classroom and the privacy implications for digital tools, my work uniquely looks at the privacy implications for students' data at scale due to standardized testing and associated data collection.

Methodologically, I rely upon a mix of historical research, interviewing, and primary research using my own collection of correspondence with the College Board and universities

towards my analysis. I aim to shed light upon unethical data practices happening within the standardized testing industry and the impacts of such practices on students applying to and attending colleges and universities in the United States.

Thesis Outline:

In this thesis, I argue that the College Board's student-facing Student Search Service and university-facing College Board Search enable surveillance capitalism impacting K-12 students. Throughout the following four chapters, I analyze the actions of the College Board to demonstrate the ways in which the organization contributes to surveillance capitalism within the college admissions process.

In Chapter 1, "Building a Framework of Privacy: Surveillance Capitalism, Student Data Privacy, and the Legal Landscape," I build a theoretical framework for privacy in this context that I use in subsequent chapters to analyze the actions of the College Board. This framework builds on the work of individuals across law, policy, and information science and relates such concepts back to educational data. I develop a three-level framework of our current assumptions around students' and guardians' understanding of data use, our components for the proper use of data, and our enforcement mechanisms for such practices. In this chapter, I introduce two theories of privacy, Ari Ezra Waldman's privacy as trust and Helen Nissenbaum's privacy as contextual integrity that guide my development of a privacy model to govern student data collection and distribution.

In Chapter 2, "The Normalization of Educational Data Collection and the College Admissions Process," I explore the history of educational data collection around standardized testing, starting with its inception in the late 19th century, and the ways in which standardized

testing and the college process have emerged inequitably in America. In this chapter, I argue that organizations ingrained within the college application process such as the College Board have evaded legal oversight in their administration of programs such as the Student Search Service by shifting organizational practices over time to meet market demands and maintain market share.

In Chapter 3, "The College Board, the Student Search Service, and Surveillance Capitalism," I analyze three case studies surrounding the College Board's collection and distribution of student data to identify ways that the College Board misleads students into turning over their data to the organization. I track the College Board's violation of the privacy framework I develop in Chapter 1 in order to demonstrate the College Board's enablement of surveillance capitalistic practices. In my analysis, I analyze documents provided to students and their parents about the Student Search Service while also drawing upon my own interactions with the College Board as a high schooler.

In Chapter 4, "Predatory Marketing and the College Admissions Process," I outline the implications for data collection and analysis practices, both around the College Board and the Student Search Service as well as the tangential or spillover effects that can occur when universities gain access to large quantities of student data. I discuss the recent growth of enrollment management within university admissions offices and the ways that it can be tied to quantitative analysis of student information and predictive modeling of student outcomes, analytical processes inherently tied to surveillance capitalism. I analyze the tie between data collection and predatory lending and the for-profit college industries before outlining a number of lawsuits connected to such practices. Finally, I connect these predatory marketing practices back to our privacy framework, demonstrating the ways in which they violate appropriate data sharing practices for student data.

I close with a hopeful discussion of how to improve upon these data practices from a theoretical basis and goals for the legal oversight of companies engaging in data collection on students through standardized testing. While for-profit universities and external marketing companies have long found ways to use student data to their benefit in unethical ways that affect students of color and students impacted by poverty most detrimentally, technology has enabled surveillance capitalism more broadly, infusing surveillance capitalism into K-12 educational spaces and the college process. By incorporating stronger transparency around company or organization data practices, enforcing existing privacy laws, and enacting new regulations for data privacy, we can fight back against surveillance capitalism in the college process to help students maintain autonomy over their higher education aspirations and decisions.

Chapter 1: Building a Framework of Privacy: Surveillance Capitalism, Student Data Privacy, and the Legal Landscape

What makes the collection, distribution, and analysis of student data so complicated? At the outset, various types of data collected within the American public school system are protected information and cannot be shared outside of a school setting without consent of students' parents or guardians. Until public school students have begun postsecondary studies or turned 18, they are not legal stewards of their own educational data. Societally, however, children as young as 13 have complete rights to distribute their personal information in online spaces outside of school, actively contributing to a data economy without knowledge of what a data economy is.

Within the last few years, the public has become increasingly aware of the pitfalls of Big Tech and the collection of data used in machine learning models, recommender systems, and their impacts on people of color and individuals impacted by poverty. A number of scholars such as Audrey Watters, Cathy O'Neil, and Justin Reich have explored concerns around student data privacy and the implications of student information being collected and used in unethical and even nefarious ways.[3] I hope to contribute to this discourse around student data privacy by outlining an explicit connection between surveillance capitalism (as theorized by Shoshana

[3] For more information on student data privacy and data collection through edtech, see Boninger, Molnar, and Murray's "Asleep at the Switch: Schoolhouse Commercialism, Student Privacy, and the Failure of Policymaking--The Nineteenth Annual Report on Schoolhouse Commercializing Trends" (2017).

For more on how school practitioners, such as administrators and security officials, might implement stronger protections for student data within schools, see Linnette Attai's guide on implementing school policies around student data, *Student Privacy: Building a School Compliance Program* (2018).

Zuboff in 2019) and the College Board's operation of the Student Search Service and its place within the college admissions process and higher education marketing. Surveillance capitalism dictates a process in which people's information and behavior are rendered into data, some of which is used to improve services (such as online websites and platforms), and some of which is used to inform predictions for people's future behavior (Zuboff, 2019). These predictions are highly valuable; companies have created entire business plans revolving around the expected revenue from these predictions of future behavior. We most explicitly see examples of surveillance capitalism online, but aspects of surveillance capitalism can be seen in many areas, including within education and the college admissions process. Throughout this thesis, I will use a theoretical model for privacy to identify ways in which the College Board's actions around the Student Search Service are surveillance capitalistic and ways we can fight back against such practices.

In this chapter, I argue for a model of privacy based on the work of Helen Nissenbaum (2004) and Ari Ezra Waldman (2018) that governs our understanding of how data are collected and distributed between a supplier (students) and a collector and distributor (the College Board). Nissenbaum's theory on privacy as contextual integrity outlines two norms that my model of privacy incorporates: the norms of appropriateness and flow. The norm of appropriateness guides the type of information that is appropriate to be collected by an individual or organization in a situation involving a supplier and a collector or distributor. The norm of flow guides how that collected information is then distributed and under what conditions distribution is allowed. Waldman's privacy as trust outlines a relationship between two parties that is centered around trust, just as two friends might have a trusting relationship and therefore feel comfortable sharing certain information based on a mutual understanding of what is appropriate to share and what is

not. Waldman argues that we already have existing models for these types of relationships, such as relationships with doctors where doctors are legally bound to protect individuals' information and must act in patients' best interest. As I will discuss later in this chapter, Waldman's privacy as trust includes building in legal enforcement to regulate the type of relationship I discuss throughout this thesis, that of an individual consumer entering an agreement with a large organization.

I argue that a combination of these two theoretical models, privacy as contextual integrity and privacy as trust, allows us to analyze the College Board's actions around the Student Search Service and identify the ways in which the College Board enables examples of surveillance capitalism that have the ability to harm students. Through strong legal enforcement of regulations, we can push back against predatory, predictive practices in the college admissions process enabled by the College Board in order to minimize the impact of surveillance capitalism on K-12 students moving into higher educational opportunities in the United States and help students maintain autonomy, choice, and access around higher education.

To do this, I will delve deeply into the key theoretical frameworks that guide my thinking around student data privacy and educational marketing. I will develop my theoretical model, based on the work of Nissenbaum and Waldman, and draw connections between the model and the practices of the College Board. I will then outline the legal landscape that surrounds student data in order to understand the federal protections for students and their data and in order to identify how my theoretical model for privacy intersects with the law. Finally, I will make a case for connecting policy and theory in this context in order to understand not only *why* protecting student information is crucial but also *how* we might act in order to protect student data.

Key Theoretical Frameworks: A Basis for Understanding Student Data Privacy

I build this chapter with a goal to create a shared vocabulary for the types of actions taking place around student data and the college admissions process. Recently, the vast majority of discussion around data privacy has been focused on the collection of user data happening within internet spaces. Through this thesis, I aim to extend this discussion towards student data privacy, understanding the ways in which issues of consumer data privacy are deeply connected to issues of student data privacy. Many companies operating both within traditional, public consumer spaces and within the educational market have business models that include the transformation of personal information into marketable data. This happens both directly through users' profile information and indirectly through users' browsing and usage habits. In this section, I explain this phenomenon using Zuboff's theory of surveillance capitalism as it relates to the College Board.

Collecting consumer information in order to design and create predictive products based on personal data more widely is what Zuboff refers to as surveillance capitalism (2019). Surveillance capitalism is, according to Zuboff, the process through which "human experience" is turned into data that are then used, analyzed, or manipulated in some way. In the earlier days of the internet, large companies typically collected user data in an effort to improve upon their business offerings. User behavior was captured and analyzed and then fed back into systems to guide improvements to online platforms and services. At some point in this cycle of using user information to improve services, companies realized there was great value in a byproduct of this data, referred to by Zuboff as "behavioral surplus." While companies continued to improve upon services for users, they realized that the extra data collected about users could be rendered into

predictive products that would predict future user behavior. This created a new marketplace centered around predicting and shaping user behavior.

When people use online websites, they are typically forced into these processes that use their behavior as raw data to be analyzed in a way that provides little benefit to individual consumers, but great benefit to large companies. In many cases, this is an invisible process, and users do not know that their information is being harvested for additional use. In some cases, the actual sale of individuals' data is restricted, but it is a much more difficult challenge to limit the sale of predictive products *based on* individuals' data. These models are often somewhat traceable to individuals (or profiles of individuals) and predict people's behavior particularly well, allowing companies to eschew regulation and continue their actions. By engaging in such practices, these models then push individuals towards certain actions or purchases, landing people in a cyclical loop of advertisement and action. The cautionary tale around surveillance capitalism is around individuals' freedom and autonomy: as markets skew towards surveillance capitalism over time, individuals lose their autonomy over decision making.

How does this apply within educational settings, especially around standardized testing and the college admissions process? When states partner with specific companies or organizations to provide their in-school testing, they normalize the relationship students have with an organization such as the College Board or the ACT. As the student moves throughout the K-12 educational system, they interact frequently with such organizations, and by the time they are considering postsecondary educational options, they have been absorbed into a system where their participation is mandatory across most postsecondary institutions and they may not opt out of testing. In these cases, organizations such as the College Board or ACT find ways to harvest information from students and distribute it more widely. Only those working directly at higher

education institutions know how these data are used. A key component of surveillance capitalism is that organizations that have collected data can wield such data to shape user behavior. By collecting data on students to provide them with "personalized" college recommendations and marketing from universities, they are doing just that. Zuboff identifies pitfalls for where these practices take place and warns against the implications for such action at scale.

When students sign up for the Student Search Service, their information is being rendered into data. Student information is compartmentalized and universities and other organizations buying students' names and contact information through the College Board Search are able to filter by certain data points or demographic characteristics, such as a students' GPA, SAT score range, zip code, and more.[4] This is exactly what Zuboff refers to as surveillance capitalism. Students' data is shared with universities that have the ability to analyze such information to make predictions on which students will be most successful at a given school. This has the potential to reinforce social inequalities already existing within higher education institutions in terms of access and accessibility to diverse populations of students.[5] When surveillance capitalism bleeds into our educational system and dictates our pathway to higher education, students may not always have the opportunity to truly opt out of the process. Even in other areas of education, students are impacted as well; they opt into contracts of adhesion[6] with edtech providers, testing companies, and other educational marketing organizations in an uninformed

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[5] Within elite institutions in the United States, a majority of lower-income Black students gaining admission and attending attended similarly elite preparatory schools prior to attending college. Lower-income Black students attending non-elite preparatory schools, typically already a small minority of the student body at elite undergraduate institutions, already face significantly higher barriers to admission at these universities. For more on these inequities, see Anthony Abraham Jack's *The Privileged Poor: How Elite Colleges Are Failing Disadvantaged Students (2019).*

[6] These contracts, drawn up by larger organizations and agreed to by smaller organizations or individuals, typically favor the actions of the larger organization; the only way to not follow certain points of such contracts is to opt out of using a service or product. The smaller organization or individual does not usually have the ability to renegotiate such a contract.

way. Educational organizations distribute student information under the guise of personalized college recommendations, feeding their information into a cycle of analysis and predictive systems that lead to inequitable outcomes when students enter higher educational opportunities.

As I will outline later on in this chapter, we have laws designed to protect student privacy, and yet, they provide a free pass for organizations claiming to serve educational causes to collect and use data however they please. This leads to surveillance capitalism within the college application process through the use of services such as the College Board's Student Search Service. It is imperative that we avoid the impacts of surveillance capitalism to the greatest degree possible, especially for children in order to preserve children's autonomy around decision making. In order to analyze actions of organizations such as the College Board that lead to surveillance capitalism, I rely upon a framework shown in Figure 2 composed of three central parts: assumptions about data collection and sharing that drive this work, required components for appropriate data distribution, and methods for implementation.

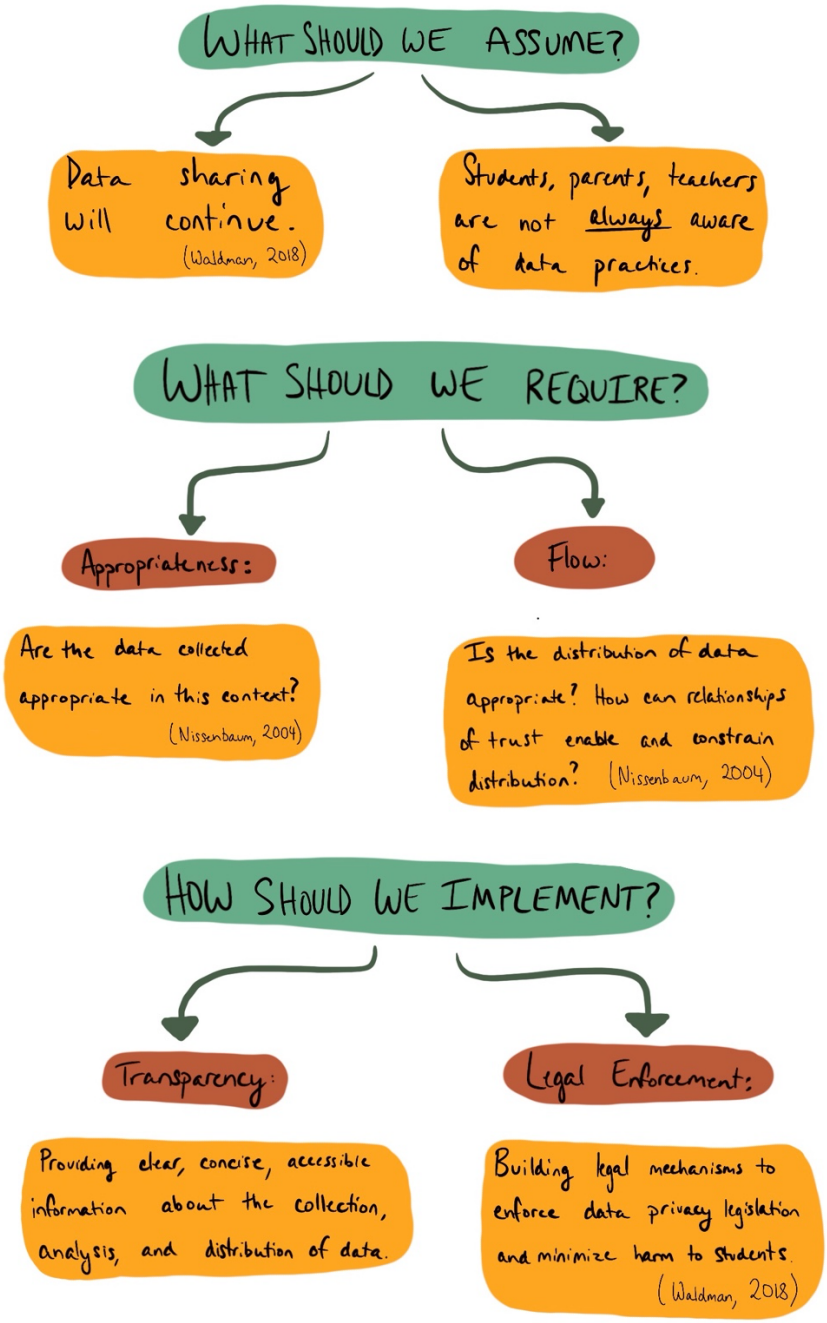


Figure 2: Privacy framework developed using components of Nissenbaum's (2004) privacy as contextual integrity and Waldman's (2018) privacy as trust models.

