The Student List Business

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1 Introduction

On February 21, 2020, represented by counsel, we issued a public records request to a public research university (herein "Stonewall University") seeking information about "student list" purchases. Student lists contain the contact information of prospective students that meet the criteria (e.g., test score range, zip codes) specified in an order. Sometimes referred to as "names," student lists are the fundamental input for recruiting campaigns, which target individual prospects by mail, email, and on social media.

Our request to Stonewall University was part of a larger project – funded by the *Joyce Foundation* and the *Kresge Foundation* and in partnership with the *Lawyers' Committee for Civil Rights* and the pro bono offices of four law firms – that issued public records requests to 93 universities in five states in order to collect quantifiable data about student list purchases. For each student list purchased by the university over the prior four years, we requested (A) the de-identified student list data and (B) the "order summary," which shows the criteria specified to determine which prospects are included in the list. Our requests focused on lists purchased from College Board, ACT, and National Research Center for College and University Admissions (NRCCUA), the three largest student list vendors at the time.

On April 27, 2020, Stonewall University responded to our request, "The university has a substantial and proprietary interest in maintaining the confidentiality of the documents you have requested. Accordingly, with the exception of the attached slide, the records requested will not be produced." The slide, titled "2016-2020 Name Purchases by Source," indicated that Stonewall University purchased about 816,000 names in 2016, including about 517,000 from College Board and 246,000 from ACT. In 2020, Stonewall University purchased about 1,251,000 names, including about 648,000 from College Board and 220,000 from ACT.

Curiously, the footer of the attached slide read "©EAB Global, Inc." We learned that EAB, an education consulting firm known for enrollment management, purchases student lists on behalf of Stonewall University. This became a barrier to our records request. Stonewall University General Counsel stated, on 12/7/2020, that "while [Stonewall University] indeed purchases student lists, the University does not actually have physical possession of such lists" and, on 1/27/2021, that "this is because [Stonewall University] does not receive anything directly from College Board or from ACT or other list sources. Rather, EAB, on [Stonewall's] behalf, places the order, receives the data, and then [Stonewall University] is billed directly for it." Later, we asked Stonewall University to ask EAB to produce the records but we were

told on 8/13/2021 that "EAB also doesn't have or keep these materials." As of December 2021 – following 22 months of emails, conference calls, and officious letters on firm letterhead – we have not received the requested order summaries or student lists. An interesting aside, the Vice President for Enrollment Management came to Stonewall University after working as an enrollment consultant for EAB.

FEW PARAGRAPHS SUMMARIZING THE REPORT– ORG FOCUSED. [I THINK THIS TEXT WORKS HERE] We began this student list project with a goal of collecting data from Stonewall University and others to understand which universities did a "good" job of reaching out to their surrounding community. Thus, we initially assumed that which prospective students are included and not included in student list purchases was a function of the enrollment preferences of individual universities. Over the course of data collection, however, we realized a need to explore the student list business beyond the behavior of customers (universities) who buy student lists, focusing instead on understanding how student lists purchased (and not purchased) by universities are functions of vendor products and on organizational dynamics in the marketplace for student list data.

ONE PARAGRAPH ON BASIC OUTLINE OF THE REPORT.

2 Student List Basics

This section describes how the student list business works, focusing on the College Board and ACT student list products that have dominated the market for decades. We describe how student lists are purchased, what data they contain, and how they are utilized in recruiting campaigns.

The choices universities make about which names to purchase are structured by the architecture of student list products. Beyond the enrollment preferences of individual universities, patterns of which prospects are included versus excluded in student list purchases are a function of (A) which prospective students are included in the underlying database and (B) the set of filters that customers can utilize to select prospects. The dominant vendors of student list data are College Board and ACT, both of which build student list databases from contact information students complete while taking standardized assessments (e.g., SAT, ACT, AP test). Prospective students who do not take College Board or ACT assessments are excluded from the underlying student list databases. Filters on College Board and ACT student list products encourage customers to target prospects based on their score range in a particular assessment. We observed many student list that filtered prospects based on AP exam score, but who attends high schools with widespread access to AP classes? Geographic filters enable customers to filter prospects based on zip code, which is correlated with race and income. Recent product enhancements include the ability to filter prospects based on the college enrollment behavior of prior students from the same high school [CITE CB] or based on the predicted probability the prospect will enroll [CITE ACT].

2.1 Situating Student Lists within the Recruiting Process

The student list business is a match-making intermediary that connects universities to prospective students. Universities require students to survive. Beyond survival, universities pursue some combination of broad enrollment goals (e.g., tuition revenue, academic profile, racial diversity), while also meeting the needs of various campus constituencies (e.g., College of Engineering needs majors, marching band needs players) (Stevens, 2007). Universities cannot realize these goals solely from prospects who find the university on their own; they must find desirable prospects who can be convinced to enroll. However, universities don't know who these prospects are, where they are, or how to contact them. Student lists overcome this problem faced by universities, providing the contact information of prospects who satisfy criteria specified by the university. From the perspective of students looking for a university, students are unaware of all college options they do not know which universities are interested in them. Student lists can help overcome this problem by enabling interested universities to contact prospective students. In practice, however, the student list business is responsive to the problems faced by universities because universities purchase student lists.

In order to situate student lists within the broader process of recruiting students, Figure 1 depicts the "enrollment funnel." The enrollment funnel is a conceptual model utilized by the enrollment management industry that identifies stages in the student recruitment process (e.g., prospects, leads, inquiries, applicants, admits, and enrolled students) in order to inform interventions that target one or more stages. "Prospects" are "all the potential students you would want to attract to your institution" (Campbell, 2017). We define "leads" as prospects whose contact information has been purchased. "Inquiries" are prospects that contact your institution and consist of two types: first, inquiries who respond to an initial solicitation (e.g., email) from the university; and second, "student as first contact" inquiries who reach out to the university on their own, for example, by sending ACT scores or by taking a "virtual tours" that records IP address. Applicants consist of inquiries who apply plus "stealth applicants" who do not contact the university before applying.

The enrollment funnel visualization is based on the "marketing funnel," in which "marketers cast a broad net to capture as many leads as possible, and then slowly nurture prospective customers through the purchasing decision, narrowing down these candidates in each stage of the funnel (Skyword, 2021)." The funnel shape assumes "melt" at each stage. For example, only a subset of inquiries will apply, a subset of applicants will be accepted, and a subset of admits will enroll. Thus, if a university wants freshmen enrollment – the final stage of the funnel – to be 5,000 students, the university must first identify and target a much larger number of prospective students.

Where does the student list business fit within the enrollment funnel? Universities identify "leads" by purchasing student lists from College Board, ACT, and other vendors. The sum of purchased leads plus student-as-first-contact inquiries (e.g., filled out an online admissions inquiry form) constitutes the set of all prospects the university has contact information for, who are eligible to receive targeted recruiting interventions from the university.

Figure 1: The enrollment funnel

2.2 Why Care About Student Lists?

Market research on student lists. Knowledge about the use and efficacy of student lists is largely based on market research by consultancies (but see Smith, Howell, & Hurwitz, 2021). Ruffalo Noel Levitz publishes regular reports about recruiting practices based on survey responses from their clients, which tend to be public and private non-profit universities of mid-level size and mid-level status. Ruffalo Noel Levitz (2018) asked universities to rate different "first contact" interventions (e.g., off-campus recruiting visit, website form) as sources of inquiries and enrolled students. For the median private non-profit university, student list purchases were the highest source of inquiries, accounting for 32% of inquiries and were tied with off-campus recruiting visits as the highest source of enrolled students, accounting for 18% of enrolled students. For the median public university, student list purchases were the highest source of inquiries, accounting for 26% of inquiries, and accounted for 14% of enrolled students, which ranked fourth after "application as first contact" (19%), campus visit (17%), and off-campus visit (16%).

With respect to the number of names purchased annually, Ruffalo Noel Levitz (2020) reported that 34% of private universities purchased less than 50,000 names, 24% purchased 50,000-100,000 names, 23% purchased 100,000-150,000 names, and 19% purchased more than 150,000 names. For public universities, 28% purchased less than 50,000 names, 44% purchased 50,000-100,000 names, 13% purchased 100,000-150,000 names, and 15% purchased more than 150,000 names. These responses, based on Ruffalo Noel Levitz clients, may not be representative of the number of names purchased by public research universities and selective private universities. For example, Belkin (2019) reported that Tulane bought about 300,000 names from College Board in 2018 [KARINA/CRYSTAL - REPLACE BELKIN 2019 WITH EXAMPLES FROM OUR RESEARCH].

