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Abstract: "Elite" and "flagship" are two influential groupings used to conceptualize differences among higher education institutions, but rarely defined. We derive common features attributed to these groupings from a content analysis of 40 years of higher education literature. Next, we explore the relationship of these features to other institutional characteristics with multiple regression analyses of organizational-level data. We uncover "organizational tautology," a self-reinforcing manifestation of status beliefs and boundary work. Elite and flagship categories represent stylized facts used to legitimate groupings based on organizational status, reinforcing exclusionary beliefs by higher education insiders and their positions within an unequal higher education system.

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The idea that some colleges and universities offer better education and opportunities to their students is pervasive, yet the determinants of quality are ambiguous. Researchers generally avoid normative terms like "good college," but do use measures such as admissions selectivity and organizational resources as proxies for quality (e.g., Bowen et al., 2005; Carnevale et al., 2020; Karabel, 2005; Karabel & Astin, 1975; Taylor & Cantwell, 2019). Scholars of higher education advance notions of status and quality through proximate categories such as "elite" and "flagship." Widely accepted by researchers, policymakers, and the general public, these categories reference taken-for-granted understandings about which institutions are highly desired and offer the best opportunities (e.g., Baker, 2019; Bastedo & Jaquette, 2011; Hoekstra, 2009; Hoxby & Turner, 2015; Karabel, 2005; Posselt, et al., 2012; Stevens, 2007). Elite and flagship categories also assist with classifying higher education institutions for comparisons along different metrics of quality, diversity, equity, and inclusion (Byrd, 2021; Espeland & Sauder, 2016). These categories are used in sample selection in research studies and for targeting interventions in policy proposals. To our knowledge, neither concept benefits from a standard and widely accepted definition, which undercuts assumptions of lexical precision and consensus among experts of categories used in social science research.

In this study, we seek to understand how higher education researchers have used elite and flagship categories and to analyze the potential consequences of their use. We examine how often researchers use the terms "elite" and "flagship", how these terms are defined, and how the sample of institutions that belong to each category may shift, depending on the definitions applied. We aim to add conceptual and definitional clarity to these widely used terms. Knowing what other researchers generally mean when they use these terms can support scholars as they design research studies and describe higher education systems and institutions. Similarly, policy analysis, accountability assessments, and policy interventions often use these terms. A critical assessment of these terms supports carefully scrutinizing policy assessments and proposals.

Over a decade ago, Bastedo (2012) called for building theories that explain how organizational structures are formed and function in higher education. Bastedo identified the "self-fulfilling prophecy" as a likely candidate for explaining the structure and categorization of higher education institutions. The sociology of organizations theorizes data are used to create social reality by producing "stylized facts," or simplified accounts of reality that become accepted conventions (Hirschman, 2021). Organizational approaches in education scholarship, which relies heavily on categories (Brankovic & Cantwell,

2022), have not fully engaged with developments in other fields, such as sociology, about the production and usage of categories that can become components of organizational identities, and can assist with addressing the persistent disconnect between organizational theory and scholarship focused on access, equity, and social justice (Bastedo, 2012). Building on research examining organizational diversity and classification in U.S. higher education and sociological theories of quantification, status beliefs, and boundary work, we develop the concept of *organizational tautology* to guide our analysis.

Researchers, like policymakers and the public, need schemata to understand and describe the differences between higher education institutions. Elite and flagship categories are schematic devices used to delineate organizations based on their status within an unequal higher education system. Organizational tautology is a recursive process that reinforces status beliefs by applying terms such as "elite" or "flagship" to describe organizations and their relationships to one another. Our study highlights the importance of organizational status beliefs to defining elite and flagship institutions within U.S. higher education and how higher education inequalities are understood.