First, I assume, based on Waldman's (2018) privacy as trust framework, that data sharing will continue and that we must determine ways to govern this process appropriately. As it relates

to education, we must also assume that students, parents, and teachers are not always aware of the data collection and sharing that happens within educational settings. Second, I use Nissenbaum's (2004) norms around contextual integrity to determine conditions under which data collection and sharing is important, the norms of appropriateness and flow. Finally, to implement this at scale, we must embrace transparency around data collection and distribution practices and back these up with strong legal enforcement to ensure that companies are held accountable for their actions. Recommendations are only as strong as their enforcements, and when individuals are placed at odds with large organizations with access to considerable legal counsel, there must be proper oversight of practices. While I am looking at privacy from the context of student data privacy, much of this work is generalizable to consumer data privacy, where the basis for this work has emerged over the last number of years.

Taking a legal perspective on broad issues of consumer data privacy, Waldman (2018) outlines a model for privacy as one rooted in trust, where the onus of responsibility for privacy is shifted from an individual to a larger organization. Our current model of privacy, especially online, is one that operates under a notice and consent model. Individuals are provided with information about how a website uses their data, and by continuing to use a website, the user is implicitly consenting to the data collection practices of that website. The notice provided to users incorporates dense legal terminology and often provides the right for the company to change their current data practices at any time. If a user continues to use a website, regardless of whether they explicitly received notice that the terms and conditions shifted, they are still consenting to whatever terms are inherently provided.

Shifting from a notice and consent model to a privacy as trust model can help us protect vulnerable individuals (in this case, everyone) by shifting the responsibility from individuals to

organizations. We have existing frameworks and laws for how sharing of data takes place between individuals and doctors or individuals and banks, frameworks under which data collection is expected to happen and expected to be protected. One such idea is explored further by Jack Balkin and Jonathan Zittrain: the idea of an information fiduciary, or, an individual or organization that is legally bound to act on our behalf as a person or organization that "deals not in money but in information" (Balkin and Zittrain, 2016). Zittrain and Balkin propose a role shift for organizations from broker to fiduciary: in our current state, organizations are perceived to act on behalf of students, but simply commoditize student information for the benefit of the larger organization. If we make the assumption that data will be shared in online spaces as I do in the framework developed above, then we build a framework around making that data sharing safer for individuals who have consented to participate in those practices, one in which organizations enabling data sharing are legally responsible to act in the best interest of individuals' whose data they collect and use.

The parallel for students participating in standardized testing provided by organizations such as the College Board and the ACT is that in most cases, taking these exams is a required part of the college application process. Very few schools do not require either SAT or ACT scores.[7] Students are required to engage with an organization's notice and consent model by default; they cannot make an educated decision about whether or not to engage with the organization because they are required to in order to gain access to most opportunities within higher education. Incorporating aspects of a privacy as trust model would allow for the College

[7] Many schools have gotten rid of their requirement for SAT or ACT testing for college due to the COVID-19 pandemic through the 2021 application cycle (for 2022 admission). It is too soon to see the impacts of this at scale, but this may indicate a shift away from the reliance on test scores for admission.

Board to prove themselves as trustworthy stewards of students' data and would provide stronger legal mechanisms for proper enforcement of privacy laws and policies.

Taking a slightly different angle to data privacy, Nissenbaum (2004) highlights the importance of considering context around privacy. Nissenbaum bases her "contextual integrity" around two norms: the norm of appropriateness, or the understanding of what information is acceptable to be shared in a given situation, and the norm of flow or distribution, or the decision around whether information is appropriate to be transferred from one person or group to another. For example, while it might be appropriate for a clothing store to gather information on purchaser habits in order to understand their clientele and determine which items to restock quickly, it would be less appropriate for that retail store to share that information with their cleaning service (the norm of flow) or request information about individuals' favorite lunch places in town (the norm of appropriateness).

By considering the context of information collection and sharing as well as the potential for harm through collection and sharing practices, it becomes easier to understand what policies, laws, or practices are appropriate or inappropriate for a given situation. For example, within education, it is appropriate for a school to share a fourth grader's student records and report cards with that student's fifth grade teacher without explicit parental consent; it would not be appropriate (or legal) for the school to share those records with that student's little league soccer coach or music teacher external to the school.

Academic discourse is often situated within consumer data privacy more broadly or within student data privacy, but discussion is not always centered on actionable enforcement measures for protecting individuals. Laws such as the California Consumer Privacy Act (CCPA) in the United States and the General Data Protection Regulation (GDPR) in Europe demonstrate

an actionable commitment to both protecting consumers' rights and helping consumers become aware of data practices involving their data, but similar protections do not exist for students.

Throughout this thesis, I draw on Zuboff's model of surveillance capitalism in order to understand how student data are collected, analyzed, and used without the explicit knowledge of students. I draw upon Waldman's privacy as trust model for best practices surrounding data collection, and Nissenbaum's privacy as contextual integrity in order to understand the intricacies around building fair principles for data collection and sharing specific to educational contexts. I rely upon these three works to guide my understanding of where we are (surveillance capitalism) and how we can improve (privacy as trust and contextual integrity). These data practices are ingrained within business models for companies and nonprofits alike, and gaining a realistic understanding of where these practices currently stand allows us to determine how we can intentionally undermine them in order to protect K-12 students. Simply put, data collection surrounding K-12 students in the college application process is a blatant form of surveillance capitalism, and we must work against that to prevent unethical and dangerous uses of students' data. Gaining an understanding of the legal landscape encompassing student data privacy can help us understand where our theoretical model of privacy intersects with law and policy, leading us to stronger enforcement of existing legal mechanisms and enactment of new protections.

The Federal Legal Landscape Surrounding Student Data Privacy

The United States has a set of three federal laws that govern various components of student data. In 1974, the Family Educational Rights and Privacy Act (FERPA) was enacted as part of the General Education Provisions Act (GEPA) in order to prevent the disclosure of protected student data to unintended parties (Feder, 2008; U.S. Department of Education, 2005).

FERPA provides parents of K-12 students access to their children's educational records. Parents are the primary stakeholders in this process until their children reach the age of 18 or begin studies at a postsecondary institution (Feder, 2008). FERPA's reach is rather wide across U.S. institutions; all institutions (preschool, K-12, postsecondary) that receive federal education funds must comply with its regulations (Daggett, 2008).[8]

There are a number of exceptions to data protected under FERPA. For example, while student educational records are protected under FERPA, information considered "directory information" is not protected. Directory information includes "the student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student" (20 U.S.C. § 1232g(a)(5)). Parents may request that an institution ask them for permission prior to sharing directory information, but unless a parent specifically requests this, institutions may assume consent from parents to share such information (Feder, 2008). Along with directory information, there are a number of other exceptions outlined in FERPA for sharing certain components of student data;[9] while FERPA is expansive in the student data that it covers, it is also relatively expansive in the exceptions under which data can be shared.

[8] This includes private schools receiving federal education funds.

[9] Other exceptions include: information shared by a school official to an external educational provider such as an online educational service when those data are used for previously discussed and maintained purposes, an exception for drug and alcohol violations allowing an institution to alert parents to such violations when specifically in the context of a student violating school policies (such as drinking on school grounds at age 17, and an exception allowing disclosure of certain student information when it is relevant to an active investigation of terrorism (Privacy Technical Assistance Center, 2014; Feder, 2018).

While FERPA has a number of clauses relating to protecting student data, it is a law that is challenging to enforce. As FERPA is connected to U.S. institutions through federal education funding, this is also how FERPA is primarily enforced. When a parent or student believes that a FERPA violation has occurred, a request for review is sent to the Family Policy Compliance Office (FPCO), the organization that most directly oversees suspected FERPA violations. The FPCO is responsible for determining whether an organization has violated FERPA; if the review board determines that a violation has occurred, then the institution is notified by the FPCO (Feder, 2008). The federal government may withhold all federal education funding to an institution in the event that a FERPA violation has occurred; however, since FERPA's enactment in 1974, this penalty has never been imposed (Peterson, 2016). Even more generally, between 1974 and 2002, the U.S. Supreme Court did not decide any FERPA cases (Daggett, 2008). Because of its limited enforcement, FERPA is often criticized for its lack of incentives for educational organizations to shift internal behavior around student privacy. Because of this, student privacy advocates have pushed for additional legislation to more deliberately bring FERPA and other educational laws into the 21st century.

One federal law that protects the privacy rights of students to a greater degree than FERPA is the Individuals with Disabilities Education Act (IDEA) enacted in 1975 as the Education for All Handicapped Children Act and reauthorized as the IDEA in 1990. Generally speaking, the IDEA is aimed at providing public education for students with disabilities and ensuring that students have their educational needs met through special education (United States Department of Education, n.d.). The IDEA works in tandem with FERPA; the IDEA expands on many of the protections covered under FERPA for ensuring students' privacy. Because records of students with disabilities may contain additional sensitive and private information, such as

therapy or evaluation reports, these records are safeguarded to a greater degree (Daggett, 2008). For example, parents of students with disabilities are informed of the types of data collected by educational agencies and must be told when the maintenance of this information is no longer necessary (National Forum on Education Statistics, 2010). Additionally, the state agency must notify individuals of the ways in which a local agency is collecting data. This disclosure must include information on how data are collected, stored, and destroyed, and it allows for parents to request that, when information is no longer needed, it be destroyed (Stahl & Karger, 2016).

An additional federal law governing the student data privacy landscape is the 1978 amendment to the GEPA, the Protection of Pupil Rights Amendment (PPRA). This statute governs surveys or other types of evaluative forms provided to students. The PPRA oversees that schools permitting such surveys to be administered to students may not market or sell student data collected in these efforts (Peterson, 2016). All surveys or other activities fall into three categories, those that are required by the school, those that are optional to students, and those that ask for information within one of eight areas protected by the PPRA. These eight areas are as follows:

> "(1) political affiliations or beliefs of the student or the student's parent;
>
> (2) mental or psychological problems of the student or the student's family;
>
> (3) sex behavior or attitudes;
>
> (4) illegal, anti-social, self-incriminating, or demeaning behavior;
>
> (5) critical appraisals of other individuals with whom respondents have close family relationships;
>
> (6) legally recognized privileged or analogous relationships, such as those of lawyers, physicians, and ministers;
>
> (7) religious practices, affiliations, or beliefs of the student or student's parent; or
>
> (8) income (other than that required by law to determine eligibility for participation in a program or for receiving financial assistance under such program)" (20 U.S.C. § 1232h(b)).

For surveys that are required by a school or other local educational agency (LEA) and request information from one or more areas listed as protected categories, schools must obtain explicit, written consent from parents prior to administering such a survey (United States Department of Education, 2016). All surveys that are optional to students, regardless of whether their content falls into the eight protected categories or not, do not require explicit consent from parents, but rather passive consent (United States Department of Education, 2016). Passive consent can take the form of a mailed or email document explaining to parents what is being asked of their children, but does not require explicit verbal or written consent from parents for their children to participate. Surveys that are either optional to students or required for students but do not ask information of students in these eight areas have no explicit requirement for consent and would fall into the passive consent category (United States Department of Education, 2016).

The PPRA also puts forth a certain set of requirements for each LEA to create clear policies to help parents understand surveys administered to their children; these policies limit the possibility for organizations or companies to use information collected from students for marketing purposes (United States Department of Education, 2016). For example, students' names, addresses, parents' names, phone numbers, and social security numbers may not be collected for marketing purposes (Daggett, 2008). On first glance, this provision seems to limit a wide range of potentially detrimental effects; this would limit organizations from collecting student data in a school setting to use to their own benefit. However, there are a variety of exceptions to this rule.

Personal information may be collected from students not only in settings under which organizations are collecting information in order to improve upon educational services, but also in settings that include recruitment for the military, college, or other postsecondary opportunities, assessments used to gather information about students (such as aptitude, achievement, or cognitive tests), and student recognition programs (United States Department of Education, 2016). This implies that as long as students are purported to benefit from a service, such as college recruitment services, explicit parental consent is not required for students to participate, even if the information collected falls under the eight protected categories.

In order to demonstrate the challenges in understanding the legal landscape for students and student data, one legal comparison point may help to provide some clarity on how the legal context for student data is, admittedly, messy and complicated. In 1998, the Children's Online Privacy Protection Act (COPPA) was enacted in order to protect children's privacy online. Through COPPA, parents are responsible for their children's online presence until the children reach the age of 13 (National Forum on Education Statistics, 2004). COPPA requires websites to receive explicit parental consent for children under the age of 13 to use their services. COPPA originated around the dot-com bubble of the new millennium and was aimed to prevent companies from using personally identifiable information of kids for marketing purposes (Stahl and Karger, 2016). COPPA requires explicit parental consent for users under the age of 13 in order for a company to collect user data.

One question we might ask is, how does COPPA apply in a school setting? In schools today, children are exposed to a wide variety of online tools used in the classroom, and teachers and administrators use additional tools on top of those explicitly introduced to students, such as learning management systems that store a large amount of student data. If any of these online

tools were to be used by K-12 students outside the classroom for enrichment at home, fully independently of school, children about the age of 13 do not need to receive explicit parental consent to fully participate. However, because of the use of technology in schools, COPPA provides an exception that allows districts to provide consent on behalf of students and their parents (Winnick et. al., 2011). This is often, but not always, done through a contracting process between a school or district and an educational technology provider in which a school or district can negotiate certain provisions about student data privacy into an agreed upon contract. When a tool is used within a school setting, the data collected by a company can only be used for purposes related to the school.

When students use a digital learning tool within school, COPPA provides schools with the right to request information collected about students and to remove student data as needed (Stahl and Karger, 2016). Outside of school, where parents accept the privacy policies of websites on behalf of their children under the age of 13, this is no longer the case (Peterson, 2016). Students may use the same tools in and out of school, but that contrast in use defines the difference in legal protection provided to students in a given situation. What does it mean for edtech providers to have the ability to shift the ways they collect data on the same potential users depending on whether those users are students in school versus out of school? What are the impacts on students, parents, teachers, and administrators? In many cases, these stakeholders are not aware of how companies may shift their actions in school vs. out of school. This parallel speaks to the lack of transparency around company business practices that has the potential to impact individuals differently in school vs. out of school, just like the College Board's Student Search Service.

Due to the decentralized nature of the American education system, many laws protecting student data emerge on a state-by-state basis and vary greatly in terms of severity of penalties, enforcement mechanisms, and guidelines for all levels of educational stakeholders. Variations in these laws impact the types of communication standardized testing companies have with students, parents, and districts between states; in states with stricter student privacy laws, companies are often subject to a greater number of requirements for how they must share information about their services and what they do with data collected from students. These disparate variations make it difficult for privacy activists[10] to advocate on behalf of students taking exams such as the SAT and PSAT, as the vastly different environments between states make oversight of companies difficult. This allows companies to continue their data collection at scale, contributing to normalization of surveillance capitalism within education.

Connecting Policy and Theory: The Need for Deep Implementation and Engagement Around Student Data Privacy

The independent understandings of privacy theory and the legal landscape surrounding student data privacy need to be tied together in order to demonstrate how educational data collection by standardized testing organizations such as the College Board feeds into an instance of surveillance capitalism targeted towards K-12 students. Theoretical frameworks for understanding consumer data privacy through the lenses of surveillance capitalism, privacy as trust, and privacy as contextual integrity help us to see the areas where we as consumers and children as students are deceived about data collection and the conditions under which data collection is or is not appropriate. Understanding the current federal landscape around student

[10] See Chapter 3 for a brief discussion on the Parent Coalition for Student Privacy, one organization dedicated to fighting for student data privacy within schools.

privacy allows us to see the gaping holes in protections for students, especially around organizations that purportedly serve students' best interests within education.