Ruffalo Noel-Levitz (2020) reports the percentage of undergraduate recruiting budget allocated to different marketing/recruiting activities. The median private university spent 14% of its recruiting budget on student lists, which was ranked second after off-campus recruiting visits (17%). The median public university spent 12% of its budget on student lists, which was ranked fifth after "prospective student communications" (17%), off-campus visits (16%), "recruitment publications" (15%), and "web services and digital advertising" (13%). To make things more concrete, we provide a back-of-the-envelope calculation, albeit one that is not representative of the population of public universities. Stonewall University reported purchasing 1,251,000 names in 2020, including about 648,000 from College Board and about 220,000 from ACT. In 2020, both the College Board Student Search Service and the ACT Encoura product charged \$0.47 per name. Thus, we calculate that Stonewall University spent $\$304,560 = 648,000 \times \$0.47$ on names from College Board and $\$103,400 = 220,000 \times \$0.47$ on names from ACT.

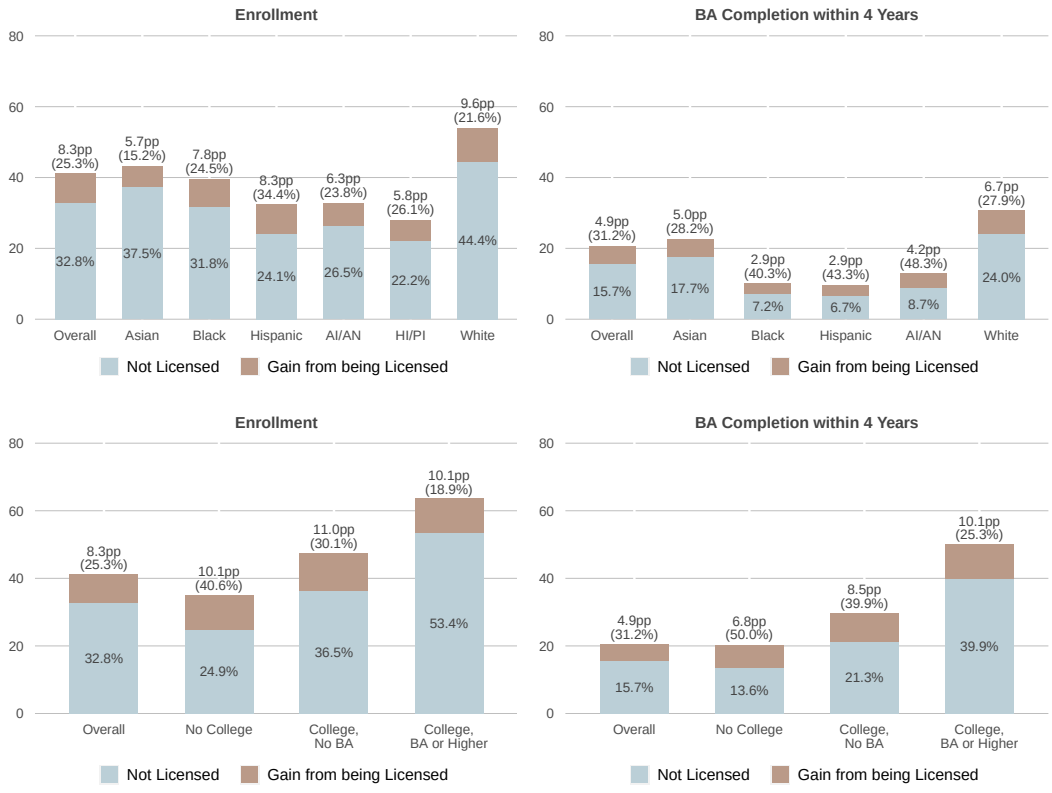
Student lists effect on college access. The ACCEPT vision is to "lead the college admissions profession in creating an equitable, just, and anti-racist path" to college with a focus on amplifying "the voices of communities marginalized in secondary and postsecondary education." Why should admissions professionals who share this vision care about student lists? Research indicates that student lists have a dramatic effect on college access and – in turn – degree completion of millions of students each year, particularly for communities that have been historically excluded from higher education.

Howell, Hurwitz, Mabel, & Smith (2021) compared the college access and degree completion outcomes of SAT test-takers who opted into the College Board Student Search Service – thereby allowing accredited institutions to "licence" their contact information – to those of students who opted out. Figure 2 reproduces results from Howell, Hurwitz, Mabel, & Smith (2021). Although the results cannot be considered causal, they are based on regression models that controlled for covariates like race/ethnicity, parental education, SAT score, and high school. For SAT test-takers who graduated from high school between 2015-2018, 41.1% of students who participated in Search attended a 4-year college compared to 32.8% of students who opted out, representing a 25.3% (`(41.1-32.8)/32.8=25.3`) relative increase in the probability of attending a 4-year college.

Note: AI/AN = American Indian or Alaska Native. HI/PI = Hawaiian or Pacific Islander. The sample for enrollment outcomes includes all SAT takers in the 2015–2018 high school graduation cohorts. The sample for completion outcomes is restricted to students in the 2015–2016 cohorts. Completion results are not reported for HI/PI students due to very small sample size (N=2,749), which returns imprecise estimates. Results are estimated from regressions that include student-level controls for: sex, race/ethnicity, SAT score, parental education level, last Student Search Service opt-in status, and graduation cohort and high school fixed effects. All differences between students whose names were licensed and those whose names were not licensed are statistically significant at the 1% level.

Furthermore, change in the relative probability of attending a four-year college associated with opting in to Search out was higher for students who identified as Black (24.5%), Hispanic (34.4%), American Indian or Alaska Native (AI/AN) (23.8%), and Native Hawaiian or Pacific Islander (26.1%) than it was for students who identified as White (21.6%) or Asian (15.2%). Similarly, change in the relative probability of attending a four-year college was higher for students whose parents did not attend college (40.6%) than it was for students whose parents

Figure 2: Student Search Service and four-year college enrollment/completion



had a BA (18.9%).

Howell, Hurwitz, Mabel, & Smith (2021) also analyzed the four-year BA degree completion rates of SAT test-takers from the 2015 and 2016 high school graduation cohorts. 20.6% of students who participated in Search obtained a BA in four years compared to 15.7% of students who opted out, representing a 31.2% increase in the relative probability (`(20.6-15.7)/15.7=31.2`). Furthermore, the relative increase in the probability of obtaining a BA was higher for Black (40.3%), Hispanic (43.3%), and Native American/Alaska Native students (48.3%) than it was for White (27.9%) and Asian (28.2%) students. The relative increase was also higher for students whose parents did not attend college (50.0%) than it was for students whose parents had a BA (25.3%).

A similar study by Moore (2017) analyzed college access outcomes of students who opted into and opted out of ACT's Educational Opportunity Service (EOS), which allows accredited institutions to license the contact information of ACT test-takers. After controlling for covariates – including ACT score, number of colleges the student sent scores to, family income, parental education, degree aspirations, race/ethnicity – students who opted into EOS had a 3.7 times higher likelihood (odds ratio = 3.7) of attending college than students who opted out (Moore, 2017). Additionally, a model that restricted the sample to students who attended college found that students who opted into EOS had 8.7% (odds ratio = 1.087)) higher odds of attending a four-year college rather than a two-year college.

2.3 Buying and Using Student Lists

The choices universities make about which names to purchase are structured by the architecture of student list products. Beyond the enrollment preferences of individual universities, patterns of which prospects are included versus excluded in student list purchases first a function of (A) which prospective students are included in the underlying student list database and (B) the set of filters that customers can utilize to select prospects. The dominant vendors of student list data are College Board and ACT, both of which build student list databases from contact information students complete while taking standardized assessments (e.g., SAT, ACT, AP test). Prospective students who do not take College Board or ACT assessments are excluded from the underlying student list databases.

Each purchased list is a subset of prospects drawn from the population of test-takers by specifying multiple search filters. Schmidt (2019) states that commonly specified search filters for ACT include high school graduation year, high school GPA, test score range (ACT or PreACT), gender, ethnicity, intended major, and geography (e.g., state, county, zip code) (Schmidt, 2019). As a hypothetical example, a university could purchase a student list from ACT that consisted of all prospects who scored between 30 and 34 on the ACT, have a GPA higher than 3.5, live in one of the top 10 metropolitan areas, and are in the high school senior class of 2023. As we discuss below, College Board and ACT recently began offering filters that enable universities to target prospects based on statistical models of the past behavior of similar or nearby prospects. [ADD LINKS/APPENDIX FIGURES SHOWING AVAILABLE SEARCH FILTERS FOR CB/ACT?]