Our extension of organizational theory through an examination of the development and usage of "elite" and "flagship" to describe higher education institutions is aided by a sequential multi-method research design. First, we conducted a content analysis of peer-reviewed articles using one or both institutional categories published in 12 journals that consistently publish on topics related to higher education between 1980 and 2020. Through the content analysis we tracked the frequency scholars used "elite" or "flagship" and how the categories were defined. Second, we explored the organizational correlates of the flagship and elite criteria uncovered through our content analysis using linear probability and Poisson regression modeling. To understand the relationship between organizational characteristics and the definitional criteria that we identified in the literature, we assembled a cross-sectional organizational dataset using federal data from the National Center for Education Statistics' (NCES) Integrated Postsecondary Education Data System (IPEDS) with non-federal sources for analysis. This step provides a window into the sorts of institutions that researchers are signaling (intended or not) when they refer to flagship and elite institutions in a given moment. Our multi-method approach allows us to understand what organizational characteristics were associated with elite and flagship categories and how the institutions included in these categories can vary when different and multiple criteria were applied. This variation can make organizational comparisons and policymaking in relation to such analyses less effective, particularly when attempting to address the many inequalities existing across the U.S. higher education system.

Organizing a Complex Higher Education Landscape

Categories play an important role in social organization; signaling what organizations do, the social space they occupy, and how they differ from other organizations. Categories guide behavior, establish appropriate decision-making criteria for members of the category, and offer guidance on how to respond to audiences. For example, tax status categories convey presumed social roles of an organization (i.e., for-profit organizations are self-interested and nonprofit organizations are socially motivated) and provide broad guidance for organizational mission and prioritization (Galaskiewicz & Barringer, 2012). Categories also help establish and reproduce status hierarchies and influence organizational performance. Organizations that conform to category expectations, and do not straddle multiple categories, tend to outperform organizations that defy category expectations or straddle them (Hsu et al., 2009). The assignment of labels to categories and organizations sets a wide range of conditions for how organizations are perceived and expected to behave. Pontikes & Hannan (2014) note, "a label not only represents a concept…but also conveys broad agreement about the pairing of a concept with a label, which gives the label a social meaning" (p. 313). Thus, tracing the use and application of categories to key organizations such as labeling colleges and universities as a flagship or elite in higher education studies can help reveal the meaning of these concepts both within a specialized academic field as well as with more general audiences.

Scholars define categories and delineate them empirically through processes of quantification. How others react to and use these categories can legitimize their importance for organizational behavior and shape perceptions of higher education institutions (Bastedo & Bowman, 2010, 2011; Bowman & Bastedo, 2009; Chu, 2021; Espeland & Sauder, 2016; Espeland & Stevens, 1998; Hirschman et al., 2016; Porter, 2020). Comparison via categories has a long history in US higher education. By the mid-twentieth century, the scale, scope, and complexity of US higher education increased, and education policymakers adopted systems-thinking approaches calling for differentiation among providers to meet overall social needs. Efforts to distinguish between higher education institutions both reflected and propagated beliefs about status differences among institutions (Wilbers & Brankovic, 2021). Systems of classification also require a knowledge infrastructure with systematic data collection (Hirschman, 2021), which came to fruition in higher education with the 1965 Higher Education Act (HEA) mandating that postsecondary organizations participating in federal financial aid (Title IV) programs submit data on their operations through a set of surveys.

Commercial entities are also active in comparing higher education institutions. *US News and World Report* (*USNWR*), which uses federal and other data, published its inaugural annual rankings of US colleges and universities

in 1983. The National Universities and Liberal Arts Colleges categories are the most prominent, but *USNWR* now features other rankings. These rankings introduce a false sense of precision about differences among institutions. The boundary between a high ranking or not is subjective and not often specified. Similarly ambiguous are the *USNWR* divisions between national and regional campuses. Notably, rankings influence organizational behaviors and student perceptions (Bastedo & Bowman, 2010; Espeland & Sauder, 2016). Espeland and Sauder's (2016) pivotal study of law schools shows that rankings work to transform the organizations to more closely resemble the rankings' structure through two mechanisms: commensuration and self-fulfilling prophecies. Commensuration is the process of simplifying the information people pay attention to concerning the qualities of an organization by turning these many qualities into a single quantity or metric (Espeland & Sauder, 2016; Espeland & Stevens, 1998). Examples of commensuration include truncating the importance of scholarship by focusing on impact ratings of journals or individual scholar h-indexes (Pardo-Guerra, 2022), or using the number of books a library has to equate to the "quality" of that library (Espeland & Sauder, 2016). The self-fulfilling prophecy (Merton 1968a, 1968b) changes universities because the people who inhabit them begin to behave in ways that reflect the rankings' priorities. Insofar as elite and flagship categories resemble rankings by positioning organizations hierarchically, use of these terms may similarly transform organizations. However, we do not assume categories and rankings operate identically, and offer a related but distinct theorization.