Students consenting to the Student Search Service are led into a relationship of so-called trust with the College Board based on the communication they've received about the perceived benefits of the Student Search Service, but are misdirected into providing personal information that feeds into the College Board's university-facing services. Zuboff's surveillance capitalism lends us terminology to describe this: here, we consider both the text, i.e., what is explicitly communicated to students about the Student Search Service, and the *shadow text*, the invisible understanding of what's really happening under the surface (Zuboff, 2019). Organizations like the College Board deceive students into sharing data for a certain purpose and then use that information in other ways, and this violates the relationship of trust that I have outlined is crucial to build between a data supplier and data collector/distributor.

A combined framework of privacy allows for transparency about what is being collected in order to allow for relationships of trust to be built, limitations on what data can be collected based on what is appropriate to be collected and what is appropriate to be distributed within context, and strong enforcement of legal mechanisms. Analyzing company and organization actions using this framework for privacy enables us to determine how and when organizations violate principles of data use and distribution and how companies and organizations can change their actions moving forward. At the beginning of this chapter, I outlined a privacy framework that includes the components of privacy as contextual integrity and privacy as trust that I see as crucial to improving upon the current data pathways that exist within education, standardized testing, and college admissions processes. However, I want to highlight the importance of legal enforcement throughout this process. Both large organizations and individuals have advocated

for stronger federal privacy laws; improved federal protections both help to protect individual consumers and also help both small and large companies comply with an equivalent set of laws across the country rather than the fractured landscape of state guidance.

Ultimately, our current privacy landscape has poor enforcement and does not account for the fact that, in many cases of data collection on students, students do not have control of their data or an understanding of how their data are used (see Chapter 4 for more information on predatory marketing through the collection of educational data). Organizations such as the College Board and ACT are ingrained within the educational system because they act as gatekeepers for higher education. Currently, 29 states partner with either the College Board, the ACT, or both organizations for some of their mandated standardized testing, so while the organizations are not explicitly part of public education across the country, in many states, students do interact with them as part of their public education. These organizations therefore operate in a liminal space between public and private, provided with some relaxed oversight from states because of their educational nature, but still impact vast numbers of students in the United States navigating the college application process. These organizations act as data brokers as well, enabling the sharing and use of student information for analytical purposes. Students are led to trust organizations simply based on their longevity of existence within education more broadly, but often have little to no understanding of their less-ethical actions. Frameworks for privacy must work in tandem with law; theoretical frameworks provide information on how we might conceive of privacy around educational data, and law enables enforcement of those protections. In the next chapter, I will outline the history of standardized testing to understand how the United States has normalized data collection in education and how such data collection

has increased over time without a comparative increase in legal protections for student data privacy.

Chapter 2: The Normalization of Educational Data Collection and the College Admissions Process

The history of college admissions testing has greatly impacted the design and implementation of standardized testing and associated data collection leading to the marketization of education through programs such as the College Board's Student Search Service. America's past mistakes in educational assessment paint a cautionary tale for the potentially harmful effects of today's educational data practices. In this chapter, I will provide historical context for the College Board's programming and explore its connections to the emergence of standardized testing in the United States. We accept the practices of organizations such as the College Board because of a historical need for a central organization to help colleges and students navigate the college application process. I argue that the history of the College Board has led to the creation of a "reseller" market through the Student Search Service, one that serves both students as individual consumers as well as universities and other educational marketing organizations as institutional customers. As an integral stakeholder of the college admissions process, the College Board as a not-for-profit operates almost in a federal capacity, gatekeeping higher education for millions of students. By operating a reseller's market of student information between students and universities, the College Board enables an instance of surveillance capitalism that has the potential to impact millions of students in the United States each year.

Unlike other market models such as a multi-sided market or platform (Hagiu and Wright, 2015) where a central party helps facilitate the sale of a service or product between a seller and a buyer, a reseller market revolves around the collection of a product from one party and the resale of that product to a second party without a business interaction between the original supplier and

the buyer. In the case of the College Board, this reseller market is an unequal market, providing the College Board and institutional customers with greater benefits than individual consumers. This reseller market is unethical; the College Board markets this as highly beneficial to students while we have minimal proof of that causal claim.

In this chapter, I outline the beginnings of standardized testing in the United States and its influence on the College Board's emergence and creation of the SAT. I trace the history of the College Board to the present, demonstrating the ways the organization has shifted its services over time to remain competitive in a broader market. I outline the structure of this reseller market in order to demonstrate the ways in which the College Board acts as a middleman, enabling vast data sharing through their marketing of the Student Search Service towards students.

While standardized testing methodology has shifted over the nearly 180 years since some of its earliest implementations, it is important to consider the initial reasons for large-scale testing as an influence on college admissions testing. Most broadly, testing in U.S. school districts began as early as 1840 and was initially designed for determining what students had learned in the classroom. Horace Mann, seen by many as the founder of modern public education, introduced more standardized exams to replace recitation-style exams across the city of Boston in 1845, during his tenure as the Secretary of the Massachusetts Board of Education (Shepherd, 2017). Mann, along with other school reformists, believed that classifying and measuring students' abilities would allow the city to determine where to make changes to classroom and school structure—a belief held by many who set out to quantify and categorize factors of the human experience (Shepherd, 2017). In comparing students across different schools in the greater Boston area, Mann was able to point to exemplary districts, where students

scored well on these exams, as well as districts that needed help and reform, where students scored poorly.

By the late 1890s, a movement to standardize the college admissions process had begun. To receive admission to institutions of higher education, students often needed to sit a variety of oral and/or written examinations in school subjects such as Greek, English, Latin, and Arithmetic. Each university had its own standards for incoming students, and high schools were responsible for preparing them for these exams (Fuess, 1950). At the 1891 meeting of the National Education Association, many high school principals voiced frustration about preparing students for so many colleges' exams (Fuess, 1950). Thus, the idea for the College Entrance Examination Board (herein, also referred to as the College Board) was born, and a committee of college professors and high school principals began to work towards a proposal for collective fields of instruction used in the college admissions process. The College Board emerged as a not-for-profit designed to aid schools and colleges, serving the public with little federal support. At the time, examination fields were Science, Mathematics, History, and Language (both English and others) (Fuess, 1950). Created on November 17, 1900, the College Board was initially led by Professors Nicholas Murray Butler and Thomas Scott Fiske, both of Columbia University (Fuess, 1950). In these early years, the Board had little success and experienced much pushback. After a small initial investment, it operated at a loss for many years. It needed to shift its focus to survive.

At the same time as the initial emergence of the College Board, a large movement towards the measurement of human intelligence began. A number of researchers adapted work by Alfred Binet, a French physiologist, to develop the IQ test, using the exam to identify individuals below a "normal" range of intelligence (Gould, 1981). Researchers such as Henry H.

Goddard used testing to identify "feeble-minded" individuals to curb the proliferation of non-intelligent Americans and prevent the influx of immigrants (Gould, 1981). The eugenics movement in the United States had just taken off, and eugenicists such as Goddard used methods such as IQ testing with that motivation in mind. Lewis Terman, a researcher at Stanford University, used testing for a similar purpose with a slightly different takeaway: he used differences in children's test scores as a way to justify his belief that race had an impact on an individual's innate intelligence (Chapman, 1988). Many of Terman's conclusions about testing students are underscored by his assessment that non-American ethnicity was an indication of inferiority.

Terman and Goddard's focus on testing and data collection as objective and necessary illustrates the fallacies in large-scale data collection and analysis. What does it tell us when individuals often seen as the fathers of intellectual testing intended to use testing to divide students, to filter certain students towards vocational work, and to confirm hypotheses about innate differences in race? The work of both men was opaque and their data collection targeted. It leaves a legacy that continues to divide students, not only laying the foundation for unfair and inequitable testing and educational experiences, but also setting a path towards normalizing the use of measures in an educational setting to collect information on students and use it in potentially nefarious ways.

While the popularity of intelligence testing grew in academic spheres and in secondary schools around the U.S., as school enrollment began increasing at the turn of the 20th century, schools needed a method of accountability for student learning. Taxes were being contributed to education, and schools needed to measure the efficacy of that investment. Furthermore, as America's public-school system developed, school was seen as a place to ensure that children

held a certain set of beliefs and cultural understandings (*Testing in American Schools: Asking the Right Questions*, 1992). Nearly 80% of school-age children went to school, and schools needed a metric for levels of success. Testing was designed to confirm something the test implementer had hypothesized, that students were failing despite the investment in education (*Testing in American Schools: Asking the Right Questions*, 1992). They sought a metric to substantiate their hypothesis. Rather than rely upon exams that ended up measuring a student's ability to memorize facts within a classroom subject, teachers began to consider the idea of "comprehensive examinations" in order to measure broader student intelligence. This set the stage for wider adoption of the College Board exam. This shift from many exams to one exam was in line with contemporary notions in educational psychology: How could you compare many students and their various high school educations without one exam to look across them all?

Intelligence Testing and the Two World Wars

It wasn't long before testing was used on an even larger scale for classification and selection. As the United States entered World War I in April of 1917, another psychologist gained wide notoriety for his efforts in the war. Robert M. Yerkes, a professor at Harvard University and a fan of strict quantification, was frustrated with the attitude of the time towards psychology as a "soft" science. When the United States entered the war, Yerkes banded together with a number of psychologists, including Lewis Terman and Henry Goddard, to work on mental testing for the U.S. Army. Their goal was to devise examinations that would help sort Army men into various positions. The Army hoped to develop a more rigorous way of selecting certain individuals for officer training and relegating others to lower-level positions (Gould, 1981). Thus, the Army Alpha and Army Beta exams were created, and over the course of World War I,

over 1.7 million army recruits took them (Shepherd, 2017). At the time, the population in the United States was approximately 103 million people; thus, nearly 1.7% of people took one of the Army's exams (Rogers, 1918). This provided Yerkes and his colleagues a dataset ripe for analysis.

Based on analysis of these data in comparison with some of Terman's earlier work on intelligence testing, Yerkes determined that the average intelligence of a man had declined significantly (Gould, 1981). He attributed this decline in part due to the increase in multiracial children and adults caused by immigration (Gould, 1981). He further broke down his analysis by subgroup, determining that western Europeans were smarter than eastern Europeans, and that Black people came in at the bottom of his scale with the lowest intelligence (an average mental age of 10.4 years) (Gould, 1981). Rather than attributing these scores to other factors, such as differing access to school or more generally, to social capital, he used these "facts" to claim that certain races had no innate desire for intellectual stimulation and did not want to attend school (Gould, 1981; Shepherd, 2017). This logical fallacy was consistent with many educational psychologists' work. Rather than considering all possible rational explanations for their analytical takeaways, these researchers explicitly threw out logic in exchange for their own biased conclusions.

At this time, there was some backlash against intelligence testing published more widely. Criticism of testing existed both towards the field of intelligence testing and towards specific examinations, such as the College Board's exams. Most notably, Walter Lippmann penned a series of six rebukes of the intelligence testing movement in the October and November 1922 issues of the *New Republic*. In his first article on the subject, Lippmann warned that the work Binet began with good intentions was "in danger of gross perversion by muddleheaded and

prejudiced men" (Lippmann, 1922a). Lippmann expounded on several topics, critiquing the calculation of a "mental age" through testing, the military's use of testing, the underlying statistics and reliability of tests, the abuse of tests, and issues of heredity in intelligence (Lippmann, 1922a-f). A similar admonishment of the College Board was published in *School and Society* by an anonymous author, who discussed the ways in which the College Board examinations were unreliable and variable in their testing ("More Criticism of the College Board," 1922).

While public criticism of testing did exist, the testing movement continued to focus on the determination of innate intelligence rather than performance on a singular exam. At this time, the College Board understood the shift in what testing should be used to measure. Up until the 1920s, the original College Board examinations were centered primarily on the following five points (according to Thomas Fiske, Secretary of the College Board, in his 1924 annual report):

(1) Power of expression
(2) Intelligent appreciation
(3) Ability to reassemble information
(4) Courage to form and express independent judgments
(5) Concentration, or power to sustain a mental effort.

However, with the use of testing in the military, contributing to testing of approximately 1.7% of the United States population during WWI, the public's general reception of testing allowed the College Board to move towards testing "innate" aspects of intelligence. In the same report, Fiske wrote about what was desired at the time by colleges, though not yet collectively measured by any specific agency or organization. He noted seven points of interest for which individual methods of measurement did exist, points which an organization such as the College Board could theoretically consider in order to meet the demands of colleges:

(1) Ethical behaviour
(2) Physical health
(3) Powers of observation
(4) Mental alertness
(5) Ability to participate successfully in cooperative efforts, or team work
(6) Skill in laboratory work
(7) Facility in conversation in foreign languages.

At this time, the College Board had grown immensely with nearly 20,000 students taking College Board examinations in 1925 (Fuess, 1950). Using the number of students enrolled in higher education institutions in the fall of 1926 as an approximation for the number of students who might've applied to college the prior year, approximately 2% of enrolled students took College Board examinations. This is a significant increase from years prior; in 1916, only 495 students took the exams, which was approximately 0.1% of the total number of students enrolled in higher education in 1917 (120 Years of American Education: A Statistical Portrait, 1993).

As the organization continued to grow, understanding the needs of the greater community (or customers, if you will) was crucial, and aligning the organization's focus with contemporary attitudes was a secure way of doing so. After appointing a committee on testing in 1924 of three men—Robert Yerkes, who had gained notoriety through his testing during the first world war; a colleague of his from the war, Carl C. Brigham; and Henry Moore, a professor at Dartmouth—the Board recommended in 1925 administering a new type of test (Fuess, 1950). The first administration of this test, the Scholastic Aptitude Test (SAT), took place in 1926, and in 1929 it was divided into two sections-one devoted to mathematics and the other to reading and writing (Fuess, 1950). A number of years later, the College Board reorganized its practices again, rescaling the scoring of the SAT in 1935, adding term limits for exam readers, and expanding into new markets (Fuess, 1950). Two years after that, the College Board introduced an exam, called the Junior Scholastic Aptitude Test, as the organization continued to broaden its scope

(Fuess, 1950). Over the College Board's history, the organization continued to make shifts in their offerings to expand their reach within college admissions and testing.

With global unrest emerging during World War II, intelligence testing experts came back to national attention. Standardized testing was once again used to collect data on individuals and to classify them by performance through the Army General Classification Test (AGCT). These scores allowed tracking of individuals into different military careers, but also provided psychologists with a wealth of data. As in World War I, psychologists looked into the relationship between scores and test takers' race, finding a strong correlation. The Army tried to avoid making the claim that the correlative nature of test scores and test takers' race was a reflection of inherent intelligence, preferring to avoid discussion of individuals' differences on reasons of statistical issues in data, such as the inability to compare different population subgroups due to lack of consistency in the contexts surrounding Black and white servicemembers (Shepherd, 2017). The Army deliberately avoided explicitly racist policies around service member assignments, but continued to allow policies that could be substantiated by test scores and the "objectivity" of exams.

The use of the AGCT and other military exams also allowed for a new development around testing: test preparation materials. As KJ Shepherd writes in their 2017 dissertation, "the AGCT exam set a precedent for American social value in standardized testing as a mechanism that could profoundly alter an individual's life course—and as such, ushered in a wave of commercial preparatory material" (Shepherd, 2017). Guidebooks were written around military entrance exams, promising test takers a higher score for a small investment in the purchase of materials. A whole industry emerged around test preparation materials, something that further divided individuals with means from those without and solidified the use of marketing. While

military testing at the time was somewhat independent of the College Board (outside of a few individuals involved in both ventures), it paved a way for the reliance on tests to predict individuals' future career outcomes, not unlike colleges' reliance upon the College Board's services.

Reorganizing the Admissions Testing Industry

After World War II, there was a considerable amount of restructuring of the market around standardized testing. In the 1940s and 1950s, the College Board continued to expand its services and target new opportunities around the higher education market. In 1947, the College Board partnered with the American Council on Education and the Carnegie Foundation for the Advancement of Teaching to create the Educational Testing Service (ETS). In creating ETS, the College Board transferred certain responsibilities to this new, semi-external body (there were still a number of College Board representatives on the ETS board of trustees), but partnered with the new organization to offer testing services. ETS allowed the College Board in the late 1940s to focus specifically on college admissions testing while ETS focused more broadly on test administration and the widening of its reach.