What data do purchased student lists contain? Each purchased student list is essentially a spreadsheet that contains one row for each prospect that meets all criteria specified in the purchase. The columns of the student list include detailed contact information (name, address, email, cell phone) and detailed student characteristics derived from the pre-test questionnaire (e.g., ethnicity, race, gender, high school GPA, graduation year, high school code, intended major, first-generation status). The data template for an ACT student list can be found here and the template for a College Board student list can be found here. These fields represent a small subset of the information the testing agencies know about prospective students and contain little data about performance on assessments (e.g., SAT score). As we discuss below, College Board and ACT provide more detailed information to universities that pay for their enrollment management consulting services.

How are lists utilized? The primary customers of student list data are universities looking for students (other customers include third-party scholarship programs looking for scholarship recipients). University enrollment goals include tuition revenue, academic profile, racial composition, and also the enrollment demands of internal campus constituents (e.g., academic majors, athletics, clubs). Additionally, universities may want more applicants as a means of raising selectivity or obtaining lower interest rates on bonds, which are often tied to indicators of student demand.

Purchased lists are the basic building block for data-informed recruiting "campaigns" (Encoura, 2022). Enrollment management consulting firms and sophisticated in-house operations use algorithms to inform recruiting interventions. However, both the algorithms and the interventions must be fed data about prospects (e.g., cannot send an email without an email address). Decisions about which names to purchase are also informed by algorithms (Fire Engine RED, 2021). Once purchased, student lists are layered with additional data sources, such as consumer data about prospects from credit companies, records of interactions with prospects (e.g., visiting virtual tour), historical application/enrollment data about students who attended the same high school, etc. These layered data are the input to predictive models that inform decisions about which recruiting interventions to send to which prospects (e.g., who gets a $0.50 postcard and who gets a $7 brochure).

3 Theoretical Framework

While the market for student list data has been largely controlled and shaped by College Board and ACT for decades, it has become surprisingly dynamic. For example, technological advances have yielded new sources of student list data – leading to entry by new firms – and have been incorporated into existing student list products in troubling ways. The distinction between student list vendor and enrollment management consultant has blurred and the test-optional movement threatens the oligopoly controlled by College Board and ACT. This section introduces concepts from theories of organizational behavior and critical legal scholarship that enable us to analyze these dynamics in the next section.

3.1 Resource Dependence Theory

Our analysis of the market for student list data draws from resource dependence theory (Pfeffer & Salancik, 1978), one of several theories of organizational behavior that provides insight about "make or buy" decisions by firms, which we refer to as "in-house" (make) or "contract-out" (buy) decisions. Resource dependence theory begins with the assumption that organizations require resources from the external environment in order to survive. The central concept of resource dependence theory is dependence, as defined by Emerson (1962). Actor A depends on actor B to the extent that B controls goals important to A – values that A cannot obtain outside the A-B relationship. Resource dependence theory states that an external resource provider has power over an organization to the extent that (a) the resource is essential for organizational operations, (b) few alternative sources of the resource exist, and (c) the external organization has discretion over how the resource is allocated.

For example, universities depend on a stable flow of names to achieve enrollment goals. The dependence of a university on a student list vendor is greater when there are few suppliers of names. This characterizes the oligopoly market structure of the student list business, where suppliers capitalize on market power by forcing customers to pay higher prices than they would pay in a competitive market. While College Board and ACT each own a unique set of names, every Title IV institution has the right to buy these names at a set price. By contrast, dependence on the supplier of a unique set of names would increase if the supplier had arbitrary discretion over which universities have access to names and the price charged to each university.

Pfeffer & Salancik (1978) describes several strategies organizations may deploy in response to the problem of dependence on a particular resource exchange. For example, *compliance* is the strategy of acquiescing to the demands of the resource provider. One strategy is finding an alternative supplier of the same resource (e.g., a different names vendor) in order to reduce reliance on a particular provider. *Resource diversification* is the strategy of reducing reliance on a particular resource by finding substitute resources, for example, reducing reliance on names by using behavioral-based marketing to identify/target leads and using brand marketing to grow inquiries. *Cooptation* is the strategy of socializing external resource providers to the goals of the organization through shared participation in organizational activities. For example, enrollment management consulting firms depend principally on universities. If a firm places a consultant in a Vice President of Enrollment Management position, it becomes more likely that the university will retain the consulting firm. Another strategy, for similar organizations that rely on a common resource provider, is to form a *professional association* in order to exert collective control over the resource provider. Although choice of strategy is contextual, resource dependence theory generally recommends choosing "the least-constraining device [action] to govern relations with your exchange partners that will allow you to minimize uncertainty and dependence and maximize your autonomy" (Davis & Cobb, 2010, p. 6).

Acquisitions are the "most resource-intensive means" (Scott & Davis, 2007, p. 237) of exerting control over the external environment. A "vertical acquisition" – the acquisition version of in-house – occurs when a firm acquires an organization that controls an essential resource/activity. The primary benefit of vertical acquisitions is reducing reliance on

contracting external organizations for a key input. Somewhere between contracting-out and vertical acquisitions is the strategy of forming *alliances*, defined as "agreements between two or more organizations to pursue joint objectives through a coordination of activities" (Scott & Davis, 2007, pp. 236–237). Alliances are less costly than acquisitions and can be mutually beneficial when each organization performs an activity that is an important input for the other organization. A "horizontal acquisition" occurs when two firms that perform similar activities merge, for example [Choose a non student list example here– have not yet introduced college search websites buys another firm that builds websites]. Horizontal mergers increase market share and reduce competition, potentially enabling the firm to charge higher prices. More generally, larger firms can exert influence on their external environment, including the ability to control suppliers, buyers, and regulators.

3.2 New Institutional Theory

Whereas resource dependence theory provides insight about the decisions of firms within an industry, new institutional theory (herein institutional theory) provides insight about macro structural forces that shape organizational behavior. Institutional theory offers insight about the SAT/ACT as an institution, it's effects, sources of deinstitutionalization [REVISE].

The seminal work by Meyer & Rowan (1977) argues that organizations survive not by superior performance (efficiency) but by appearing "legitimate" to external stakeholders. Legitimacy is defined as conforming to recognized, accepted standards. An organization has legitimacy if external actors view it as an accepted member of a particular type of organization. In turn, gaining/maintaining legitimacy depends on adopting practices deemed appropriate for a particular type of organization. Thus, Meyer & Rowan (1977) define "institutions" as taken-for-granted ideas about appropriate practices. Institutionalization is the process by which ideas about appropriate practices "come to take on a rulelike status in social thought and action" (Meyer & Rowan, 1977, p. 341). Because all organizations within a population (e.g., research universities) are beholden to the same expectations from the external environment, the institutionalization of a practice results in "isomorphism," defined as the process by which organizations within a population adopt the same processes, policies, and structures.

The diffusion of the SAT and ACT exams is a textbook case for the first wave of scholarship on institutional theory, which focused on the effects of institutions. Scholarship finds that whereas early adoption of an innovation is motivated by substantive rationale, later adoption is motivated by legitimacy considerations (e.g., Tolbert & Zucker, 1983). Following the adoption of the SAT or ACT as an admissions requirement by leading public and private universities, other universities followed suit because this is what legitimate universities do. In turn, the institutionalization of standardized college entrance exam complled college-going high school students to take either the SAT or the ACT, creating databases of test-takers that formed the basis of competitive advantange for College Board and ACT in the student list business.

A second wave of empirical scholarship on institutional theory on "deinstitutionalization" – the conditions and processes by which institutions die – finds that even well-established

institutions cannot persist in the face of prolonged adverse external conditions (e.g., the conglomerate firm as an organizational form (Davis, Diekmann, & Tinsley, 1994), lifetime employment in Japan (Ahmadjian & Robinson, 2001), the liberal arts mission of liberal arts colleges (Kraatz & Zajac, 1996)). Deinstitutionalization is caused by macro forces in the external environment, particularly technological change (Chandler, 1977; e.g., Schumpeter, 1942) and social movements/political mobilization (Karen, 1991; McAdam, Tarrow, & Tilly, 2001). With respect to technology, Davis (2005) p. 495 states that, "underlying the shifts in forms of finance and production were advances in information and communication technologies that substantially expanded the range of possible organizational structures and repertoires." Karen (1991) p. 224 describes political mobilization as "involving a collective effort on the part of individuals who are excluded from some critical resource (e.g., access to higher education) to change existing patterns of institutionalized behavior." Both social movements and technological change have contributed to the deinstitutionalization of the SAT/ACT, with well-organized coalitions attacking the legitimacy of standardized testing and encouraging universities to remove the test as an admissions requirement, coupled with technological advances in data processing that make standardized tests less critical for evaluating applicants from different high schools.