Elite and Flagship Categories as "Stylized Facts"

Categories used to convey complex data and analysis simply are sometimes called stylized facts. Stylized facts such as organizational categories resulting from empirical analysis are integral to sorting complex organizational landscapes such as higher education (see Hirschman, 2016, 2021). Examples include identifying research universities by research expenditures and doctoral degree awards (Carnegie Classifications), Hispanic Serving Institutions (HSI) when Hispanic and/or Latinx enrollments exceed 25% of total student enrollment (Department of Education), and using admissions rates and survey data of administrators' perceptions to rank campuses (*USNWR)*. Quantification shapes these stylized facts by creating categories or groupings (categorization), procedures and rules for assigning attributes, people, or phenomena to those categories (classification), counting the frequencies of people or objects in those categories (enumeration), and making meaning of these measurements and how they can be used to inform decisions and perspectives of organizations, communities, or social phenomena (valuation) (Byrd, 2021; Espeland & Sauder, 2016; Hirschman et al., 2016).

Some categories are more credible than others because they are informed by theory or reflect well-established differences in mission or organizational faction, gaining legitimacy over time through the evolution of the knowledge infrastructure (Fujimura, 1987; Hirschman, 2021). Yet, no categories are natural and immutable, and all are socially constructed and historically contingent within systems of status, power, and inequality (Byrd, 2021; D'Ignazio & Klein, 2020; Espeland & Sauder, 2016; Garcia et al., 2018; Gillborn et al., 2018). Categories can shape organizational behaviors and outcomes, and take on further importance through resource availability by crossing a quantitative threshold such as the enrollment measure for HSI designation (Garcia, 2019; Vargas, 2018; Vargas & Villa-Palomino, 2019). However, seeking additional resources through categorization can undermine the concept informing the category, such as when institutions apply for federal HSI funding but do not use the funding to support Hispanic and Latinx students. Garcia (2019) and Aguilar-Smith (2021) recognize the value of federal designation and resources for institutions enrolling large numbers of Hispanic and Latinx students while also critiquing the idea that the HSI category necessarily signals a particular commitment to serving those students. Moreover, as research on institutions seeking HSI designation shows, stylized facts shape organizational decisions and influence opportunity and inequality across the higher education system (Aguilar-Smith 2021; Aguilar-Smith & Yun, 2023; Vargas, 2018; Vargas & Villa-Palomino, 2019).

Organizational Tautology: Elite and Flagship as Organizational Status Beliefs

"Elite" and "flagship" are two frequently used categories that reflect how status beliefs overlay organizational inequalities in higher education. Identifying an institution as a flagship is reserved for public institutions, and gestures toward the perspective that one institution leads all others in a state. Early conceptions identified flagships as public institutions with certain levels of credibility, resources, and "carefully constructed prestige" (Kerchner & Schuster, 1982, p. 127), or as reaching the "highest classification" among institutions in the state (Astin, 1985) that continue in contemporary framing of "national" and/or "prestigious" profiles (Bowen et al., 2005, 2009). Some scholars argue that only one flagship institution can exist in a state (Cardozier, 1987), while others identify 65 flagships (Astin, 1985). Observers also define flagships as more selective and with higher research intensity than other public institutions (Mugglestone et al., 2019).

Scholars and advocates describe elite institutions in relation to admissions selectivity such as admitting less than 30 percent of applicants each year (Byrd, 2021), and institutional wealth such as large operating budgets and endowments (Moody, 2021; Taylor & Cantwell, 2019; Vaccaro, 2014). Espenshade and Radford (2009) identify elite institutions as "often in the

vanguard of innovative change in higher education" (p. 10). Acknowledging how institutions identified as "elite" are positioned within societal inequality beyond presumptions of educational quality is important, given their centrality to networks of wealth, privilege, and power (Bourdieu, 1990; Bourdieu & Passeron, 1977; Khan, 2012; Mills, 1956; Rivera, 2015). With this context in mind, Byrd (2017) offers the following definition: "Colleges and universities considered 'elite' are those with inordinate restrictions on who is accepted for enrollment, and they carry high levels of status, privilege, opportunity, and most importantly resources, which establishes this upper echelon of higher education as a highly sought-after commodity in society" (p. 6).