ETS began to charge the College Board for their services administering College Board exams, and the College Board raised prices on their own exams for student consumers to compensate for their change in expenditures (Shepherd, 2017). The organizations began to collaborate in new areas; while tests were still designed to identify something innate about students, the organizations diversified their services again to reach new markets and stay competitive. For example, the two collaborated on a new exam, called the National Study of High School Students and Their Plane, in order to identify gifted students who might not have

previously considered attending higher education (Shepherd, 2017). After determining that tuition was a barrier to considering higher education for many students, the College Board and ETS again diversified to launch programs to provide scholarship funding to deserving students, using standardized testing as a metric to vet students (Shepherd, 2017; *The First 75 Years of the College Board*, 1976).[11]

While interest grew around what standardized testing could provide for schools in the US, it also stimulated more analysis and deeper critiques of the practice. In 1957, the President of Smith College, Benjamin Wright, in his annual report to the college's alumnae, wrote of how the exams could help differentiate between students, but observed that they did not do much to predict success rates in college ("College Boards," 1957). Other critiques coincided with the civil rights movement, especially after the 1954 ruling of Brown v. Board of Education. For example, in 1957, an associate dean of the College of Education at Harvard University, Justin T. Shaplin, spoke of the college application process and the College Board, saying that "tests are now sometimes being used to maintain segregation within presumably integrated schools…. Admission standards in some colleges are being raised to keep the proportion of Negro students low, even though underprivileged whites will be similarly affected" ("College Admission," 1957). Just as the U.S. Army had used testing to sort and categorize workers in World War I, ending up with segregated groups of servicemembers based on their various work assignments, these academic administrators spoke of a wider issue of using testing as an objective metric for student success.

[11] At this time, a number of other organizations and companies introduced new scholarship opportunities tied to standardized test scores, such as the National Merit Scholarship Corporation, the Westinghouse Science Talent Search, and even the Betty Crocker Homemaker of Tomorrow (an award that Elizabeth Warren received in 1966). Critics of these programs spoke to how they reinforced racial inequities in America and used an "overly narrow" metric through testing to identify gifted students (Shepherd, 2017).

At this time, the College Board was the only provider (through ETS) of a college entrance examination. In 1959, the ACT began administering its own exam, focusing on the Midwest rather than the East. The ACT was created around achievement testing, more like traditional educational assessment measuring students' learning rather than measuring students' innate abilities through aptitude testing, a goal of the SAT exam (Lemann, 1999). In response to the ACT's creation, the College Board and ETS began to expand their own reach, trying to access other regions of the country ahead of the ACT. The primary method for gaining market share was to convince universities to partner with them, and while the College Board had a large market hold, the ACT was able to launch aggressive marketing tactics to regain some of the market share (Lemann, 1999). The ACT was not as successful in the early years as the College Board, but would slowly gain footing over time.

In 1965, the Elementary and Secondary Education Act (ESEA) was passed, providing states with an opportunity to acquire federal education funds. This program opened up funding for schools serving students of color and students with financial need, but came with strings attached. At a time when scores (as reflected on the SAT) were decreasing, the government and the public put pressure on schools to demonstrate a rise in student test scores as the most important metric of success (Shepard, 2008). Districts requesting funds needed to provide state authorities with data on student performance (Resnick, 1981). In 1969, the National Assessment of Education Progress (NAEP) was introduced to compare student performance nationwide, as states varied greatly in how they measured student performance. As the College Board and the ACT began to increase their presence in the college admissions process nationwide, the K-12 educational system began to consider testing at scale as well.

The Student Search Service and College Board Search

In 1972, the College Board released a new student-facing program called the Student Search Service. Unlike many College Board programs, the Student Search Service is nearly identical today compared to the original program. The program allows students to opt into the program to "hear directly from colleges and scholarships" (*Connect to Colleges*, 2020). To participate in the program, students are invited to fill out a lengthy questionnaire asking for information such as their name, address, gender, date of birth, high school, graduation year, and email address as well as information such as a student's ethnicity, educational aspirations, financial aid need, high school activities and courses, honors, and sports. The College Board notes that they never share a student's information on "disability status, self-reported parental income, social security number or phone number" given their presumed commitment to student data privacy (*Connect to Colleges*, 2020). The organization also notes that they do not use this information for commercial advertising, mentioning that only "approved colleges, scholarship programs, and non-profit educational organizations can participate" in the program (*Connect to Colleges*, 2020). Further, students have the option to opt out at any time.

While this seems to denote an ethical foundation for the College Board's actions, it is complicated by the College Board's distribution of student data. In order to provide students with personalized recommendations and connect students with universities, the College Board shares student-provided data with approved organizations. The College Board "leases" this information through a service called the College Board Search, described in 2019 as "an integrated enrollment solution comprising three services designed to help institutions find students, focus recruitment strategies and improve marketing ROI" (*Meet College Board Search*, 2019). According to the College Board Search "Usage Policies," the College Board requires ethical

usage of the data for non-commercial and more specifically, purely educational purposes (in a recruitment and marketing manner) and provides a list of requirements on data use that eligible institutions must comply with in order to continue to access the data (*Usage Policies*, 2019). While the three services vary in price and depth of information, at the most basic level, universities and other educational organizations typically pay a flat fee to participate in the program and then a fee per student name that they purchase or "lease." By 2019, each student name cost 47 cents (Belkin, 2019).

By collecting student information and distributing it to universities and other organizations, the College Board acts as the overseer of a reseller's market, in which the students supply data to the College Board that the organization then distributes at a cost to universities and other organizations. The organization therefore plays to both sides as customers, students receiving personalized college recommendations and college marketing on one end, and universities and other organizations receiving large quantities of student information at the other end. While the College Board has more recently considered this a program of "leasing" student information to universities, the vast majority of journalism reporting on the program has always considered it a program that sells student names. Unlike other College Board services, this process has changed very little in format or terminology since the program's inception in 1972. In the 1975-1976 academic year, a school could join the search program for $100 plus a fee of 10 cents per name; 900 schools purchased approximately 16 million names ("Colleges Turn to the 'Hard Sell,'" 1977). By 1981, that number had increased to 25 million names (McCormack, 1981). In 1983, the program cost 14 cents per student name and nearly 1,000 universities participated in the program (Williams, 1983). By then, the program had already been used by universities hoping to bolster their recruiting of underrepresented students (Denison, 1983). Even

MIT joined in, beginning to recruit students as early as 9th grade and aiming much of their recruitment materials towards girls (Bass, 1997).

With the introduction of email, the College Board once again expanded their marketing services for universities. By 2000, approximately 1,300 colleges were using the College Board Search (Grose, 2000). Marketing quickly took off, but not without criticism. In 2002, Jay Mathews, a Washington Post reporter, began writing about the types of marketing emails students received (including phrases such as "We congratulate you on your impressive academic record and encourage you to consider Yale" or "I believe that MIT may be the place for you—where you can fully explore all of your potential and develop your talents") and the subsequent disappointment they felt when ultimately waitlisted or rejected at these universities (Mathews, 2002). When these types of outreach went out to large numbers of students, universities could be perceived as inclusive in their recruiting, but drop their admissions rate, demonstrating a higher level of exclusivity to the public, and using email allowed schools to inexpensively reach large quantities of students.[12]

A few years later after the Student Search Service and associated College Board Search began operating digitally, the College Board began to allow universities to filter student names by factors such as family income and zip code to help schools recruit for greater diversity. Prior to 2008, this hadn't been allowed, as universities would intentionally target areas based on zip code and family income where they expected students to be able to pay full tuition costs (Jagoda, 2008). Given the number of for-profit universities that were already known to target student recruitment using zip code, it is still unclear what led the College Board to change their zip code

[12] The College Board gained access to an even larger number of students when the organization introduced the SAT School Day in 2009, boosting the number of students who took the SAT and simultaneously increasing the number of students who had the option to participate in the Student Search Service by signing up on a testing day (College Board SAT School Day Program, 2016).

policy, as the College Board does allow accredited universities, both non-profit and for-profit, to use the College Board Search.

Just like standardized test scores can be used to identify students who need more support or to target certain populations of students in detrimental ways, the College Board's Student Search Service can similarly be used for conflicting purposes. The Student Search Service can help universities connect with students who might not otherwise consider applying, as one college admissions officer told me, but can also be used to target students that might not gain admission, helping a university maintain prestige through a low admissions rate, or target students who might be eligible for federal loans, providing a for-profit university with significant revenue. These negative externalities of the program are not what students are told to expect when signing up for the Student Search Service and speak to the challenges surrounding large-scale data collection on students. The program initially emerged at a time where other organizations such as ETS were investigated by consumer rights advocates for their involvement in the standardized testing and test preparation industry. This co-occurrence in time is not a surprise, as the larger marketing movement in university admissions began around the same time with the creation of the U.S. News & World Report college rankings list in 1983 (O'Neil, 2016). The market share that the College Board had captured by the 1980s helped solidify the College Board as an integral part of the college admissions process, serving both universities and individual students.

Investigating Standardized Testing and Educational Reform

In 1980, consumer rights advocate Ralph Nader and a colleague of his, Allan Nairn, embarked on an extended research agenda looking into standardized testing, specifically with

regards to ETS and the SAT. Nader and Nairn's work centered around the idea that ETS did not operate as a traditional nonprofit, but rather on a business model responding to consumers' desires and needs (Shepherd, 2017). Therefore, students sitting for exams administered by ETS and their parents, were consumers. As Shepherd writes in their 2017 dissertation, "students, as consumers of tests, were caught in a 'contract of adhesion' without any clear understanding of their contractual rights" (Shepherd, 2017). This observation illustrates the challenges around standardized testing. Once testing was seen as a necessary component of the college process, students and parents were trapped, required to play into the system to move ahead. Nairn and Nader referred to standardized testing as an "involuntary consumption"; to fully benefit from the system of college admissions, students had no choice but to participate in the market madness around testing (Shepherd, 2017). As testing encroached on the earlier years of K-12 education, this overreach would further expand.

By the mid to late 1980s, only a few powerful organizations dictated the college application process after many years of monopolizing and standardizing the process. From the early years, when the College Board provided universities with one examination for students to take, the Board thrust itself into the center of the process, gaining a near monopoly in the process (only to be fought back against by the ACT). It set itself up as the primary driver of standardized testing through its partnership with ETS, making it hard for competitors to compete. For the college application process, this had enormous implications for financial aid and scholarships. In the 1980s, the government had only just begun its inquiry into the practices of these organizations, with a view to contributing to the public's awareness of their practices.

The 1983 publication of "A Nation At Risk: the Imperative for Educational Reform" under the Reagan administration reinforced the practice of standardized testing in the United

States. The report covered more than test scores, but focused on quantifying ways in which American public education had faltered over the previous twenty or so years. In looking at SAT scores, both on the verbal and math sections, the report concluded that average scores in both sections had dropped dramatically from 1963 to 1980 (National Commission on Excellence in Education, 1983). Policymakers and elected officials took this as a mandate towards greater accountability. However, in their analysis the report's authors overlooked an important factor that led to the publication of a second major report less than ten years later. The Sandia National Laboratories looked further into the analysis in "A Nation at Risk" and determined that, while on average, SAT scores did decline over the 17-year period studied, studying the data on a more granular level told a different story.

By looking at subpopulations taking the SAT, Carson, Huelskamp, and Woodall (1992), three senior researchers at the Sandia National Laboratories, determined that each racial subgroup's scores had increased by the 1980s. When the authors of "A Nation at Risk" reported the overall average scores and changes over time, they forgot to take into account the possibility of Simpson's paradox, a statistical phenomenon that appears when individual subgroup trends may be the opposite of an overall trend, such as racial subgroups' scores versus an average score across all test takers. Figure 3 shows an illustration of Simpson's paradox.

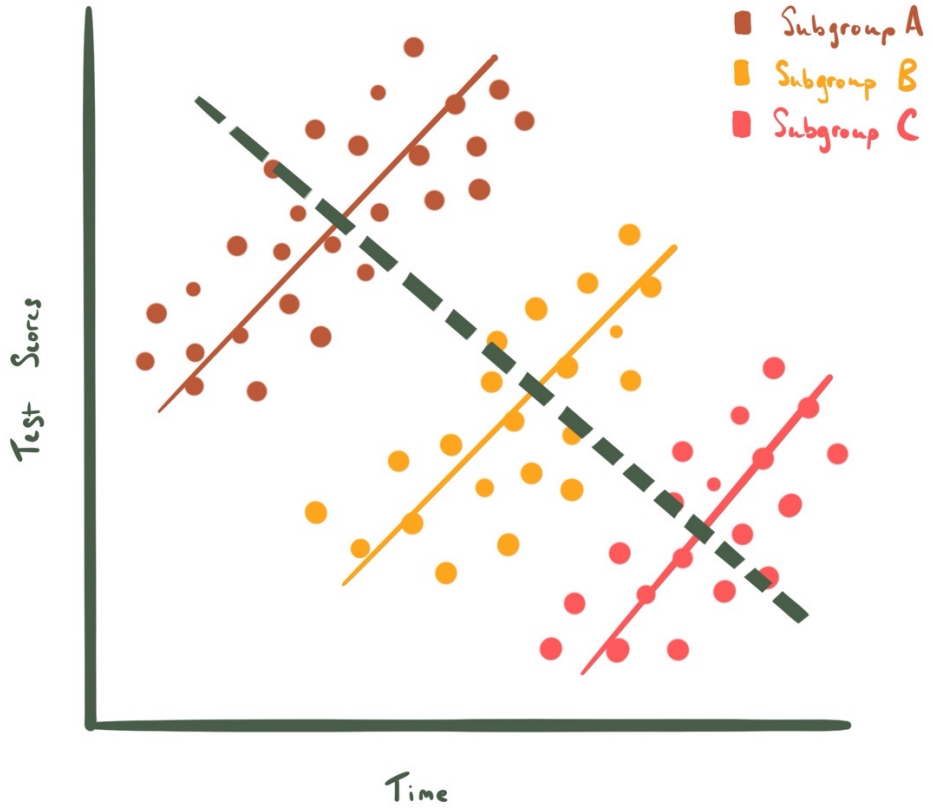


Figure 3: A schematic demonstrating Simpson's paradox. In this situation, subgroups A, B, and C all have increasing test scores over time, but the overall trend of test scores slopes downwards over time.

Simpson's paradox is possible because of the differing proportions of test takers across groups. As illustrated in Figure 3, when proportions of test takers shifted over time, subgroups' individual scores increased, but the overall average score decreased. While this report cleared up some of the confusion around test scores that "A Nation at Risk" had introduced in 1983, it was not enough to convince the public that further accountability and reform were not needed. Reflecting on the report nearly 30 years later, it is clear that analytic errors in analysis led to a dramatic misunderstanding of the data, contributing enormously to the inadequate educational accountability systems we have today.

Testing at Scale: Mandated Standardized Testing

The largest push towards quantifying individual students on a massive scale in the United States came at the turn of the millennium. In 2001, Congress passed the No Child Left Behind (NCLB) Act signed into law by President George W. Bush in 2002. NCLB was a reauthorization of the ESEA mandating state-administered standardized testing programs around the country. At the national level, NCLB took shape as possible sanctions if states could not meet "Adequate Yearly Progress" (AYP) standards (Shepard, 2008). NCLB demanded more frequent testing of students and had a goal of 100% proficiency in state-by-state testing programs by 2014. As states approached the 2014 deadline, the percentage of schools at which AYP was not met continued to increase. Because of NCLB, states put undue pressure on teachers to teach to the test; students were drilled to succeed on these exams as, for many schools, federal funding was jeopardized.

Today's public-school students have never known school as a place without mandated standardized testing. Today's oldest high schoolers were born after the introduction of NCLB. Some of today's youngest elementary students were born after the 2015 reauthorization of the ESEA, the Every Student Succeeds Act (ESSA), signed into law by President Barack Obama. While these interventions were introduced to improve schooling, in many cases, they have had the opposite impact. School environments have become structured around springtime state testing; even during the COVID-19 pandemic, parents and teachers have been concerned about whether standardized testing should be a priority that defines the material taught throughout the year. NCLB and ESSA have reinforced the national focus on standardized testing as a necessity, almost always regardless of societal circumstances.