3.3 Place-based Whiteness as Property

Institutional theory does not substantially consider race, nor does it consider theories that centralize race (Ray, 2019). As a result, applications of institutional theory tend to understate the extent to which the existing institutions privilege white people and the extent to which these institutions are built upon established, macro-institutions that were explicitly designed to benefit white men. We incorporate the "place-based whiteness as property" framework developed by Salazar (onlinefirst), which is based on the concepts of "space" versus "place" (Agnew, 2011) from critical geography and "whiteness as property" from Harris (1993).

Critical geography describes the concept of "space" as a decontextualized physical location. Geospatial research views space "as a location on a surface where things 'just happen' " (Agnew, 2011) and analyses describe locations in terms of quantifiable spatial features (e.g., distance, demographics, population density, etc.). By contrast, the concept "place" encompasses a more holistic, critical view of geography that incorporates a location's "history, peoples, and purposes within the political, social, and economic landscape" (Bell, 2007, p. 378). Student list products take the perspective of location as space rather than place in that customers can filter prospects based on their home zip-code or based on the college-going behaviors of students from their school or neighborhood, without consideration to the history of systematic residential discrimination that creates the segregation observed in these localities.

Harris (1993) argued that the law legitimizes tangible, economic benefits that accrue to people because they are white via four "property functions of whiteness" (rights of disposition, right to use and enjoyment; right to reputation and staus; right to exclude). Using the example of residential segregation, Salazar (onlinefirst) p. XX argues that "each prop-

erty function of whiteness can be linked to understanding how geographic places encompass racialized meanings and processes." For example, the rights of disposition and use are exemplified by racial home ownership disparities caused by laws in which "Home ownership is passed down generationally for White families both in the form of actual property (i.e., rights of disposition) as well as in the form of home buying processes that favor White families (i.e., right to use and enjoyment)" (Salazar, onlinefirst, p. X). Whiteness and non-whiteness also defines the "reputation and status" ascribed to localities, whereby " 'the inner city,' 'the ghetto,' and 'urban' are linked to communities of color" (Salazar, onlinefirst, p. X). Fourth, the "absolute right to exclude is exemplified in exclusionary zoning ordinances (e.g., density controls, prohibiting multi-family units) historically used to discourage Black residents from living in predominantly White areas" (Salazar, onlinefirst, p. X).

4 Student List Market Dynamics

[REVISE] This section draws on theoretical concepts described in the previous section to analyze three important changes in the market for student list data over the past decade. First, we sketch the "organizational field" in broad contours to map how new sources of student list data – made possible by advances in technology – have created opportunities for new players and new acquisitions. Second, we provide an in-depth analysis of new products introduced by the College Board and ACT in efforts to maintain a competitive advantage amidst new student list market players that are likely designed in ways that benefit whiteness and further impede access for underserved student populations. Third, we analyze moves by EAB to enter the student list market, exemplifying the blurring of lines between student list vendors and enrollment management consultants.

4.1 Universities and Consulting Firms

The primary customers of student list data are universities looking for students. Postsecondary institutions serve several different student markets (e.g., graduate education, vocational training). In the market for college-going high school students, university enrollment goals depend on the stable flow of prospect contact information. Universities are more dependent on student list vendors that own large, unique sets of names and less dependent on a particular vendor to the extent that the set of names they sell are also sold by other vendors. Student-as-first-contact inquiries are a university-specific substitute for purchased names. Universities that receive many student-as-first-contact inquiries because of strong brand recognition (e.g., Stanford, UCLA) are less reliant on purchasing names.

Although universities are the primary customers of student list products, we cannot understand the student list business without understanding the role of enrollment management consulting firms. Enrollment management consulting firms depend on universities as their primary source of revenue. Universities hire enrollment management consulting firms for advice and for implementation in the broad areas of marketing and recruiting, pricing and financial aid, and student success. Decisions about hiring a consultancy are "make or buy"

decisions, whereby the university decides which enrollment management processes to outsource to an external vendor. As recruiting has become more sophisticated and competitive over the past twenty years, a growing number of universities hired consultancies to develop and/or implement recruiting campaigns. Contributing to this trend, university leaders are often quick to fire senior enrollment and admissions professionals when enrollment does not meet targets. In turn, employee turnover reduces in-house capacity, making universities more dependent on external consultants.

Although universities are the primary customers of enrollment management consulting firms, these firms depend on student list vendors for two reasons. First, a core service offered by most firms is making recommendations about student list purchases and executing these purchases (e.g., Ruffalo Noel Levitz, Fire Engine Red). Second, student lists are an essential input to the predictive models and to the recruiting interventions (e.g., email, mail, social media) that the consultancies provide.

The market for enrollment management consulting incluses large firms providng the full range of enrollment services and smaller firms providing particular services. Anecdotally, from 2000 to 2010, advances in digital technology and data science encouraged market entry by small and medium sized firms. Since 2010, horizontal acquisitions have caused the market for enrollment management consulting to become more concentrated (Rogers, 2014). For example, RuffaloCODY acquired Noel-Levitz in 2014 [CITE] and EAB acquired the enrollment management business of Hobsons in 2021 [CITE]. By 2022, the enrollment management consulting market consisted of two large firms – Ruffalo Noel Levitz, which claims to serve "1,900 campuses and nonprofits" each year [CITE], and EAB, which claimed to serve "more than 1,100 higher education institutions" in 2021 [CITE] – and a shrinking number of small and mid-sized operations (e.g., Fire Engine Red, Capture Higher Ed). Increasing market concentration makes universities that lack in-house capabilities more dependent on the remaining set of enrollment management consulting firms.

4.2 New Data Sources and New Vendors

Student list data are created by several data generating processes. Prior to the 21st century, student list data on college-going high school students were derived from two primary sources. First, data were generated by students completing standardized assessments (e.g., SAT, ACT, AP, GRE, TOEFL) developed by testing companies College Board, ACT, and ETS. Second, organizations like the National Research Center for College and University (NRCCUA) and College Bound Selection Service (CBSS) asked high school students to complete a survey during school hours.

Advances in technology yielded new sources of student list data, and also new vendors that developed and/or acquired student list products based on these new data sources. A data source that emerged in the 2000s consists of survey data students voluntarily submit to college search engine websites, which have the explicit goal of helping students find "match" universities and scholarships (e.g., scholarships.com, Niche, parchment, Cappex, and Going Merry). With the exception of the legally required privacy page, these sites often avoid

clear language about whether/how student data are shared.[1] A related source of student list data consists of social network platforms that focus on college search (e.g., Zinch, Cirkled In). These platforms often have the explicit goal of sharing profiles created by students with the universities the students express interest in attending. For example, Cirkled In's website reads "Go beyond test scores and connect directly to colleges. Cirkled In's portfolio platform showcases students' entire educational story" [CITE]. Initially, vendors in the college search engine/social network space consisted largely of start-up EdTech firms. Later, vendors of paper-based surveys completed in high school transitioned to the search engine space (e.g., NRCCUA developed the myOptions college and career planning website).

Another source of student list data comes from software used by high schools and high school students. For example, Naviance enables students to plan for college and enables guidance counselors to help students with the college search process. In turn, Naviance user data provide the basis for Intersect, a software product that enables universities to send advertising messages to high school students using Naviance. Similarly, Scoir develops college search and application software for high school students and counselors CITE, while also enabling universities to message students that meet criteria specified by the university CITE.

4.2.1 Failed Market Entry by Chegg

The case study of Chegg and Zinch is illustrative of the failure of a larger number of EdTech firms that entered the college search engine space with the promise of transforming the student list business. Zinch, created by Princeton University students in 2006, was a company that matched students to colleges and to scholarships. Zinch users created a profile "similar to a college application, which could be browsed by colleges in which they were interested, providing a forum for a connection between college and Zinch user" (Wikipedia contributors, 2021, para. 1).

Chegg, a company known for online textbook rentals, purchased Zinch in 2011 for $27.2 million (Chegg, Inc., 2013). The press release headline reads, "Chegg plans to expand into $7 Billion college recruiting market and increase student base by over 3.5 Million" (Swisher, 2011). Following the acquisition of Zinch, Chegg began offering College Admissions and Scholarship Services to students, which generated names for enrollment marketing services to universities. In 2013, Chegg became a publicly traded company and the IPO prospectus provides insight about Chegg's strategy:[2]

> Using the information from the more than one million college-bound high school students who fill out a profile using our College Admissions and Scholarship Services, we provide colleges with qualified leads to potential candidates... The

[1] For example, Cappex – recently acquired by EAB – helps students "find colleges and scholarships that are right for you." The privacy policy statement reads, "services require us to collect detailed personal information from you and in many cases to share your personal information with colleges, universities, counselors, scholarship administrators, EAB, employers, marketing partners and advertisers."