Elite and flagship groupings reflect how organizational categories and classifications are influenced by status beliefs (Ridgeway et al., 1998). Status beliefs are "widely shared cultural beliefs that people [or organizations] who belong to one social group are more esteemed and competent than those who belong to another social group" (Ridgeway & Erickson, 2000, p. 560). When organizational quality is uncertain, a "third-order inference" problem can develop whereby people try to discern what others think a higher quality organization could be, reinforcing advantages by relying on already-existing status beliefs (Correll et al., 2017). Organizational status beliefs shape conceptual and methodological decisions to construct the stylized facts of elite and flagship categories, which can subsequently influence organizational decisions and people's perception of higher education institutions. Status beliefs also facilitate a combination of self-fulfilling prophecies and cumulative advantages (Merton, 1968a, 1968b) that can perpetuate inequalities, as some institutions are viewed more favorably or hold higher status than others, and thus, treated more favorably. Perceptions of quality and status mean institutions already in high demand attract more resources and tend to separate from the rest of the field (Cantwell & Marginson, 2018; Chu, 2021).

Identifying institutions as elite or flagships relies on the cyclical reinforcement of status beliefs, operating as boundary work (Lamont, 1992; Lamont & Molnar, 2002). We label this process *organizational tautology* as status beliefs are linked to observed patterns of inequality. Researchers observe organizational inequalities and describe them using off-the-shelf terms such as "elite" and "flagship" to signal differences. Using these terms is not an endorsement of inequality or an intentional reification of categories but rather a pragmatic move to communicate empirical findings to confront observed inequalities. For example, Bowen et al. (2009) grappled with the use of selectivity to differentiate universities as flagships:

> "Use of selectivity is not meant to imply that we endorse 'the rankings game,' which we regard as foolish and hurtful… There is no denying, however, that there are pronounced differences in outcomes, such as graduation rates, across selectivity clusters. Failure to acknowledge these differences would muddy the

> analysis of many important questions… The use of selectivity clusters also allows us to study, on something approaching an other-things-equal basis, the strong relationship between institutional selectivity per se and outcomes such as graduation rates and time-to-degree" (p. 11).

The self-fulfilling prophecy orients these researchers to identify flagships by relying on outcomes of organizational inequalities (i.e., graduation rates). Such tautological thinking is also evident among Harvard and Stanford students who point to the education status hierarchy to justify their own privileged positions (Binder & Abel, 2019). Over time, the self-fulfilling prophecy merges with cumulative (dis)advantages through treatment and policy, reifying these organizational inequalities and providing justifications for status beliefs.

Organizational tautology develops a reliance on commensuration, quantification, and limited analyses for comparisons to further justify organizational distinction behind the air of "imagined objectivity" of those methods without grappling with necessary contexts and sociohistorical processes that create and perpetuate inequalities (Benjamin, 2019; Espeland & Sauder, 2016; Porter, 2020). Recent developments in critical quantitative approaches provide a helpful corrective to such narrow analyses and interpretations (Byrd, 2021; D'Ignazio & Klein, 2020; Garcia et al., 2018; Gillborn et al., 2018; Tabron & Thomas, 2023), and Garcia (2019) and Aguilar-Smith (2021) provide instructive examples of how to engage with quantification and stylized facts such as the HSI designation to promote more equity in higher education. Thus, using elite and flagship categories within the inequality knowledge infrastructure reflect researchers' conceptual and methodological decisions (Hirschman, 2021). Which institutions, then, are considered to be elite and flagships in U.S. higher education? From our multi-method approach, we can better understand how inconsistent we may be with defining these key categories to examine the U.S. higher education system, and how such inconsistency may reinforce particular views of these institutional groups, what higher education inequalities look like, and influence interpretations of inequalities and the policies designed to combat them.

Methods

Our study took a sequential multi-method approach using content analysis of peer-reviewed literature and multiple regression analysis of contemporary organizational-level data to address the following research questions:

1. Historically, how often did researchers use the terms elite and flagship?
2. How did researchers define the terms elite and flagship?
3. Using contemporary data, how many institutions meet the definitions of elite and flagship?