While testing companies continue to battle challenges around equity, the preparation students have received prior to an exam's administration, and the ways in which tests themselves

are still flawed, they also have created new ways to continue to profit off of students, parents, and schools as consumers. The test preparation market has soared since its kickoff in the early 1970s. Companies like Kaplan and the Princeton Review have made billions of dollars in profit from test preparation materials, courses, and tutors. Kaplan has gone further, even purchasing for-profit, accredited online universities such as Concord Law School and creating Kaplan University (a for-profit degree-granting program) to provide the company with enormous loans through federal financial aid programs (Shepherd, 2017). The College Board now publishes an annual Official SAT Study Guide that includes practice tests published by Kaplan. In 2016, the College Board made its most recent redesign of the exam and partnered with Khan Academy to provide free preparation materials so that students who couldn't necessarily purchase booklet materials and practice tests could practice for the exam (Shepherd, 2017). By introducing all kinds of preparation materials, the College Board and other companies have collectively created what Shepherd refers to as an "educational marketplace" in which companies pose as ethical providers of access and assistance but create an environment where consumer information can be purchased and marketed under the guise of increased educational opportunity.

What does it mean for companies and organizations providing access and opportunity to students, acting as gatekeepers towards higher education institutions and the promise of upward social mobility, to operate in an educational marketplace competing for individual and state consumer dollars? By accepting these organizations as an integral part of the college admissions process, we deprioritize the transparency of their business practices and we allow data collection contributing to an instance of surveillance capitalism to flourish. While we have become more aware of consumer data privacy issues and challenges across the United States in the last five to ten years, this awareness has not extended as directly to practices surrounding educational

companies and organizations with a large stake in students' futures. The long-term normalization of testing, beginning with intelligence testing and college admissions testing and continuing with state standardized testing, has allowed these educational organizations to operate at the margins of their stated objectives, finding ways to turn student information into profits. The precedent surrounding these policies and practices allows companies to operate in unethical and opaque ways, disincentivizing the transparency that many individuals are actively working to achieve in the greater realm of consumer data privacy.

Chapter 3: The College Board, the Student Search Service, and Surveillance Capitalism

In 2017, Valerie Strauss, an education writer at the Washington Post, highlighted the writing of Cheri Kiesecker, a Colorado parent and member of the Parent Coalition for Student Privacy, in an article on the College Board's Student Search Service, a service described by the College Board as a "free, voluntary program that connects students with information about educational and financial aid opportunities from nearly 1,900 eligible colleges and universities, and scholarship and other educational programs" (*Student Search Service*, 2020). Kiesecker wrote of her experience speaking with not only students and parents but also school administrators about the Student Search Service and learning that these individuals were not aware that participation in the Student Search Service was optional. She described a crucial distinction the College Board makes to continue to administer the program, noting that while the College Board claims they will not sell student data, they do distribute names and contact information of students for a cost under a "licensing" fee (Strauss, 2017).

In this chapter, I argue that the College Board's Student Search Service feeds directly into surveillance capitalism: students sign up for the service thinking it will provide one specific and beneficial thing, but unknowingly become a part of a completely different process involving the distribution of their data to universities and other educational marketing organizations. In doing so, students may lose some of their decision-making autonomy around higher education and their data may be fed into broader predictive systems that benefit universities, but have little positive impact on students.[13] Thus, the College Board violates aspects of the privacy framework

[13] For more on predictive systems within education and how student data are used in the college admissions process, see Chapter 4.

I outlined in Chapter 1 using Waldman's framework of privacy as trust and Nissenbaum's framework of privacy as contextual integrity, making it challenging for students to enter into a relationship of trust with the College Board as they embark on their college application process.

In this chapter, I use three case studies to demonstrate how the College Board misleads students into participating in the Student Search Service and enables surveillance capitalism. First, I will outline an example of an information asymmetry created by the College Board in the organization's description of the Student Search Service that makes it challenging for students and their guardians to enter into a relationship of trust with the College Board. Second, I will outline the financial implications of the Student Search Service and College Board Search, explaining how the overall service benefits the College Board and university customers while having little positive impact on students. Finally, I will delve into the College Board's opt-out policy for the Student Search Service to show how the College Board enables surveillance capitalism through the distribution of student data. Ultimately, I argue that surveillance capitalism through the College Board's administration of the Student Search Service and College Board Search has the ability to decrease students' autonomy in the college application process and disproportionately harm students of color and students impacted by poverty.

Informed and uninformed decision-making: Information asymmetries around participation in the Student Search Service

As discussed in Chapter 2, the College Board's Student Search Service has been operating since 1972. Through the program, students participating in the program hear directly from interested universities, receiving emails and/or physical mail inviting them to apply or to reach out directly to learn more information. Students have the option of participating in the program online as well, receiving personalized college recommendations. On the surface, the

program seems to be a win-win for students. Students share information about their intents around college, and in return, hear from universities they are excited about, learn about universities they may not have previously considered, and find out about scholarships and financial aid opportunities.

In most settings, a student may consent to participating in the Student Search Service on their own; in certain situations a state's Department of Education may require parental consent for a student to participate in the Student Search Service (for example, when the Student Search Service is administered alongside the SAT in school as part of an SAT School Day test administration). Students and parents receive different information about the Student Search Service and the College Board's data collection efforts in different settings. The student-aimed and parent-aimed guidance differs based on whether students sign up online versus in a test setting.

When students decide to sign up for the Student Search Service online, they are met with the following messaging on what types of personal data can be provided to the College Board in exchange for outreach from colleges, as seen in Figure 4.

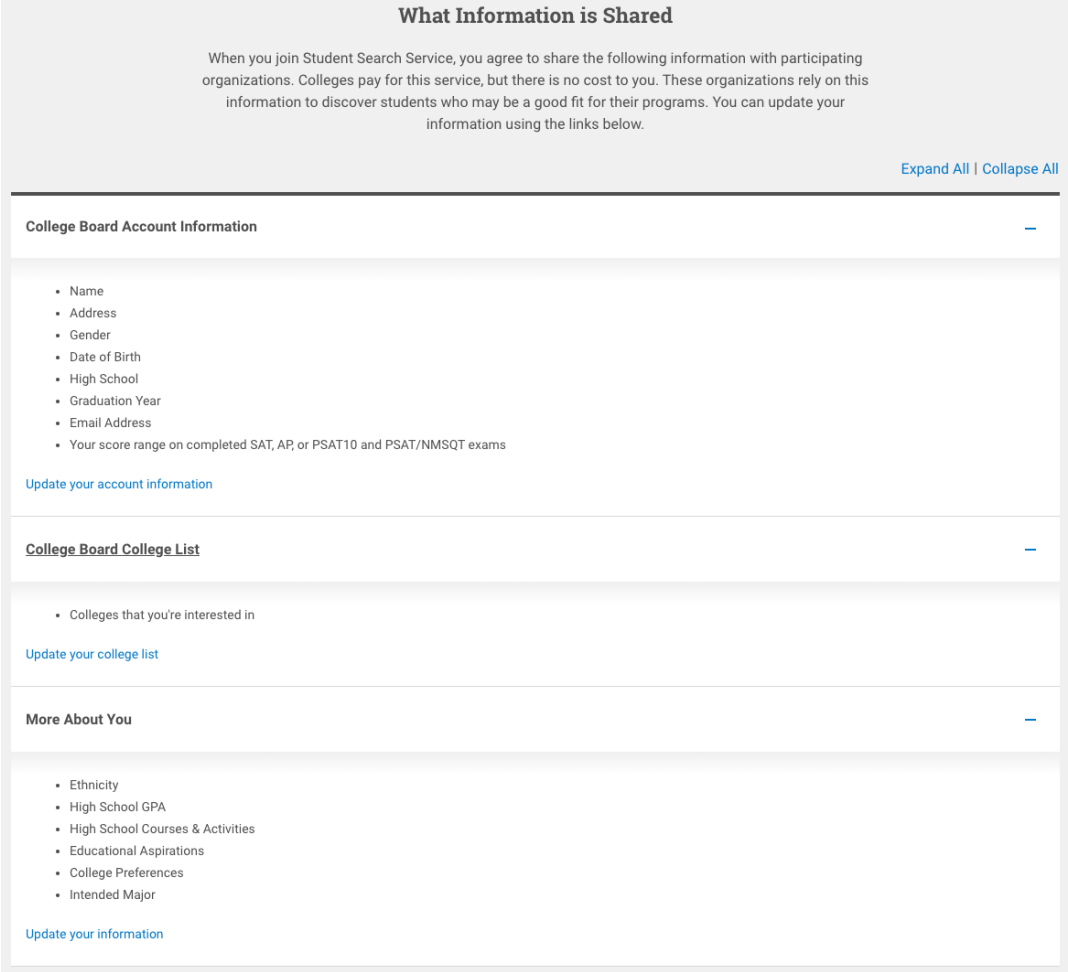
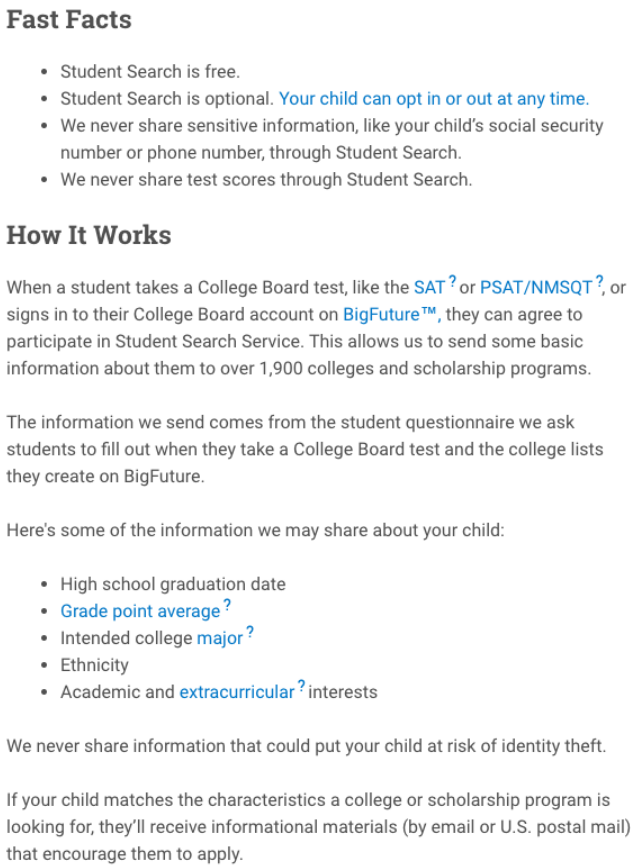


Figure 4: Screenshot of the College Board's Student Search Service website identifying what student information is shared with participating organizations. Screenshot taken February 17, 2021 (*Connect to Colleges,* 2021).

The webpage indicates that students will have the option to provide both personal details about themselves and their aspirations for college, but also their College Board account information, such as their address, date of birth, and email address. In contrast, the informational page for parents and guardians around the Student Search Service is not as forthcoming about what is provided to universities. Figure 5 shows the information provided to parents about the Student Search Service. Most notably, the page shown to parents omits two key pieces of information. First – parents are not told that colleges and universities will receive their children's personal information, including their name, date of birth, address, gender, high school,

graduation year, email address, and approximate score range on College Board exams. Second – while students are told that organizations pay for the Student Search Service, parents are provided with no such information. If a student were to go to the student page, they could at least know that information is provided to organizations for a charge without knowing that universities actively pay a fee for every student whose information they purchase. In contrast, parents are not told that universities are paying for their children's information unless they navigate to a separate webpage, where they're told that universities pay a license fee to participate. This license fee does not mention the per-name cost basis of the service.



Fast Facts

- Student Search is free.
- Student Search is optional. Your child can opt in or out at any time.
- We never share sensitive information, like your child's social security number or phone number, through Student Search.
- We never share test scores through Student Search.

How It Works

When a student takes a College Board test, like the SAT or PSAT/NMSQT, or signs in to their College Board account on BigFuture™, they can agree to participate in Student Search Service. This allows us to send some basic information about them to over 1,900 colleges and scholarship programs.

The information we send comes from the student questionnaire we ask students to fill out when they take a College Board test and the college lists they create on BigFuture.

Here's some of the information we may share about your child:

- High school graduation date
- Grade point average
- Intended college major
- Ethnicity
- Academic and extracurricular interests

We never share information that could put your child at risk of identity theft.

If your child matches the characteristics a college or scholarship program is looking for, they'll receive informational materials (by email or U.S. postal mail) that encourage them to apply.

Figure 5: Information provided to parents and guardians about the Student Search Service. Screenshot taken on February 17th, 2021 (*Student Search Service—For Parents & Guardians,* 2021).

In a test setting when students take an exam such as the PSAT or SAT, students are *not* told that colleges pay for the information they provide through the Student Search Service. Again, the College Board leaves out a key piece of information, that student information is available to universities for a price. The Spring 2021 digital SAT testing manual for an SAT School Day administration (when the SAT is administered as part of a state's mandatory standardized testing) only provides the following information about the service:

> Page 4 of the questionnaire asks if you want to participate in College Board's free Student Search Service. There are certain advantages for you to complete this optional information. If you opt in to Student Search Service, it's provided to colleges, universities, and scholarship providers, and used to identify students who may be interested in the opportunities they offer. However, it's important that you know College Board will also be able to use this information and provide it to others for additional uses, such as research (College Board, 2021).

In certain settings, such as when a student takes the SAT as part of their state's mandatory testing, a parent may be provided with a consent form for their child to participate in the Student Search Service. This consent form is published by the College Board and only denotes that universities pay a license fee to participate in the College Board Search. Again, parents are provided with different information than their children, the students most immediately affected by the service.

The difference in information provided to students and to parents represents a lack of transparency around the Student Search Service. If we return to our theoretical framework of privacy, we immediately can see that the College Board, in presenting unequal amounts of information here to parents and students, is violating our predetermined norms around data collection and distribution. We can refer to this difference in information as an information asymmetry, a situation in which one party, the College Board, maintains a significantly larger amount of knowledge about a given situation than a second party, students and their parents. This information asymmetry makes it very difficult for individuals to proceed within what Waldman calls a relationship of trust. The lack of transparency provided by the College Board in this situation denotes an immediate betrayal of trust; for students and parents to trust the College Board as a steward of student information, then the College Board needs to be transparent with both students and parents about the organization's use of data and the ways in which they share data with third parties.

In operating the Student Search Service, the College Board has created a reseller's market between students and universities, one in which the larger set of customers, universities and other organizations, will default as the most important. Students cannot participate in this market as informed participants because they have not been provided with key details about the nature of this market. This lack of transparency between the College Board and students (or their guardians) perfectly exhibits what Zuboff refers to as shadow text; while the College Board tells students that the organization is helping them, the shadow text tells a different story: that the College Board is helping universities market themselves and make predictions about their incoming classes of students. This is possible because of the exact market dynamics of a

reseller's market; the larger customer is more likely to benefit than the smaller customer, or in this case, supplier.

Implications of the Student Search Service: Who really benefits?

The Student Search Service and College Board Search explicitly benefit the College Board and universities or other organizations purchasing names from the College Board. According to a preliminary research paper put out by the College Board and cited by Douglas Belkin in his 2019 article on the Student Search Service in the Wall Street Journal, students whose information is sold as part of the Student Search Service are approximately 0.1% likelier to apply to a university from which they've received marketing materials and the likelihood they will enroll in that college increases by 0.02% (Belkin, 2019). For any individual student, that impact is low. The College Board often touts a takeaway they've found from their research using the Student Search Service data; students who sign up for the Student Search Service are 12% more likely to enroll in college than other students (Belkin, 2019). While used as a justification for students' participation in the program, that relationship is not causal and does not imply that students who participate in the Student Search Service are more likely to be accepted to universities than their peers who abstain. In fact, according to the College Board, "[i]f a student does not opt in to Student Search Service it will not impact their chances at being accepted into colleges or scholarship programs in any way" (Strauss, 2017).