[2] Chegg stated its enrollment marketing services delivered "approximately 2.6 million paid leads for interested students" to 750 colleges in 2012 (Chegg, Inc., 2013, p. XX).

> leads can be based either on students' expressed preference for a particular college or matching students' general preferences with college profiles... Colleges pay for these services on a per-lead basis or on a subscription fee basis... Rather than spending hundreds or thousands of dollars per enrollment, colleges that use our enrollment marketing services can realize recruiting costs of generally less than $100 per student enrolled (Chegg, Inc., 2013, p. 97).

One cost of Chegg's student list business was "leads purchased from third-party suppliers to fulfill leads that we are unable to fulfill through our internal database" (Chegg, Inc., 2013, p. 60). Chegg's long-term strategy was to increase the number of users by creating the Chegg Student Hub. In turn, more users would enable Chegg to "increase monetization of marketing services":

> We intend to leverage our enrollment marketing platform to increase monetization of potential leads by demonstrating our value proposition to more colleges, which will increase the number of paying colleges as the number of students and leads per student increases (Chegg, Inc., 2013, p. 95).

However, by 2014, Chegg began promoting the "Chegg Cloud" as a broker/reseller which claimed to reach "8 out of 10 students actively researching schools online" by partnering with "18 of the top college search websites and mobile apps to aggregate student data and requests for information" (Chegg, 2015, p. 5). In 2017, Chegg effectively shuttled its enrollment marketing service when it entered a partnership whereby "NRCCUA will assume responsibility for managing, renewing, and maintaining our existing university contracts and become the exclusive reseller of our digital Enrollment Marketing services for colleges and universities" (Chegg, 2017, p. 87).

To this day, Chegg remains a successful company – recording revenue of $644 million in 2020 (Chegg, 2020) – raising the question, why did Chegg's foray into the student list business fail? Enrollment management consultants we spoke with had little respect for names provided by Chegg and similar providers. A principal concern was coverage; universities often target particular subsets of prospective students but the names contained by these lists were a sparse, scattered subset of all prospects. Second, consultants criticized the low quality of these data (e.g., many missing fields), a function of names being generated from voluntary online survey responses. Another concern was timeliness. College Board and ACT generate student list data early in the college search process (e.g., PSAT, PreACT). By contrast, names cannot be derived from college search websites until students start searching for college. Finally, it may be difficult to create a foothold in the student list business based on user data from college search engines, a competitive market with few barriers to entry.

4.3 Acquisitions and Concentration: The EAB Story

Whereas market entry in the 2000s promised greater competition in the markets for student list data and enrollment management consulting, a striking dynamic over the last decade has

been acquisitions and growing concentration, both in the broader EdTech industry and in the enrollment management industry (Bradley, 2021; Rogers, 2014). Another striking dynamic has been the emergence of and transformation of the consulting firm EAB, formerly Royall & Company. Although EAB does not sell student lists, by 2021 EAB arguably joined College Board and ACT as one of the three most important players in the student list business. Whereas College Board and ACT student lists can be purchased by any accredited university, only EAB clients have access to the prospect databases controlled by EAB. How did this come to be? From our perspective as outsiders – relying on the financial news, press releases, and background conversations with enrollment management professionals – the EAB story is substantially a story about acquisitions.

The origins of EAB trace to 1983 when Bill Royall founded Royall & Company to provide direct marketing and fundraising for Republican political campaigns (Jump, 2020). Royall & Company did not sign its first university client for several years, but by 1995 universities became the primary focus. In 2015, Royall & Company was acquired for $850 million by the the Advisory Board Company (NASDAQ:ABCO), a technology and consulting firm operating in the health sector, which purchased Royall as the centerpiece for its entrance into the higher education consulting market (StreetInsider, 2014). StreetInsider (2014) reported that "central to the Advisory Board's higher education growth strategy is developing service offerings to aid members across the entire student life cycle" (para.2). StreetInsider (2014) described Royall as

> the higher education industry leader in strategic, data-driven student engagement and enrollment management solutions, financial aid optimization, and alumni fundraising. Royall's solutions help non-profit colleges and universities achieve such critical institutional goals as strengthening national reputations, broadening student enrollment, improving overall academic profiles, and enhancing revenue" (para.3).

Given that Royall had about 350 clients at the time, the price tag of $850 million speaks to the value the investment community placed on the business model and proprietary platform developed by Royall. Robert Musslewhite, CEO of the Advisory Board, said that the acquisition:

> creates a one-of-a-kind resource to enable higher education executives to apply data and analytics to both engage and enroll the right students and help those students graduate on time. Royall's leadership position in higher education, its track record of delivering measurable ROI, its exceptional and experienced staff, and its analytics-driven, scalable business model – which translates into highly recurring revenues and strong bottom line performance – make it a compelling strategic and financial fit... Over time, we also expect to realize additional value by expanding member relationships across the portfolio and developing new programs and technologies based on the joint assets (StreetInsider, 2014).

This last sentence contains two nuggets – "expanding member relationships across the [Advisory Board] portfolio" and "developing new programs . . . based on joint assets" – that remain prophetic although the Advisory Board Company no longer exists.

In 2017, the Advisory Board sold its healthcare business to a subsidiary of UnitedHealth Group for $1.3 billion and its education business to Vista Equity Partners for $1.5 billion (Hansen, 2017). The Royall & Company division was renamed EAB and operates as a standalone business.

Under Vista, the largest private equity firm in the world, EAB pursued acquisitions that increased the value of existing activities and also leveraged relationships with other subsidiaries of Vista, particularly PowerSchool. EAB acquisitions include YouVisit (2019), Cappex (2020), Hobsons/Starfish (2021), Wisr (2021), Seramount (2021), Rapid Insight (2021). We discuss acquisitions and partnerships connected to the student list business.

YouVisit and Cappex acquisitions. In 2019, EAB acquired YouVisit, which (EAB, 2019) described as "the leading provider of virtual tour and interactive web content for higher education," stating that the acquisition "further enhances EAB's ability to help colleges and universities find, engage, and enroll new students" (para.1). EAB CEO David Felsenthal said that " 'Integrating EAB's enrollment platform with YouVisit's market-leading student-centric content will help to drive even greater success for our partners' " (EAB, 2019, para. 5).

In September 2020 EAB announced the acquisition of Cappex, a college/scholarship search website reportedly used by 1.5 million students each year (EAB, 2020). The press relase highlighted market research indicating more prospects are using college search sites and Chris Marett, President of EAB Enrollment Services, said the acquisition " 'will enable EAB partners to identify and engage prospective students who do not interact with schools through the traditional channels, such as campus visits or standardized tests. By expanding schools' inquiry pools, we can help institutions grow and diversify their student populations"'(EAB, 2020, para. 5). Prior to the acquisition Cappex sold lists directly to universities. Cappex CEO Alex Stepien, said " 'Leveraging EAB's enrollment data and analytics expertise and experiential marketing services, such as YouVisit virtual tours, we can deliver more personalized and impactful student experiences' "(EAB, 2020, para. 6).

We analyze these deals using concepts from resource dependence theory. Cappex generates proprietary student list data. To the extent that Cappex users do not take College Board or ACT assessments, Cappex provides names that cannot be purchased from College Board or ACT. Let us conceive of EAB as simultaneously being a supplier of student list data and an enrollment management consulting firm. Focusing on EAB as a supplier of names, the Cappex deal is a vertical acquisition because EAB is acquiring a firm that provides a key input. As a consulting firm, only EAB provides the names of Cappex users to EAB clients, rather than selling names to any university the way College Board and ACT do. Access to Cappex names make EAB clients – and prospective clients – more dependent on EAB. Although EAB price schedules are not publicly available, the price universities pay for access to Cappex names may be built into the contract they sign with EAB.

EAB virtual tours are an inquiry engine because they record IP address, behavior on the

platform, and submitted contact information, helping university clients know "who your visitors are and where their interests lie so that you can effectively recruit them" CITE. If we conceptualize inquiries as university-specific lists, then EAB virtual tours is a product that produces university-specific student lists. The Cappex and YouVisit acquisitions – now fully integrated within the EAB platform – are synergistic in that prospects searching for colleges on Cappex are served the virtual tours of EAB clients. Therefore, purchasing Cappex increases the value of the YouVisit virtual tour asset in that Cappex users are fed YouVisit virtual tours, which yield inquiries for clients that pay EAB for virtual tours.