4. What organizational characteristics are associated with the definitions of elite and flagship?

The first step of our methodological approach was collecting and analyzing articles mentioning elite and/or flagship institutions published in 12 peer-reviewed academic journals central to the field of higher education over 40 years to identify how the categories were defined and used in the literature. Through the content analysis, we identified literature-based definitional criteria for elite and flagship categories. That is, our content analysis uncovered the frequency of scholars' use of elite and flagship categories for higher education institutions (RQ1), and how researchers defined these institutional groupings in previous research (RQ2). Next, we assembled a cross-sectional organizational dataset, and used the definitional criteria derived from our content analysis to identify dependent variables that measured whether an institution met one or more of the criteria for being classified as a flagship or elite institution. The application of our content analysis findings allowed us to assess how differences in the conceptualization of elite and flagship institutions can change which institutions are included in those categories (RQ3) and the organizational characteristics associated with meeting the literature-derived criteria (RQ4). This research approach allowed us to embed current practices implementing institutional categories as stylized facts in research and policymaking that can influence not only which institutions could be included in these groups, but also what we understand about their organizational features, policies, and importance to educational opportunities and inequalities.

Content Analysis of Journal Articles

We collected articles published in 12 peer-reviewed academic journals to identify the common usage, definition, and research approaches of scholars who discuss elite and/or flagship institutions. The expansion of the field of higher education and the engagement with higher education as a research area among scholars in other fields warrants a longitudinal examination capturing how discussions of elite and flagship institutions developed across the key journals integral to its knowledge infrastructure. Our content analysis was limited to journals and did not include books to bracket our sample within the interdisciplinary educational and social scientific study of higher education. We selected the 40-year timeframe of 1980 – 2020 to collect journal articles across the 12 journals central for researchers focusing on higher education: *American Education Research Journal*, *Economics of Education Review*, *Educational Evaluation and Policy Analysis*, *Educational Researcher*, *Innovative Higher Education*, *Journal of College Student Development*, *Journal of Diversity in Higher Education*, *Journal of Higher Education*, *Research in Higher Education*, *Review of Educational Research*, *Review of Higher Educa-*

tion, and *Sociology of Education*. Three journals did not have available articles across the 40 years. The *Journal of Diversity in Higher Education* published its first issue in 2008, and due to limited access to print issues during the COVID-19 pandemic, we were unable to include articles prior to 2003 for the *Journal of College Student Development*. Also, journal articles were not available in 1981 and 1983 for the *Economics of Education Review*.

Similar to previous content analyses of the higher education literature (Byrd, 2021; Harper, 2012), we utilized website search engines of journals to identify articles that discussed elite and/or flagship institutions. In each search engine we entered the query terms "elite" and then "flagship" to capture the broadest usage of the terms given some scholars, for example, may use the term "elite institutions" while others use "elite colleges." Once the initial search results for each journal were produced, we reviewed each result to identify if the author(s) used elite and/or flagship anywhere in the article. If the only mention of elite and/or flagship was in the references, we did not include the article in the sample. Also, the discussion of elites in society and how colleges support their positions of power and status resulted in many articles initially captured in our search. However, many of these articles would discuss specific colleges attended by elite families but did not talk about the institutions as being "elite" or what constituted them to be elite institutions, only that they were in service to elite families and students. Thus, these articles were not included in our sample. From this search, 937 articles were included in our sample that discussed elite and/or flagship institutions. Among this sample, 61 articles were included twice for their usage of elite and flagship but were coded as separate articles to focus on their distinct usage of each institutional category.

We identified whether the institutional category was mentioned one or more times in the article. Locations of mention(s) were also coded (abstract, introduction, literature review, methodology, analysis/results, discussion, discussed throughout the article). Articles were coded for whether they included a definition of an institutional category. If the author(s) did include a definition, we coded the definitions to identify the key features of institutions mentioned. Lastly, the methodological approaches of articles were captured in our coding scheme (quantitative, qualitative, mixed methods, review, or theoretical agenda setting).

Constructing Elite and Flagship Institutional Groupings

To examine what characteristics of colleges and universities are associated with the evolving categories of elite and flagship institutions identified in our content analysis, we assembled a cross-section of organizational data from federal and other sources. Our primary source of data was IPEDS, which we supplemented with variables from other sources that were essential to our conceptual model but not available from federal sources. While IPEDS

is longitudinal, some other sources of data were only readily available in a cross-sectional format. Moreover, our aim with this stage of research was to explore how differing criteria used to identify elite and flagship institutions found in the content analysis can shape what institutions are included at any one moment in time, which can impact research and policy decisions.