Who ultimately benefits from the Student Search Service, if not the students volunteering their information for the program? Universities and the College Board itself. For a university purchasing thousands (if not hundreds of thousands) of names, the minimal impact on individual students' likelihood of applying to that school adds up, making the investment a worthy one for

universities across a wide set of students. Universities gain access to enormous datasets of student information to use for research and analysis. These datasets can feed into all kinds of analytical and predictive systems and have the ability to enable the for-profit university industry,[14] as many for-profit universities rely upon large quantities of student demographic data for recruiting.[15] In fact, up until 2011, the College Board referred to the use of the Student Search Service and College Board Search on the organization's annual tax filings as "enrollment services" through which the College Board would help universities "find the best students for their campuses" through recruiting and enrollment services (College Board Form 990, 2011). This original terminology makes no mention of helping students find a university that might meet their needs, but refers to a university's need for recruitment and enrollment.[16]

For the College Board, the participation of upwards of 80% of students taking a College Board exam has a large impact on the organization's research opportunities and organizational revenue. The College Board has been able to provide the names of millions of students each year; in 2000, only about 5% of students taking a College Board test did not opt into the Student Search Service (Bowden, 2000). That trend has shifted downwards and in recent years, the College Board has not even listed out the actual percentage of students participating on the organization's Form 990 filings. There are a couple of possible explanations for this. Table 1 shows the change in participation in the Student Search Service according to the College Board's Form 990 filings in the five most recent years available.

[14] For more on predatory college marketing, see Chapter 4.
[15] It is important to note here that for-profit universities are not the only universities using data for recruiting and marketing and benefiting from these services. According to an admissions officer whom I interviewed, many universities use programs like the College Board Search in order to broaden their recruiting to students who might not otherwise consider those universities.
[16] More recently, the College Board has referred to these services as "College Enrollment & Career Opportunities" or "College & Career Opportunities & Enrollment."

Table 1: Percent of students using College Board services opting into the Student Search Service

Year	Percent of students opting into the Student Search Service
2014	84.90%
2015	85.50%
2016	80.44%
2017	>80% (specificity of value not reported)
2018	Not reported

Note: Values reported as listed in annual Form 990 paperwork submitted to the IRS.

As more states have partnered with the College Board for their mandated standardized testing,[17] some states (but not all states) require parental consent forms for students to participate. This could have an impact on the number of students who are able to participate; if students are no longer able to provide consent on their own behalf, parents and guardians could step in and prevent them from participating. However, on the other hand, not all states have such a requirement, and the College Board could gain additional participation in the Student Search Service through state partnerships; if this were the case, then the drop in participation must be explained by something else. Another hypothesis to explain such a drop is one of decreasing trust in organizations such as the College Board. As the public's trust in institutions or the government has decreased over time (Rainie and Perrin, 2019), it is possible that the growing recognition of privacy issues in the public sphere has led students away from programs such as the Student Search Service. Therefore, this second hypothesis indicates a possibility that, as individuals become aware of privacy issues, they choose to opt out of programs such as the Student Search Service.

Inspecting the College Board's tax filings lends more information than just the Student Search Service participation trends over time. These filings allow for analysis of the College

[17] In 2021, 15 states partnered with the College Board to administer some or all of their mandatory standardized testing.

Board's finances. The College Board operates multiple service lines; the Student Search Service falls under what I refer to in the table below as the College Enrollment & Career Opportunities category. A closer analysis of these three categories and the College Board's 2015-2018 Form 990 filings shows that a significant component of the College Board's profit is attributable to the College Enrollment & Career Opportunities service line. Table 2 shows the breakdown in the percent of College Board's profit across the organization's three service lines.

Table 2: Annual percent of profit attributable to three College Board service lines

Year	Profit Attributable College Enrollment & Career Opportunities	Profit Attributable to AP, Instruction and Personalized Practice	Profit Attributable to Focused Assessments
2015	21%	66%	12%
2016	35%	97%	-32%
2017	21%	71%	8%
2018	22%	70%	9%

Note: In 2016, the College Board spent a disproportionately large amount on the organization's Focused Assessments Line, resulting in the loss of profit due to Focused Assessments. This explains the unusually high percent of profit attributable to College Enrollment & Career Opportunities and AP, Instruction and Personalized Practice.

While most of the College Board's profit as an organization is attributable to their AP, Instruction and Personalized Practice service line, the College Enrollment & Career Opportunities line contributed a significant amount of profit to the organization between 2015 and 2018. This is due to the relatively low cost of operating services such as the Student Search Service and the inbound flow of revenue due to universities and organizations purchasing students' data.

As the middleman in a reseller's market involving students' information, the College Board prioritizes colleges as the paying customer for supplied student data. In doing so, any potential blame for unethical actions is inherently passed on to universities. Universities are bound by an agreement to use data ethically, but for-profit universities sometimes target students

for recruitment based on their zip code as a proxy for race, assuming individuals of a certain race will be more likely to take out federal loans (Hayes and Lowe, 2020).[18] By misdirecting students to share significant personal information through the Student Search Service, the College Board is enabling predatory practices in college recruitment. This is a classic component of surveillance capitalism; individuals enter into a contractual relationship, in this case, one with the College Board, thinking that their information will be used for one specific and beneficial thing; in fact, their data get used in myriad ways, as student information may end up used in through recruitment, predictive systems, and targeted advertising (I will analyze some of these possibilities in Chapter 4). The digital nature of such data makes it even more challenging for individuals to track how and when their data may be used.

Opting in and opting out: the maintenance of and access to digital data

When students sign up for the Student Search Service, they are consenting to the College Board "leasing" their names and other personal information to colleges, universities, and other educational organizations, regardless of their understanding of how that information may be used by universities. I argue that the College Board misleads students into providing consent for this service without a full understanding of what it means to participate and then revoke their consent for participation; this leads to a violation of the norm of flow as outlined in the privacy framework in Chapter 1. While the College Board claims to "lease" student data, the actions they take to distribute data do not reflect those of a lease.

[18] See Stephen Hayes and Andrea Lowe's 2020 report on for-profit schools, "Combating Exploitative Education: Holding For-Profit Schools Accountable for Civil Rights Violations" for an in-depth discussion of the predatory recruiting tactics of the Richmond School of Health and Technology, a now-dissolved for-profit university sued in a class action lawsuit by eight individuals.

According to the Merriam-Webster dictionary, a lease is "a contract by which one conveys real estate, equipment, or facilities for a specified term and for a specified rent." A lease is defined by the borrowing of something for a time period defined by a start and end date in exchange for payment. Traditionally, a lease suggests physicality; something tangible is offered up by one party to another for a certain period of time. For example, to provide a brief parallel here, I'll consider a simple case of renting a car. If I were to rent a car from a rental agency, I would sign a contract with the agency to return that car by a certain date. That contract is a temporary lease agreement; on the last day of my rental, I would have to return the car to the agency. If I do not return the car, I will likely face large penalties, as I have violated the terms of my lease.

A lease of data is complicated by its lack of physicality. While data are ultimately stored on physical objects, one organization providing data to another does not necessarily send a physical storage item containing data to another. Data distributed from one party to another online are harder to trace and protect than data located on a single hard drive. Therefore, leasing data becomes a much more complicated task than sending someone a physical item for a limited amount of time in exchange for payment. A traditional definition of a lease does not include the lease of non-physical items, but we do have an understanding of what leases of digital data could look like. We can look to online subscription models to streaming platforms such as Netflix or Hulu as examples. On these platforms, a user pays a fee to maintain access to a website and use the website's services; when a user stops paying, a user automatically loses access to the media maintained on the platform. When a platform like Netflix loses the license to an individual show, all users of Netflix maintain access to the main platform and its content, but can no longer access that specific show.

If we think of the College Board's Student Search Service and College Board as an online platform for data access, then a university no longer paying for access might lose access to all data on the platform. A student opting out of the Student Search Service is equivalent to Netflix's license to a certain show expiring. This is a simple enough model for extending a lease of a physical item into a digital space. Thus, a student participating in the Student Search Service might assume as I did as a high schooler that, since the College Board claims to "lease" rather than "sell" data, the data sharing is temporary and permissions can be revoked at any time when a student chooses to opt out. However, that is not the case. Documentation provided by the College Board around the Student Search Service puts the onus on students and universities when students choose to opt out of the Student Search Service, as shown in Figure 6. Unlike a platform like Netflix, when a student opts out of the Student Search Service, the College Board and any university or organization that already has received that student's data can continue to use it.

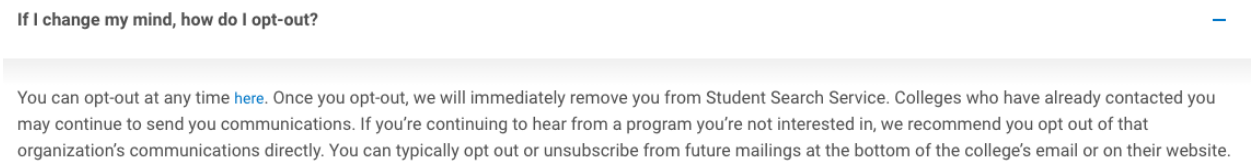
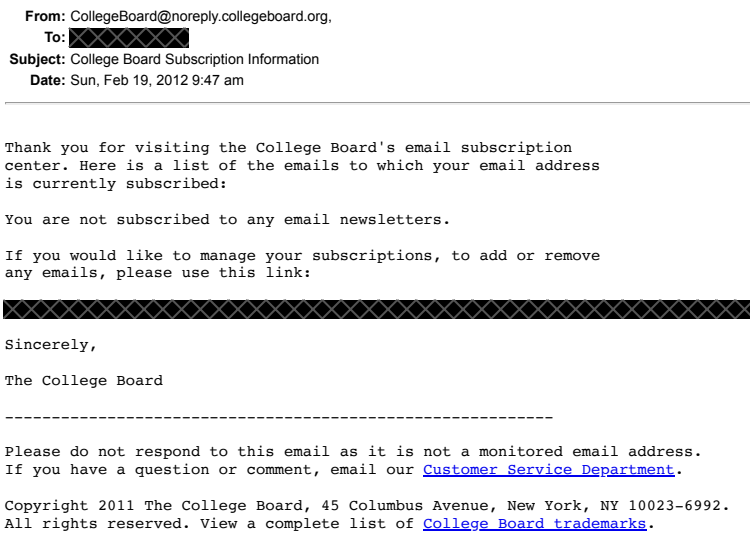


Figure 6: Instructions on opting out of the Student Search Service provided for students on the College Board website.

As I argue in Chapter 1, students consenting to College Board services should be operating in a relationship of trust with the College Board, and to gain students' trust, the College Board should be clear and transparent about their data distribution policies. The College Board's opt-out policy, allowing universities and other organizations to maintain data they have already received through the College Board Search clearly violates one of two norms included in

this model for privacy, the norm of flow (as described by Nissenbaum's privacy as contextual integrity). The norm of flow, or distribution, asks whether the actual distribution of data is appropriate, in this case, the flow of information from one party to another. If we think of the transfer of data from the College Board to university or other organization as the flow of data under a lease or a temporary access license, then when that lease or license has ended, those data should no longer be maintained or accessed by the receiving party. Therefore, the College Board violates the norm of flow, as a student opting out of the Student Search Service no longer provides consent for the distribution and use of their data. By allowing continued use of students' data and by not requiring deletion or the return of student data, the College Board in no way is leasing data. The College Board is selling student data.

This is an explicit example of surveillance capitalism. Students sign up for the service expecting personalized college recommendations and outreach from universities interested in them, and scholarship or financial aid opportunities. Unknowingly, students supply their data into a reseller's market, an economy that profits off of their data for a price. When I signed up for the Student Search Service as a high schooler and then revoked my consent not long after, I continued to receive outreach from universities and other educational enrichment programs or honors society organizations. As I continued to receive emails, I even reached out to the College Board to confirm I was not subscribed to any marketing email lists (as shown in Figure 7).



From: CollegeBoard@noreply.collegeboard.org,
To: [redacted]
Subject: College Board Subscription Information
Date: Sun, Feb 19, 2012 9:47 am

Thank you for visiting the College Board's email subscription center. Here is a list of the emails to which your email address is currently subscribed:

You are not subscribed to any email newsletters.

If you would like to manage your subscriptions, to add or remove any emails, please use this link:

[redacted]

Sincerely,

The College Board

Please do not respond to this email as it is not a monitored email address.
If you have a question or comment, email our Customer Service Department.

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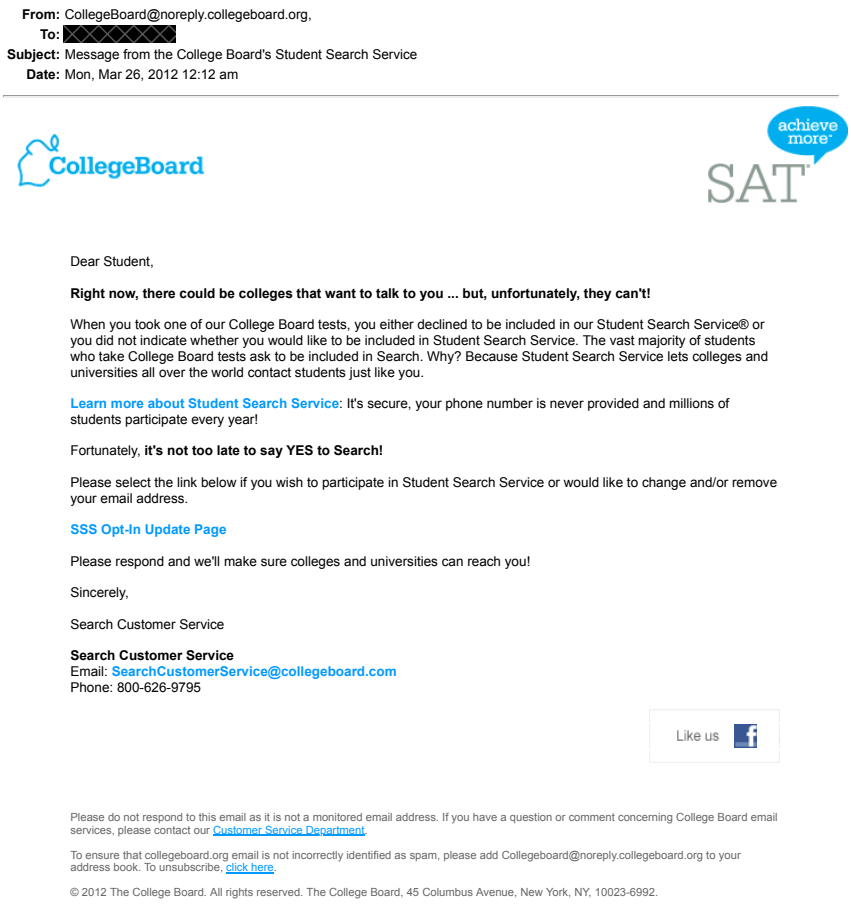
Figure 7: An email I received from the College Board indicating that I was not actively subscribed to any marketing emails from the College Board.

After the College Board confirmed that I was not subscribed to any email newsletters, I continued to receive outreach from universities and other organizations for *nearly a year* after revoking my permission from participation.[19] Even further, I continued to receive emails such as the one shown below in Figure 8 from the College Board asking me to reconsider my participation in the Student Search Service. I received the same email three times: once in March, July, and September of 2012. These emails were proof that I wasn't actively signed up for the Student Search Service, and pushed me to question why I continued to receive marketing emails.

[19] Even the fact that I still have access to emails from nine years ago speaks to the challenges presented by both maintenance and deletion of digital data. The retention of digital media of all sorts has become vastly simpler as data storage has gotten cheaper and more efficient.



From: CollegeBoard@noreply.collegeboard.org,
To: [redacted]
Subject: Message from the College Board's Student Search Service
Date: Mon, Mar 26, 2012 12:12 am

CollegeBoard

achieve more SAT

Dear Student,

Right now, there could be colleges that want to talk to you ... but, unfortunately, they can't!