Naviance/Intersect Partnership with PowerSchool. EAB's most profound foray into the student list market occurred when Hobsons was broken up and split between EAB and PowerSchool, two subsidiaries of Vista Equity Partners (Feathers, 2022b). Hobsons, subsidiary of British media company Daily Mail and General Trust (DMGT), was an Ed Tech company that provided consulting services to schools and universities. It also operated three software-as-service products: Naviance, college search/planning/application software sold to high schools; Intersect, a recruitment platform that connects universities to Naviance users; and, Starfish, a student success platform for colleges and universities.

Investigative reporting by Feathers (2022a) explained how Naviance and Intersect work in concert. Naviance is reportedly used by more than 10 million students and by 40% of US high schools (PowerSchool, 2021b). High school students use Naviance to research potential colleges, request recommendations, submit transcripts, and submit applications. Intersect enables "colleges and universities to target students [Naviance users] with paid advertisements encouraging them to enroll" (Feathers, 2022a). Unlike College Board/ACT list products, Intersect customers (universities) do not receive the contact information of Naviance users. However, like College Board/ACT products, intersect customers control which Naviance users will receive recruiting messages by filtering on criteria such as geographic location, academic "ability," intended majors, and whether the student used Naviance to "research competitor institutions" (Feathers, 2022a).

In 2021, PowerSchool acquired Naviance and Intersect from Hobsons for $320 million and EAB acquired Starfish for $90 million. Given that EAB already had a strong student success platform, the Starfish acquisition can be read as the horizontal acquisition of a competitor. In addition, universities that contracted with Hobsons for enrollment services became became EAB clients, increasing EAB market share. More interestingly, after PowerSchool completed the acquisitions of Naviance and Intersect, EAB "announced an agreement with PowerSchool that makes EAB the exclusive provider of the Intersect student recruitment platform ..., allow[ing] EAB to connect its higher education partners to millions more high school students" (EAB, 2021a, para. 2). In July, 2021 PowerSchool became a publicly traded company (NYSE: PWSC) and the IPO prospectus describes the terms of the partnership with EAB:

> we entered into a reseller agreement with EAB Global, Inc. ("EAB"), a portfolio company of Vista, for them to serve as, among other terms, the exclusive reseller of the Intersect student recruitment platform in the United States and Canada. [The agreement] has a ten-year term and includes annual minimum revenue commitments from EAB. The commitment amount for the first 12-month period was

> $32.4 million, and will increase upon anniversary of the Agreement (PowerSchool, 2021a, p. 42).

How do we analyze this partnership from the perspective of EAB? We begin with the premise that EAB provides enrollment management consulting services and also supplies leads to clients. From this perspective, the partnership can be seen as a vertical integration by which EAB obtains exclusive access to a key input resource. Just like College Board and ACT are exclusive providers of the unique set of names generated by College Board assessments, the Intersect agreement grants EAB exclusive control over the unique set of names and behavioral data generated by Naviance users.

Whereas College Board and ACT use their oligopoly position in the supply of names to charge oligopoly prices, we expect EAB will utilize the Intersect agreement to attract new clients and to charge clients higher prices for the right to recruit Naviance users. EAB promotional material states that, with access to millions of "high school students on Naviance, Intersect is the preeminent provider of high-intent student inquiries and candidates for colleges" (EAB, 2021b, para. 3). In turn, as fewer high school students take SAT/ACT tests, universities experience pressure to pay for Intersect or else they cannot recruit Naviance users. For example, a University of Utah procurement request document states that the "justification" for subscribing to Intersect is that "there is a unique group of prospective students who are only in the PowerSchool Naviance platform [CITE; DOC IN POWERSCHOOL GOOGLE DRIVE]

Furthermore, we expect that EAB will funnel Naviance users towards client universities. For example, the EAB website states that "80% of high school students who connect with a college through Intersect apply to that institution." These issues raise important questions for policymakers. Should access to a substantial share of college-going high school students be restricted to clients of a private firm? Are we concerned that these students are being funneled towards clients of a private firm and away from other universities?

EAB business model. Analyzing the EAB business model is difficult because privately owned companies have neither the requirement nor the incentive to disclose information.[3] The IPO prospectus of PowerSchool, formerly a Vista subsidiary, may provide insight about EAB. PowerSchool (2021a) states that:

> Many of our customers begin their journey with us by using only two of our 15 products on average . . . As customers begin to appreciate the benefits of an

[3]In May 2021, BC Partners – a British private equity firm with over $40 billion under management – announced an investment in EAB ("BC partners joins vista equity partners as an investor in EAB," 2021). In June 2021, Moody's Investor Service "assigned B2 ratings" – a speculative, not of investment grade rating – to EAB debt "consisting of a $745 million term loan and a $125 million revolver," but stated that upon completion of the investment by BC Partners, "Moody's expects EAB's existing debt to be repaid and ratings on these instruments to be withdrawn" (Moody's, 2021, para. 1). In August 2021, the "plan by global investors BC Partners and Vista Equity Partners to acquire joint control over U.S. education company EAB Global Inc. received EU antitrust clearance" (CQ Roll Call, 2021, para. 1). Terms of the deal were not disclosed because all parties are privately owned.

> integrated software platform across student data, classroom learning, office functions and talent management, they increase the number of solutions they buy from us over time, with over 1,000 customers owning 5+ products and over 3,000 customers owning 3+ products . . . Our future revenue growth is dependent upon our ability to expand our customers' use of our platform, and our go-to-market efforts are designed to drive cross-sell growth (p.43).

The PowerSchool quote is consistent with the assessment – made by enrollment management vice presidents and consultants speaking on background – that EAB encourages existing clients to add new products to their consulting agreement.

The PowerSchool quote is also consistent with how EAB frames their *Enroll360* "recruiting ecosystem" as realizing the synergy between YouVisit, Cappex, Naviance/Intersect, Wisr (a peer-to-peer engagement platform acquired in 2021), and the EAB Enrollment Marketing Platform (Koppenheffer, 2021):

> Imagine a high school student today. Let's call her 'Emma.' . . . Fast forward to Emma's junior year. She has begun to think more seriously about college and like many of her peers, she turns to Google to explore options. Emma quickly comes across Cappex, where she's prompted to fill out her ideal college location – close to her hometown in Rhode Island – and her intended major – computer engineering.
>
> . . . After connecting with her counselor during her senior year, Emma has narrowed down her list of schools to five and enters her shortlist in Naviance. From there, she explores your university's website, she comes across a link to your virtual tour. . . After the tour, she starts to see Instagram ads for your school depicting students in that same lab. And after receiving an email from your school with an invite to apply via a personalized application, she applies.
>
> Emma is admitted to four of her five top schools, including yours. But to help her decide where to enroll, she wants to hear what student life is actually like. Through Wisr, Emma connects one-on-one with Kayleigh, a current junior and student ambassador at your institution studying computer engineering.

4.4 Incumbents Seek Competitive Advantage

Another key dynamic over the past decade is that College Board and ACT – the incumbent oligopoly – has sought to maintain their competitive advantage in the student list market by developing and/or acquiring new products and features. The student list business of College Board and ACT are largely byproducts of their core assessment businesses. Data about the annual revenue College Board and ACT generate from selling names is not publicly available. However, College Board recorded $130 million in revenue from "College Opportunities & Enrollment" in 2019 [CITE COLLEGE BOARD FORM 990 2019] – the business

that includes selling names – compared to $100 million in 2017 [CITE COLLEGE BOARD FORM 990 2017] and $63 million in 2010 (Belkin, 2019). This section describes the sources of competitive advantage of College Board and ACT student lists, and then analyzes moves over the last decade to maintain and leverage this competitive advantage.

Competitive advantage. The College Board and ACT have maintained their competitive advantage in the student list industry in three important ways. First, the vast majority of college-going high school students take the SAT or ACT, although this is likely to dramatically change as the test-optional/test-blind college admissions movement threatens coverage. Adding to the coverage advantage of College Board's and ACT's student list databases, some states have also adopted either the ACT or the SAT as a requirement for high school graduation (Kate, 2021). A second source of competitive advantage is data quality. Compared to student lists generated from college search engines, list data from College Board and ACT possess more-reliable indicators of academic achievement and less missing data with respect to contact information, student characteristics, and preferences. Higher data quality enables universities to filter more precisely when deciding which names to purchase and also makes the lists universities receive more useful for recruiting purposes.

A third competitive advantage is timeliness. Names generated from the PSAT and PreACT assessments enable universities to begin recruiting high school students early in their high school career, which is viewed as important for successful recruiting campaigns. By contrast, lists generated from college search engines can only target prospects who have already begun their college search process. In Fall 2021, College Board introduced the new "Prospect Notifications" feature, which improves on the timeliness competitive advantage by enabling universities to obtain the contact information of prospects who meet the criteria of recent student list purchases "as soon as they join the [Student Search Service] program".

Search Filters for Micro-Targeting. The search filters on College Board and ACT student list products enable to universities to target particular segments of prospective students with great precision, particularly when they are used in combination (e.g., test score range and GPA range and particular zip codes). Over the past decade, College Board – and to a lesser extent ACT – has developed new search filters to facilitate enhanced micro-targeting of prospects.

The College Board Segment Analysis service allocates each high school (over 33,000 high schools) to one of 29 high school (HS) clusters and allocates each Census tract (about 44,000) to one of 33 educational neighborhood (EN) clusters based on the college-going behavior and the socioeconomic characteristics of the school or neighborhood. Customers of Segment Analysis Service could purchase a list that contains prospects who scored within a particular range on the SAT, who live in a particular set of metropolitan areas, and who are associated with particular combinations of neighborhood and high school cluster (e.g., live in neighborhood cluster "EN:61" and attend any high school OR live in neighborhood cluster "EN:73" and high school categories "HS:65" or "HS:70"). However, Segment neighborhood and high school clusters are highly correlated with both racial and income demographics. For example, in the College Board (2011) table of "Neighborhood cluster sample characteristics" (p. 5), neighborhood cluster "EN:61" is 30% nonwhite and has median income of $123,858 while neighborhood cluster "EN71" is 97% nonwhite and has median income of $42,661.

Similarly, high school cluster "HS:70" is 33% nonwhite and has median income of $105,721 while cluster "HS:71" is 98% nonwhite and has median income of $43,391 (College Board, 2011, p. 6).

Drawing on the place-based whiteness as property framework by Salazar (onlinefirst), we argue that student list products are designed in ways that benefit whiteness. First, Communities of Color who have been historically underrepresented in higher education are less likely likely to be in College Board/ACT student list databases because of lower rates of test-taking, which are due in part to concerns about racial bias in standardized tests. Second, College Board student list filters encourage universities to target prospects based on AP scores, but Black, Latinx, and Native students are less likely to attend high schools that offer substantial AP curricula. Third, small geographic areas are highly correlated with race, due to centuries of laws and policies that promoted residential segregation. However, College Board and ACT student list products allow universities to target prospects within small geographic areas, including particular zip-codes [CHECK BOTH CB/ACT ALLOW 5-DIGIT ZIP], making it possible for public and private non-profit universities to purchase lists that avoid Communities of Color while predatory for-profit colleges target Communities of Color.

Fourth, "geodemographic" filters enable universities to target prospective students based on the historical college-going behaviors of students from the same high school and the same neighborhood. These school and neighborhood categories are highly correlated with race, resulting in filters that encourage universities to target prospects from schools and communities with college-going behaviors associated with whiteness. In Fall 2021, College Board doubled-down on geodemographic filters by adding three "Environmental Attributes" search filters to the Student Search Service. The three new filters are: Travel Rates (out-of-state), Travel Rates (distance from home), and AP engagement rates. Using out-of-state travel as an example, each high school is categorized as "low," "medium," or "high" in terms of the percentage of college students who attend an out-of-state university. In turn, a Student Search Service customer could purchase prospects who live in a particular metro area, with PSAT scores within some interval, and attend a high school with a "high" out-of-state travel rate.

College Board and ACT student list products enable universities to target prospects who identify with particular ethnic and racial groups. In our data collection, these filters were often used to target students who identified as Black, Latinx, American Indian/Alaska Native, or Native Hawaiian and other Pacific Islander. On the surface, race/ethnicity on student list products may promote racial diversity in college access, particularly given the trend away from race-conscious admissions policies.

Drawing from the theory of racial capitalism (Leong, 2013), we argue that race/ethnicity filters tend to privilege whiteness, even when they are used to target non-white prospects. Leong (2013) builds on Harris (1993). Whereas "nonwhiteness" was historically "used as a basis for withholding value by denying nonwhite people legal rights and privileges" (Leong, 2013, p. 21555), nonwhiteness now confers social and legal value as a function with society's preoccupation with diversity. The commodification of nonwhiteness – a "commodity to be pursued, captured, possessed, and used" (p. 2155) – encourages organizations to prioritize

representational diversity, which Harris (1993) argues is exemplified by universities enrolling and marketing a diverse student body as a marker of status and prestige. However, selective universities pursue representational diversity while simultaneously privileging characteristics associated with whiteness (e.g., a "good" high school, "interesting" extracurricular activities) (Jack, 2019; Stevens, 2007; Thornhill, 2019). By combining race/ethnicity filters with academic achievement (e.g., AP test score range), geographic, and/or geodemographic filters, universities are able to screen for Students of Color who have characteristics associated with whiteness, often as a function of attending a predominantly white high school.

Incorporating college search engines. Both College Board and ACT incorporated college search enginese into their student list products. College Board developed the college search website "BigFuture." In 2021, College Board added the "Interest in My College" search filter to Student Search Service, whereby universities can filter for prospects who expressed interest in their university when searching for colleges on BigFuture. ACT achieved similar ends by acquiring NRCCUA in 2018. Years earlier, NRCCUA had replaced the paper surveys that students filled out during school with an online college search engine named myOptions. The ACT Encoura platform incorporates student list data derived from ACT assessments and data derived from the myOptions search engine.

In Fall 2021, Student Search Service introduced "Interest in My College," a modest enhancement that utilizes data from the "BigFuture" college search website owned by College Board. BigFuture encourages prospective students to create a list of universities they are interested in. "Interest in My College" enables universities to filter prospects who expressed interest in their university when purchasing student lists.

Enrollment management consulting

According FairTest, the number of baccalaureate granting universities with test-optional or test-blind admissions policies increased from 1,071 "immediately before the COVID-19 pandemic" to 1,815 for the Fall 2022 admissions cycle CITE.

4.5 The Test Optional Movement

The test-optional movement is an existential threat to College Board and ACT student list products. According FairTest.org, "immediately before the COVID-19 pandemic," 1,071 baccalaureate granting institutions had test-optional or test-blind admissions policies [CITE]. As of December 2021, "more than 1,815 colleges and universities now practice test-optional or test-blind admissions" for the fall 2022 admissions cylcle and the "list includes nearly all of the nation's most selective colleges and universities" [CITE]. Furthermore, at least 1,400 institutions have extended test-optional and test-blind policies through the fall 2023 admissions cycle [CITE], which suggests that the adoption of these policies will persist beyond the Covid pandemic.

The number of SAT and ACT test takers have also declined in recent years. The number of SAT test takers was 2.14 million for the class of 2018 [CITE], 2.22 million for the class of 2019, 2.20 million for the class of 2020 [CITE], and 1.51 million for the class of 2021 [CITE].

The number of ACT test-takers changed from about 1.91 million in 2018, 1.78 million in 2019, 1.67 million in 2020, and 1.3 million in 2021 [GET NON WIKIPEDIA CITE].

Although the pandemic complicates the interpretation of these trends, scholarship on organizational behavior suggests that the college entrance exam is dead. Empirical scholarship on institutional theory has analyzed the processes of institutionalization – how institutions emerge – and de-institutionalization – how they die – across many industries (Davis, 2005; Scott, 2008). In the latter stages of institutionalization, organizations adopt the practice for the sake of legitimacy (e.g., "because that's what legitimate organizations do"), often because this practice has become the norm for their more prestigious peers. The institutionalization of the SAT/ACT college entrance exam is a textbook example; once leading universities adopted the test as an admissions requirement, other universities followed suit.

Empirical scholarship on de-institutionalization consistently finds that even well-established institutions cannot persist in the face of prolonged adverse external conditions (Ahmadjian & Robinson, 2001; e.g., Davis, 2005; Davis, Diekmann, & Tinsley, 1994; Kraatz & Zajac, 1996). The metaphor of a breaking dam illustrates a typical de-institutionalization process. De-institutionalization is caused by macro forces in the external environment that become hostile to the institution (Karen, 1991), creating cracks in the dam. Macro causes of de-institutionalization include market forces, technological change, social movements, and destabilizing events (e.g., 1973 oil crisis, 9/11 attacks, Covid pandemic). In the case of the SAT/ACT, a broad social movement, consisting of well-organized coalitions, attacked the legitimacy and legality of the college entrance exam. Meanwhile, advances in data science make standardized tests less critical for evaluating applicants from different high schools. "Early adopter" colleges and universities began adopting of test-optional and test-blind admissions policies in the 2000s. The flow of adopters increased in the 2010s. At the onset of Covid, students could not take the SAT/ACT exam and universities responded by mimicking earlier adopters, catalyzing the de-institutionalization process. In January 2022, ACT CEO Janet Godwin said, " 'I'm not surprised by the test-optional movement. It's the new normal. It's here to stay' " [CITE]. De-institutionalization is complete.