When you took one of our College Board tests, you either declined to be included in our Student Search Service® or you did not indicate whether you would like to be included in Student Search Service. The vast majority of students who take College Board tests ask to be included in Search. Why? Because Student Search Service lets colleges and universities all over the world contact students just like you.

Learn more about Student Search Service: It's secure, your phone number is never provided and millions of students participate every year!

Fortunately, **it's not too late to say YES to Search!**

Please select the link below if you wish to participate in Student Search Service or would like to change and/or remove your email address.

SSS Opt-In Update Page

Please respond and we'll make sure colleges and universities can reach you!

Sincerely,

Search Customer Service

Search Customer Service
Email: **SearchCustomerService@collegeboard.com**
Phone: 800-626-9795

Like us

Please do not respond to this email as it is not a monitored email address. If you have a question or comment concerning College Board email services, please contact our Customer Service Department.

To ensure that collegeboard.org email is not incorrectly identified as spam, please add Collegeboard@noreply.collegeboard.org to your address book. To unsubscribe, click here.

Figure 8: An email I received in March asking me to opt in to the Student Search Service. I received identical emails from the College Board in July and September of 2012 despite having removed myself from any College Board email lists.

In total, I received over 1,500 emails from colleges and universities that year, either through the College Board's Student Search Service outreach or other "personalized college recommendation" tools that fed my information into university marketing programs. While I do not have the ability to track exactly which companies maintained my data outside of the College Board, it is clear that the College Board violated the norm of flow in allowing universities to continue to reach out to me despite my revocation of consent. As I argue in Chapter 1, without proper legal enforcement, organizations receive nothing but a slap on the wrist and only make promises to do better in the future.

For example, the College Board, by selling student data to universities and other organizations, violates a legally enforceable pledge called the Student Privacy Pledge. The Student Privacy Pledge is a statement signed by over 400 edtech providers and other educational service providers (such as the College Board) in which signatories agree to abide by the points in the pledge, most importantly, a promise to never sell student data ("How the Student Privacy Pledge Bolsters Legal Requirements and Supports Better Privacy in Education - Future of Privacy Forum," n.d.). This pledge, like many student privacy laws, only applies in the case of companies or organizations providing services within school; when a product or service line is used outside of a school setting, an organization or company may do as they please as long as they follow all state and federal laws.

However, in this case, because of the College Board's administration of exams such as the SAT School Day, under which the College Board is acting as an exam provider for mandated state testing in an in-school administration of an exam, the College Board *is* a school service provider. That is to say, the College Board operating independently outside of a school setting may be legally allowed to sell collected information to universities, regardless of how unethical it is (and regardless of the organization's violation of the privacy framework I outlined in Chapter 1). However, by operating the Student Search Service equivalently within school and providing only one opt-out option, the College Board is explicitly selling student data and violating the terms of the Student Privacy Pledge. The Student Privacy Pledge is enforceable by both the Federal Trade Commission (FTC) and state Attorneys General (AG), but has received criticism for its lack of enforcement thus far. In 2018, Alexi Pfeffer-Gillett analyzed the privacy policies of eight signatories of the Student Privacy Pledge and found that seven of the eight had at least one potential violation of the Pledge (Pfeffer-Gillet, 2018). While the College Board was

not included in Pfeffer-Gillett's 2018 analysis, I have demonstrated here that the College Board sells student data and therefore violates the Student Privacy Pledge, making us question the value of such agreements without legal enforcement.

The lack of transparency and legal enforcement of current privacy laws allows organizations such as the College Board to continue their unethical data practices without oversight. Over many years, the College Board has expanded their influence into the educational system, gaining access to testing at scale across the country through mandated standardized testing programs such as NCLB. Providing differing information to students versus parents and misleading information during testing administrations about what information is required from students versus optional not only violates our norms of distribution and flow based within a relationship of trust but also lacks transparency around the organization and its data practices.

Current practices of the College Board are misaligned with the privacy framework I've outlined in Chapter 1. While this framework assumes data sharing will continue, it is designed around creating collective understanding of the appropriate opportunities around data sharing and limiting those that are not appropriate. The College Board knows that the Student Search Service does not have a significant measurable (and positive) impact on students' chances of attending higher education institutions, but it continues the service because of the benefit to the organization and universities and other organizations. By shedding light on the College Board's actions, we can fight back against these predatory practices that feed into surveillance capitalism.

Chapter 4: Predatory Marketing and the College Admissions Process

Advertising and marketing within education are not new concepts. While federal and state laws dictate the specificities of legal and illegal marketing practices, generally speaking, external advertising to K-12 students is not allowed, but exceptions are made for marketing or advertising of programs that are educational or career-oriented in nature.[20] This is loosely defined and allows for flexibility for organizations such as the College Board and the ACT (and more broadly, other organizations providing services around the college process or educational enrichment) to market their own services, as long as they are educationally beneficial to students.

In this chapter, I argue that the College Board's enabling of surveillance capitalism through the Student Search Service and College Board Search has the ability to impact students detrimentally through predatory marketing and lending. These predatory practices detrimentally affect students of color and students impacted by poverty in ways that do not have the same impact on their white or more affluent classmates (Hayes and Lowe, 2020). I discuss marketing around the college process, aiming to understand how universities use student information to convince students to apply and ultimately attend, minimizing students' agency around finding a university that is the right fit, not only in terms of academics, but also in terms of finances. I provide an overview of enrollment management and the industry that has emerged over the last 40 years around finding and retaining students for the growth of universities in order to demonstrate the ways that universities attempt to reach students. To demonstrate a connection between the College Board's administration of the Student Search Service and surveillance

[20] For example, the U.S. military is allowed to request access to high school campuses as well as contact information for students in order to recruit students as servicemembers (Kershner and Harding, 2015).

capitalism, I provide examples of companies engaging in predatory marketing practices aimed at students.

Marketing of Student Data

While the Student Search Service was started in 1972, the push for marketing within higher education became widespread in 1983, when the U.S. News & World Report began to rank U.S. higher education institutions and publish a list of these rankings (O'Neil, 2016). Initial rankings were based upon data provided directly by college presidents through surveys, but consumers quickly complained about this process and U.S. News & World Report turned around their rankings system. They transitioned to using correlative factors for student and university success such as SAT scores and acceptance rates and further analyzed the retention of students over years of a program, the donations coming from alumni, and many other factors. Ultimately, the organization processed this information algorithmically to produce a ranked list of universities.

As Cathy O'Neil explains in her 2016 book *Weapons of Math Destruction*, these rankings were cyclical in nature. Guidance counselors and parents began relying upon these rankings when making recommendations to students. Students began looking to factors such as acceptance rate and faculty-student ratio as proxies for an institution's prestige. When a university initially placed high on the rankings, students flocked to it, driving up application numbers, increasing average test scores, and dropping the acceptance rate. The following year, the process would repeat itself. However, when an institution fared poorly in rankings, its following year application numbers went down, acceptances went up, and the overall acceptance rate increased, denoting less prestige.

To place themselves within the successful version of this cycle, universities aim to market themselves to students, recruiting students based on factors such as their test scores. At some universities, this outreach is truly well-meaning; one admissions officer I interviewed at a large university mentioned that using the College Board Search allowed them to reach historically marginalized students that might otherwise think themselves to not be competitive enough to apply. The College Board acts as a middleman in this process, creating a reseller's market that allows the organization to collect student information and broker it directly to colleges that can then make outreach directly to students. However, while some universities use these data ethically, many do not. Universities can also filter these data by certain demographic characteristics or student information, like a student's zip code, in order to identify students for marketing of predatory loans. All of this is done to convince students to apply and attend. Historically, we've seen universities fabricate admissions data in order to appear competitive and drive up their rankings (O'Neil, 2016). In other cases, universities use student data to target military veterans because of their GI Bill benefits and tuition payments. While examples involving the fabrication of enrollment data are explicitly unethical, the use of student data for targeted recruitment (both ethical and unethical) falls into enrollment management, the process of universities finding, recruiting, and retaining students.

What is Enrollment Management?

Universities spend significant amounts of time and money considering their outreach and recruitment strategies. Much of this effort falls into the category of enrollment management: helping universities determine how to reach students, convince them to apply, maintain status as students, and ultimately, graduate. As one educational consultant working in enrollment

management explained to me, enrollment management is much greater than just students enrolling. It includes student experiences, but also a college or university's public perception or brand. Wealthy, but mid-tier (in reputation and exclusivity) universities often hire consultants or pay for online services or programs to help them with their image and prestige.

In recent years, enrollment management has become so common that individuals can enroll in graduate programs around the country focusing specifically on enrollment management. For example, USC's Rossier School of Education offers an online Master of Education in Enrollment Management and Policy, helping individuals learn to "lead enrollment efforts in admission, financial aid, orientation, student retention and strategic planning" (USC Rossier, 2021). Describing USC's program in 2012, the executive director of USC's Center for Enrollment Research, Policy, and Practice shared that universities had become more data-focused and hoped to use data to inform their enrollment strategy more consistently, especially around marketing and prediction (Young, 2012). Therefore, this focus on data-driven admissions is not brand new, but the risks for students through such practices within admissions have become more serious. These practices are reliant upon student data, and in many cases, these data are provided through the College Board's Student Search Service and other similar programs. Enrollment management programs prepare individuals to work directly at universities within admissions offices as well as at companies providing enrollment management services to universities.

Companies such as EAB provide "real-time visibility into market dynamics and proven strategies for shaping your incoming class and optimizing total enrollment levels" (EAB, 2021). Other companies, such as Blackboard, typically known for providing schools with a learning management system, provide "enrollment coaches" that help institutions "convert at a higher

rate" with respect to turning applicants into matriculated students (Blackboard, 2021). Other companies provide online analytical services to help universities track outbound marketing, communicate with applicants and incoming students, and analyze data collected about applicants.

One such program mentioned to me by multiple interviewees, Slate, is well-known among admissions circles and very widely used. Slate is one of the most common systems used by large universities, described to me by one admissions officer as a "CRM" system or customer relationship management system. This phrasing alone is quite the tell; Slate has sold itself to universities to help them manage their customers: students. When universities compete for students and the tuition dollars they bring in, students become customers, and programs like Slate help manage the entire application and review process.

Slate consists of a digital platform that allows universities to manage applications, query information, reach out to students, and track student information and behavior. While Slate says they don't share data externally, they do provide universities with the option to track cookies and other information as a student browses pages on their website (for example, how long someone maintains connection on a certain site, how often they click on other webpages within that university's system, etc.). This sort of tracking of students' behavior on a university's website or through marketing emails is what I call the measurement of a student's digital demonstrated interest. While applying to college, many of us were told the value of showing "demonstrated interest" by attending an online information session or participating in a campus visit. In this digital age, students are pressured to show demonstrated interest in even more ways to demonstrate their commitment as an applicant.

Not only does Slate provide ways to track student behavior and engagement with a university, but Slate also provides predictive modeling of student behavior and success based on the data collected about students. Slate offers a generalizable prediction tool to allow admissions officers to "apply machine learning principles to make predictions about outcomes" for students (Slate, 2021). As scholar Safiya Noble demonstrates in *Algorithms of Oppression: How Search Engines Reinforce Racism* (2018), these predictive practices have the potential to harm individuals and typically have a disproportionate effect on people of color and those impacted by poverty. These are exactly the types of analytical processes that Zuboff points to as the rendition of human behavior into prediction products and then even further, behavior modification. Student information is used for predictions that allow universities to market themselves to students and gain customers through appealing to students.

Educational Marketing Organizations: A Leg Up Through Enrichment Program

Legal protections exist around student information within schools, but educational organizations that are provided exceptions for academic or career recruitment within schools receive minimal legal oversight. When students or their guardians have provided consent to share certain personal information with an organization, as long as that organization is purportedly using that information to students' benefit, the organization can continue to use students' data. Because of this, students each year are convinced to participate in all kinds of online surveys and programs that lead to a barrage of marketing materials. Even through in-school activities, such as taking the SAT through an SAT School Day administration, students can still be bombarded with outreach material. This is the material that feeds directly into enrollment management strategies,

but these strategies don't exist only for universities. Many other organizations use such strategies to bring in revenue.

I touched on the outreach I received through the Student Search Service in Chapter 3, reflecting upon my own experience as a high school student receiving email after email from universities across the country. However, universities aren't the only organizations eligible to purchase student information from the College Board; other organizations such as scholarship organizations or external enrichment programs can also participate as long as they exist within an educational space. For example, one organization that reached out to me as a high schooler was the National Society of High School Scholars (NSHSS). The email I received from the NSHSS congratulated me on my selection into the organization, as shown below in Figure 9.

From: [redacted]
To: [redacted]
Subject: Your NSHSS Invitation - Deadline July 30th - [redacted]
Date: Sat, Jul 21, 2012 12:43 pm

You are receiving this email message from The National Society of High School Scholars, located at 1936 North Druid Hills Rd., Atlanta, Georgia 30319, (866) 343-1800. NSHSS received your contact information from the College Board Student Search Service.

Dear Roya,

Congratulations on your selection to the National Society of High School Scholars! We recently sent you an invitation to join NSHSS and wanted to remind you that the invitation deadline is coming up on July 30th so be sure to mail in your membership form soon or join online.

Please visit our website to learn more about NSHSS and the many great benefits available to our members.

Member Benefits Include:

- Recognition for your achievements
- Opportunities for you to apply for over $300,000 in scholarships annually
- Service and leadership opportunities
- Free events including members-only college fairs
- Summer study and study abroad programs
- A diploma-quality, personalized certificate
- Free NSHSS T-Shirt

We encourage you to complete the membership confirmation process today!
Your personal confirmation code is [redacted]

Figure 9: The email I received from the NSHSS welcoming me to their organization and asking me to submit my membership form.

Based on the email I received, I may have assumed as an incoming high school senior that I was being selected for a special honors society. However, the NSHSS received my information because I had met a benchmark minimum SAT score to qualify for their society, and in return, they hoped I'd pay the $75 initiation fee to their organization. Based on the organization's qualification as an educational organization, the NSHSS can purchase student information from the College Board. However, the organization then does exactly what it pleases with that data without any oversight. While that information was purchased through an

educational pathway through the College Board, the information they collect about students through memberships can then be used for other purposes. In their current privacy policy, the NSHSS shares that they may "use third-party Service Providers to show advertisements, which may include targeted advertisements on a third party [sic] site after you have visited [their] website" (National Society of High School Scholars, 2021).

This is an explicit example of student information collected through the Student Search Service used by an organization for financial benefit, and violates the norm of distribution or flow outlined in the privacy framework I develop in Chapter 1. Students provide their information to the College Board, the College Board provides it to the NSHSS, and the NSHSS can profit off of that data by using it in predictive systems and providing targeted advertising services. Signing up for a so-called scholarship organization requires the sharing of a tremendous amount of personal information, and the transformation of that information into targeted advertising can have detrimental effects on incoming college students. In this manner, the College Board acts as a data broker, allowing the transfer of information to be used in unethical ways that allow student information to be further distributed and sold for advertising and predatory marketing. These types of scholarship organizations engage in just one type of predatory practice in a wider collection of predatory practices within the college admissions process and higher education.

Predatory Lending and the Legal Ramifications for Such Practices

Simply put, why are these practices dangerous? One of the primary reasons such data collection and transmission processes are dangerous is the impact of predictive modeling on students. For example, many for-profit universities use targeted advertising in order to convince

students to attend, even though in many cases, a degree from a for-profit university is worth just about the same amount as a high school degree (Cellini and Turner, 2019). For-profit universities target students for recruitment who may have access to significant funding through federal loans or other federal funding programs such as the GI Bill. These universities spend an enormous amount of money on marketing; for example, in 2017, for-profit universities spent four times the amount nonprofit colleges spent per student on marketing and twenty times as public colleges (Vazquez-Martinez and Hansen, 2020). Universities often do this by purchasing students' information to target them for advertising and recruiting campaigns. Lead generation websites are one way that universities gain access to student information, but databases of student information such as the collection of information the College Board maintains are more heavily relied upon.