How will de-institutionalization of the SAT/ACT affect the student list business? As fewer universities consider the SAT/ACT for admissions, fewer high school students will take the test. In turn, College Board and ACT databases will contain a shrinking share of prospective college students, undermining their competitive advantage in the domain of coverage. College Board and ACT are attempting to convince states to adopt the SAT/ACT as a statewide high school graduation requirement (Kate, 2021), but this strategy is unlikely to offset the long-term decline in test-takers. College Board can sell the names of AP test-takers, but the availability of AP curricula faces obvious racial and socioeconomic inequality. As the coverage of standardized tests erode, college search engines and software used by high schools will become more important sources of student list data and firms that control data derived from these sources will compete for market share ceded by College Board and ACT. Large suppliers (e.g., PowerSchool, EAB) will attempt to recreate oligopoly conditions. Whereas College Board and ACT sold names to any accredited institution at a fixed price per prospect, these large suppliers have learned to maximize profit by restricting access to universities that pay for expensive subscription or consulting services.

How will de-institutionalization of the SAT/ACT affect college access? We anticipate a college access crisis. In the U.S. market for higher education, college access depends substantially on postsecondary institutions finding prospective students and encouraging them to enroll. Policy debate about the effects of test optional has focused on the process fo college *admissions*, but the SAT/ACT exams have been central to the broader process of college *access*. A by-product of these exams, student lists are an essential mechanism that connects postsecondary institutions to prospective students. Without the emergence of viable alternatives, we anticipate that the test optional movement will create a crisis in college access because postsecondary institutions will be unable to connect with prospective students. We are skeptical whether for-profit student list vendors – even in aggregate – will attain the level of coverage previously attained by College Board and ACT.

5 Recommendations for Practitioners

5.1 Concerns about the Student List Business

Why should we care about the student list business? Research suggests that participation in College Board and ACT student list products has large, positive effects on the access and degree completion outcomes of millions of students each year (Howell, Hurwitz, Mabel, & Smith, 2021; Moore, 2017). Further, these effects appear to be relatively larger for first-generation students and students from underrepresented race/ethnicity groups (Howell, Hurwitz, Mabel, & Smith, 2021).

Unfortunately, the design of College Board and ACT student list products makes it likely that student from rural communities, low-income communities, and communities of color are systematically excluded from student list purchases. Because lists are paid for by universities, student list products are designed around university enrollment goals rather than equality of opportunity for students. Neither the standardized assessments nor the student list filters have ever been neutral. More recently, College Board and ACT have added elaborate filters that enable universities to micro-target prospects based on models of the past behavior of nearby peers. The rationale for new filters is to help universities make "efficient" name buys that target "right-fit" prospects. Many talented prospects are excluded in the name of efficiency. However, universities only care about efficient name buys because the price of names is so damned high.

College access over the past 50 years has depended on the SAT and ACT exams being strong institutions, having enjoyed taken-for-granted legitimacy amongsts admissions offices and college-going high school students. A long-standing source of exclusion is that students who do not take these assessments – due to mistrust or lack of opportunity – are excluded from the student list products. Today, the test optional movement has deinstitutionalized the college entrance exam. In turn, fewer college-going high school students will take the test, which will create a college access crisis caused by the eroding coverage of College Board and ACT student list products. Over the past twenty years, the free market produced many firms eager to acquire market share ceded by the testing agencies. The firms that remain

have learned that the key to profit is acquiring proprietary control over a unique set of prospects that universities want to enroll. The profit-seeking behavior of these suppliers may not coincide with the goal of equality of opportunity for students.

5.2 University Leaders

Vice presidents of enrollment management serve at the pleasure of the president, who serves at the pleasure of the board, so big-picture decisions about enrollment are made at the top. University presidents and trustees need not become entangled in the details of student lists, but need to make thoughtful decisions on the big issues that drive student list purchases.

Efficiency or equality of opportunity. The enrollment management profession is built upon an intellectual foundation of micro-economics in which universities attempt to maximize some combination of enrollment goals – selectivity, academic profile, revenue, diversity – given some set of constraints (e.g., budget, student demand) (Cheslock & Kroc, 2012; DesJardins & Bell, 2006). This model encourages encourages universities to allocate resources efficiently in order to achieve organization-level enrollment goals.

University leadership should discuss the extent to which the university should should be oriented to equality of opportunity versus oriented to the efficient maximization of organization-level enrollment goals. While many struggling private non-profits may not have the luxury of this discussion, most public universities do not face imminent mortality and were founded to serve some vision of equality of opportunity.

Directing an enrollment management office to prioritize equality of opportunity would substantively change recruiting behavior, including name buys. Consider an enrollment goal to increase enrollment from students who identify as Black or Latinx. Universities oriented to efficient maximization might use the College Board *Segment Analysis Service* to buy the names of Black and Latinx students from affluent, high-achieving schools and communities in an attempt to simultaneously maximize racial divesity, tuition revenue, and academic profile. A university oriented to equality of opportunity would buy lists with a focus on providing enrollment opportunities for all Black and Latinx students, regardless of the characteristics of their school and community.

Equality of opportunity is unapologetically inefficient. That is, with respect to an organization-level enrollment target (e.g., number of Pell recipients), expenditure on recruiting would exceed that which is necessary to achieve the target. However, this excess expenditure is not wasteful. Rather, if the organizational mission values equality of opportunity, then recruiting expenditure oriented to equality of opportunity is **directly** achieving the organizational mission. University leaders should discuss what the organization cares about and direct the enrollment managment office accordingly.

Additionally, universities have adopted offices of equity, diversity, and inclusion (EDI), which are charged with improving the campus climate experienced by students. Campus climate is substantially a function of which porspects a university enrolls. Therefore, we recommend that EDI leaders be included in big-picture conversations about enrollment goals and who the university will recruit.

Develop in-house enrollment management capacity. Boards do fire presidents when enrollment numbers do not meet targets. In turn, turnover in enrollment management is high because presidents are jumpy about issues they can get fired over. Every time an enrollment management vice president – and likely many of their staff – is let go, the organization loses in-house capacity. Given that recruiting is simultaneously important, competitive, and complicated, constant turnover in the enrollment office is a vicious cycle that undermines in-house capacity and compels universities to rely on consultancies to avert disaster in the coming recruiting cycle.

We recommend that university leaders commit to developing the long-term in-house capacity of their enrollment office. Develop a plan around which capacities the office should have in-house, and how to obtain those capacities through hiring and professional development. A long-term approach means not firing everyone when enrollment does not meet targets. This may require educating the board about what is possible.

Given the complexity and scope of undergraduate recruiting, universities need not perform all activities in-house and consultancies will continue to play an important role. However, we recommend hiring consultancies for advice and implementation around specific activities and as big-picture thought partners. At universities where equality of opportunity central to the organizational mission, student list purchases should be made by a university employee who understands the organizational mission and who understands the internal and external constituents. The process of buying names is complicated by eroding coverage of College Board and ACT and the entrance of niche vendors. Unless the university possesses substantial in-house expertise, we recommend hiring a consultancy for advice about which lists to purchase from which vendors.

We recommend against wholesale outsourcing of the recruiting function. Universities considering this approach likely have little in-house capacity and, thus, are in a poor position to evaluate the efficacy of services the consultancy is pitching. Many recruiting indicators can be easily gamed (e.g., number of applications, selectivity). Thus, wholesale outsourcing is a very expensive approach that may result in short-term gains to easily gamed indicators, especially when the enrollment office lacks expertise.

At minimum, the university should treat the enrollment office like a general counsel. The general counsel consists of a small cadre of highly skilled employees who are committed to the mission of the university, and who have sufficient expertise to make good decisions about when to retain outside counsel. Similarly, the emrollment management office must have sufficient expertise to make good decisions about which activities should be outsourced to which consultancies.

5.3 Recommendations for Admissions and Enrollment Professionals

[KARINA TAKE LEAD ON THIS SUB-SECTION]

- Execute student list buys on your own, often working with EM consultancies

- Compare student list buys to comparison groups (e.g., state demographics, county demographics; who is being included? Who is being excluded?

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