The targeting of Black students, other students of color, and students impacted by poverty has led for-profit universities to have disproportionate enrollments of these students in comparison to nonprofit universities. According to the Harvard Law School's Project on Predatory Student Lending, more than four-fifths of students enrolled in for-profit universities will never graduate (Project on Predatory Student Lending, 2021). Even further, nearly 70% of Black students enrolled in for-profit universities end up defaulting on their student loans within ten years. On average, students who enroll and graduate from for-profit universities end up with 41% more debt after graduation than students at other four-year universities (Hayes and Lowe, 2020). Many students ending up in these situations are unethically targeted by universities using zip codes to recruit students likely to bring in large federal loan funding. For-profit universities often expect these students to drop out; the universities maintain the students' initial tuition funded through loans while putting the onus on students to repay the funding to the government

or private entities. While there has been action against for-profit universities, such as the Gainful Employment regulations enacted in 2014 that required universities to meet specific requirements in order to be eligible to receive student aid, Betsy DeVos rolled back many of these policies in 2019 (Vazquez-Martinez and Hansen, 2020).

One interviewee shared that these practices of targeting students for loan financing are not unique to for-profit universities. This interviewee shared that at one of her previous places of employment, a private mid-tier university, both admissions officers and financial aid officers were pressured to converse with students about private loan financing in order to convince students to attend, regardless of their ability to afford tuition. The university needed to maintain status, and with slowly dwindling numbers of interested students within the region, the university needed to maintain a certain level of exclusivity to bring in adequate revenue. This behavior felt unethical to her, as she was not comfortable with putting pressure on students to take out significant private loans to attend if they hadn't otherwise received sufficient financial aid to attend.

The scale of impact of such techniques around marketing and loans is well-known to the federal government. Just over 10 years ago, the U.S. Government Accountability Office (GAO) went undercover to analyze the practices of for-profit colleges around pushing staff towards lying on forms to gain additional federal funding and lying to students about post-college salaries and graduation rates (Hayes and Lowe, 2020). The government has investigated such practices for years, and cases periodically pop up around the predatory lending industry and the discriminatory methods used to target students of color as potential borrowers. For example, one such investigation was aimed at the Richmond School of Health and Technology, a for-profit school in Chester, VA, centered around the health sciences. In a legal case involving the school,

students shared that they sometimes found at the end of a program that a certificate they were working towards didn't exist in the state, that the jobs and higher salaries they were promised through certain programs never materialized, saddling them with thousands of dollars in loans to repay. Even further, in the same case, an instructor shared in a declaration that administrators intentionally used advertising methods based on zip codes to target Black neighborhoods and skip over white neighborhoods, as administrators thought students from the Black neighborhoods would be more easily persuaded to enroll in such a school and qualify for the loans that would keep the school afloat (Hayes and Lowe, 2020).

Obviously, these practices do not happen at all universities. However, such practices rely upon large quantities of student demographic data collected through direct-to-consumer advertising methods and lead generation as well as in and out of school collection through programs like the College Board's Student Search Service. Predatory lending disproportionately impacts students who face structural racism and classism within the educational system in the United States. Organizations such as the College Board have the ability to enable these processes to allow for college recruitment specialists to enhance their analytical capabilities and intentionally target and take advantage of certain populations of prospective students.

Legal Challenges to Marketing:

We know that using data in unethical and predatory ways to target certain populations of students has dangerously long-term and detrimental impacts on students. How do organizations such as the College Board, administering optional surveys alongside test material both in school and out of school and providing opportunities for students to share highly personal information online in return for personalized college recommendations, enable these practices?

We can look to parallel situations in order to see the impact similar programs have had. For example, in 2002, New York State filed a lawsuit against a nonprofit, Student Marketing Group, for distributing a survey to students and teachers that collected personal information such as students' addresses, gender, age, religious beliefs, and career interests (not unlike the information the College Board requests through the Student Search Service). The information collected through this survey was sent to colleges and universities as teachers and students expected, but was also sold more widely for advertising to credit card companies, magazines, and cosmetics companies (Golden, 2002). In this case, data were collected through a survey purported to be educational in nature and then distributed more widely. Student Marketing Group and a related company, the Educational Research Center of America, were later investigated by the FTC for deceptive practices around how they portrayed their marketing tactics as educational when they were anything but (FTC, 2003). As a result of the investigation, the organizations were ordered to explicitly represent the types of marketing that were truly going on with educational information, and the case outlined a delineation between marketing related to education and noneducational marketing for future use as precedent.

Similar cases have popped up involving student marketing and standardized testing companies in recent history. In Silha v. ACT (2015), participants in the ACT's and the College Board's student information marketing programs sued the organization for not mentioning that their information was explicitly sold to institutions and other educational organizations (Silha v. ACT, 2015). The case was ultimately thrown out by the court because legally speaking, they could not trace a causal relationship between the alleged injury dealt to the plaintiffs and the marketing program. This diffuseness of potential harm complicates regulation of these organizations. The court was unable to determine that there was an actual economic loss for

plaintiffs, just that there was an explicit financial gain for the defendants. In 2016, a similar case emerged in Ellinghaus v. ETS in which parents sued ETS and the College Board on behalf of themselves and their children on two separate points (Ellinghaus v. ETS, 2016). One point of the case outlined issues in the printed test materials, testing irregularities that emerged during a certain administration of the exam on June 6th, 2015. A second point outlined the issues around the collection and use of student data through the Student Search Service and the College Board Search. This case was similarly thrown out based on technicalities around the testing irregularities and the same point outlined in the decision for Silha v. ACT, that while the defendants collected and sold students' information, the defendants benefited but students were not harmed.

Most recently, Mark S. v. College Board (2020) was filed on behalf of parents and their children for the misuse of student data by the College Board. This case is still under review. The plaintiffs allege that the College Board uses disingenuous practices to collect and distribute student information. The plaintiffs argue that the College Board implies that such practices are inherently beneficial to students and their college search and that not participating would be detrimental to students. Plaintiffs allege that, in putting the onus on students to *truly* opt out of the Student Search Service, the College-Board falsifies the level of control the organization maintains over the distribution and use of student data. While this case is still ongoing, it stresses the importance of analyzing the implications of these programs on a wider scale.

Our legal system is set up to prosecute in cases where explicit harm has been demonstrated, and lack of explicit, traceable harm has made it challenging for individuals to fight back against the College Board's actions thus far. However, legal regulation of organizations such as the College Board is important in order to avoid triggering a situation where after the

fact, we can measure explicit harm. Legal regulation is a preventative measure; rather than rely upon courts to prosecute after individuals have been harmed, after student information has been sold and students have lost autonomy over their college process because of predatory practices within college admissions, it is imperative that we create systems of oversight to prevent these issues from cropping up in the first place. Surveillance capitalism is insidious and often invisible; within education this complicates determining the ramifications for such processes until they have already impacted individuals' educational trajectories and choices.

Privacy Implications and Predictive Modeling

Tying these factors together indicates a dangerous connection between organizations such as the College Board, broader educational marketing, organizations providing loosely "educational" enrichment services, and for-profit universities. Organizations such as the College Board act as enablers of this process. They commodify student data when students often don't know that their data are being commodified. They create a direct pathway for other organizations to gain access to data that they purchase, rather than lease such information. Organizations can then use such information in predatory ways and turn students' data into predictive products used within admissions and marketing.

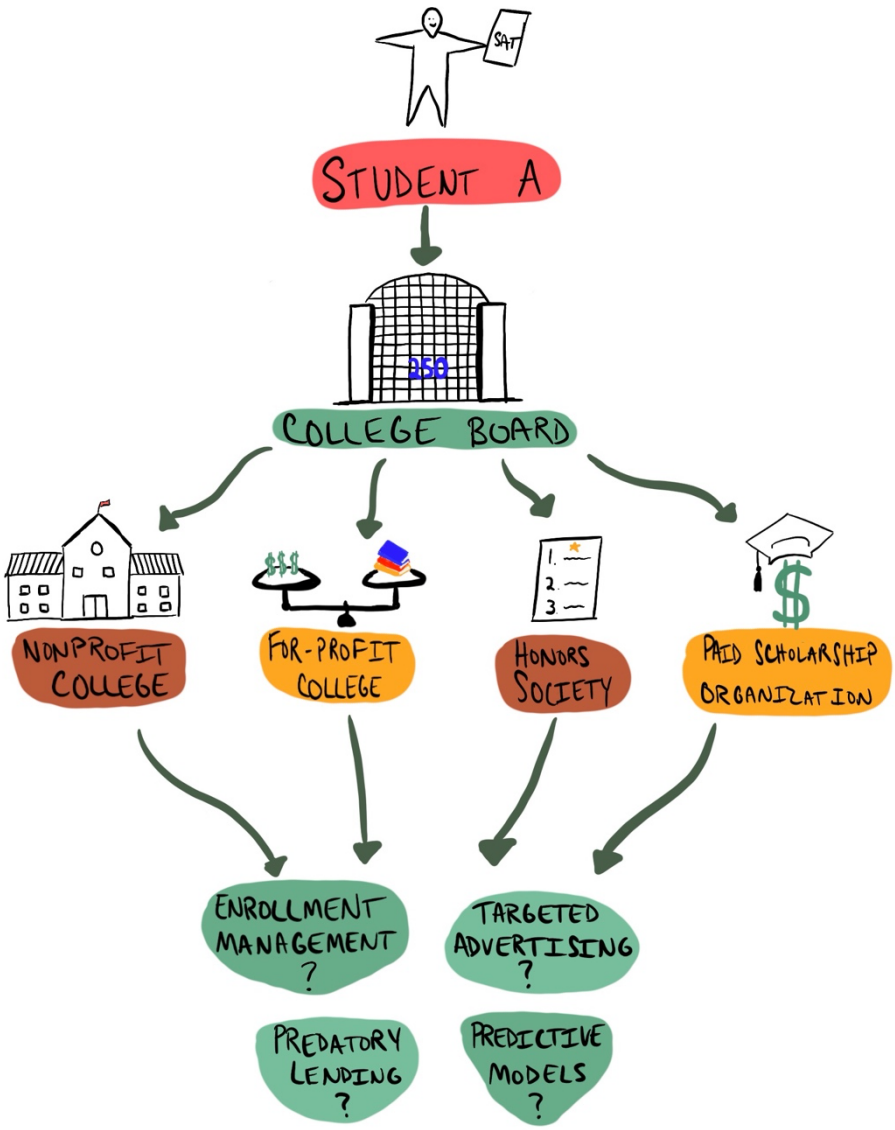


Figure 10: An example of various pathways student data can take through the Student Search Service. While the College Board shares the types of organizations with which it shares student data, there are no mechanisms for preventing further distribution.

Turning back to the theoretical framework for privacy I developed in Chapter 1, we can easily see that organizations such as the College Board have directly violated one of the norms central to our privacy framework. By transferring information from students to universities, scholarship organizations, "educational" honors societies, and other educational organizations, the norm of flow or distribution has been violated. Without an explicit understanding of the path their data travel, students are inherently misled into a relationship with organizations that they

are forced to trust without having a proper basis for that trust. Further, without strong legal protections and enforcement of those legal protections, organizations continue their practices with only an occasional slap on the wrist.

When universities, both for-profit and nonprofit, become increasingly reliant upon databases of student information to analyze and predict which students will graduate within four years and which students will require financial aid based on their zip code, education becomes less about providing equitable access to students who have been previously marginalized within the system and more about preserving so-called "traditional" pathways to success and privileging the same students over and over again. The same tools that are designed to help students learn more about universities end up sending them down predicted pathways that use their information against them. Predictive systems are not neutral, and putting them in the hands of individuals who don't often have a deep understanding of the challenges and pitfalls of such systems fosters continuous disenfranchisement of our most vulnerable learners.

Conclusion

Throughout this thesis, I've systematically analyzed the actions of the College Board in their administration of the Student Search Service to demonstrate the ways in which the College Board enables surveillance capitalism of K-12 students. I've modeled how we might engage in appropriate data sharing through the privacy framework I outlined in Chapter 1, relying upon the work of Waldman and Nissenbaum to inform my model. I've traced the history of standardized testing in the U.S. and the ways in which it has, in many cases, been used to maintain societal expectations and reinforce biases around who can and cannot achieve. I've done a deep dive into the practices of the College Board, tying the organization's actions back to my model of privacy and explaining the ways in which those actions are surveillance capitalistic. Finally, I've outlined connections between the College Board's actions and the predatory practices that occur within the college admissions process.

Surveillance capitalistic practices are dangerous because of their ability to predict and shape individuals' behavior, minimizing individuals' autonomy. They reduce individuals' privacy and provide disproportionate amounts of power to organizations and companies engaging in surveillance capitalistic practices as compared to individuals. However, in many cases, they are also invisible, making it very challenging to explicitly measure the impact of these practices. While it's possible to track such practices at a small scale, such as within an individual organization or even a collection of companies operating within one specific industry,[21] it is much harder to trace an immediately visible harm of surveillance capitalism at scale across many organizations and industries simultaneously.

[21] For example, Consumer Reports has analyzed the College Board's use of tracking technology to share data with tech companies and advertising providers such as Google, Facebook, Snapchat, and AdMedia (Germain, 2020). More recently, the Me2B Alliance analyzed the data sharing occurring across 73 apps used in 38 schools across 14

In the course of this thesis, I have outlined why it is important to challenge what has now become the status quo around predatory data practices. However, the harms I discuss here that result from surveillance capitalism are diffuse and, in most cases, intangible. This is why so many legal cases around programs such as the Student Search Service have been thrown out of court:[22] in the eyes of the law, without demonstrable, quantifiable, and tangible harm, it is impossible to prosecute. Silha v. ACT (2015) and Ellinghaus v. ETS (2016) both resulted in such an outcome. In the U.S. judicial system, we prosecute to punish after the fact; in the legislative branch, we regulate to prevent harm from occurring in the first place.

Protecting students' privacy is not an issue that should require demonstrable harm in the first place. Our actions aimed towards K-12 students should not only be reactionary, and yet, most action that has taken place around student data privacy has been exactly that. K-12 students deserve better than waiting until their information has been leaked through data breaches for adults to care. I propose three steps to be taken by educational stakeholders in order to better protect students' privacy within standardized testing and the college application process that will help ensure student data privacy before surveillance capitalistic practices scale past our control. First, a model of privacy on practices and uses of data collection is mandated to help students and parents to make informed decisions; this model should be the foundation for any legal regulation going forward and should incorporate company transparency as a key component.

Second, there is a need for greater enforcement of existing privacy agreements and laws specific to student data privacy. Organizations such as the Future of Privacy Forum have created legally binding agreements like the Student Privacy Pledge have for organizations such as the

states in the U.S. and determined that 60% of the apps were sending data to third-party providers (LeVasseur et al., 2021).

[22] See more on these cases in Chapter 4.

College Board. However, enforcement of these agreements is remarkably low. Although the College Board "leases" data to universities for a cost, it then shirks its responsibility to stop the universities from sending students additional information beyond the admission process. This is an explicit violation of a legally binding pledge such as the Student Privacy Pledge and must be enforced by governing bodies. For example, while the FTC is responsible for enforcing the Student Privacy Pledge, it is not currently known whether the organization has actually enforced any violations of the Student Privacy Pledge since its inception in 2014.

Finally, there is a need for enactment of new state and federal privacy laws. Many large companies and organizations support more stringent federal privacy laws to ensure compliance with many different state privacy laws. Student data privacy advocates also support the idea of stronger federal privacy laws, as students in different states are provided with different levels of protection. It is remarkable that these usually competing constituencies actually agree there is a path forward for the timely enactment of privacy legislation. Such regulation may be tied to existing fiduciary models in other industries, such as the medical and financial services, that require ethical decision-making behavior. Extending this to data privacy through greater regulation would ensure that students' data are adequately protected.

By building in greater transparency of organizational data practices that lead to relationships of trust, enforcement of existing privacy agreements and laws, and wider enactment of new regulations, we can shift the needle towards greater protections for students around standardized testing, associated data collection, and the college admissions process. Subjecting students to surveillance capitalistic practices is antithetical to the idea of education as providing greater opportunity for students and has the ability to invisibly harm students historically

marginalized by both the K-12 and higher education systems. It is imperative that we fight back against these practices now in order to ensure a more equitable future for all students.

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