We assembled a sample of 2,957 colleges and universities identified using the Office of Postsecondary Education Identifier from the 2019 IPEDS surveys, and only included public and non-profit private degree granting institutions that participated in Title IV federal financial aid programs. Community colleges and special focus institutions were not included (discussed further below). IPEDS financial data from the Financial Accounting Standards Board survey for private not-for-profit institutions and the Governmental Accounting Standards Board survey for public institutions included total revenues, total expenditures, and expenditures on research and development. Given admissions selectivity, enrollment size, and the composition of the study body are associated with organizational status in higher education (Taylor & Cantwell, 2019), we included IPEDS data on total enrollment by full time equivalency (FTE), Pell grant students, share of applicants granted admission, average published cost of attendance for full-time undergraduates, and racial and ethnic composition of students. Faculty demographic data were also collected from IPEDS. Also, we identified 444 Minority Serving Institutions (MSIs), using a list compiled by the Rutgers University Center for Minority Serving Institutions.

University rankings distill perceptions and resources into a single index that reflect long-standing organizational differences. We collected data from *US News and World Report's* (*USNWR*) 2020 Best National Universities and Best Liberal Arts Colleges rankings, creating a binary variable for whether institutions fall within the top-100 of either list because of the categorical benefits associated with being a top-ranked institution (Bastedo & Bowman, 2009). Although other rankings for colleges and universities including global university rankings such as the *Times Higher Education* World University Rankings and the Shanghai Academic Rankings of World Universities exist, *USNWR* remains the most consequential ranking system within the US. *USNWR* rankings garner intense public interest, shape student and institutional behaviors, and further accentuate inequality and competition between universities (Bastedo & Bowman, 2011, 2010; Bowman & Bastedo, 2009; Chu, 2021; Espeland & Sauder, 2016).

Additionally, we explore possible "status enhancing pursuits" of institutions through intellectual and scientific prestige and athletic prowess (Bastedo & Bowman, 2010, 2011; Bowman & Bastedo, 2009; Espeland & Sauder, 2016; Fisher, 2009; Smith, 2019; Suggs, 2009). The Association of American Universities (AAU) is noted for the collective's high research intensity and

contributions, and we identified those institutions in our sample. Counts for institutional mentions in Nobel Prize winners' official biographies were taken from Urquiola's (2020) study of US university performance, and include counts for all mentions, either as faculty or students, between 1855 to 2016 for institutions with at least two mentions. We gathered the institution's Rhodes Scholarship recipient counts from 1904 to 2019 as a measure of cumulative advantage. Both the Nobel Prize mention and Rhodes Scholars data were total counts over time for each institution. Finally, to consider potential resources and status of "big time" collegiate sports (Clotfelter, 2019), we collected data on institutions' athletic conferences from IPEDS.

Variables

Flagship and Elite Criteria Variables

Based on our content analysis, four binary criteria variables were created (1 = yes; 0 = no): whether an institution (1) operated selective admissions (were in the top 20% of selectivity among institutions); (2) was classified as a research university by the Carnegie Classifications; (3) had high institutional resources; and (4) was ranked in the top 100 national or liberal arts colleges for *USNWR's* 2020 annual rankings. Two total count variables were created for analyses (range 0 - 4). The first variable counted the total number of literature-informed criteria for public flagship institutions for whether the institution operated selective admissions, was a research university, had high institutional resources, and was ranked in the top 100 national or liberal arts colleges for *USNWR's* annual rankings. Similarly, a second variable counted the total number of literature-informed criteria for elite institutions using nearly identical criteria as used for the flagship count variable, with the exception of how we identified institutions with high institutional resources. We established different institutional resource criteria based on the highly inequitable resources available across U.S. higher education and how public and private institutions are not necessarily "wealthy" in the same way (Taylor & Cantwell, 2019). For our flagship criteria and total count variables, public institutions were identified as being "highly resourced" or "wealthy" if they had institutional resources one standard deviation above the mean for public institutions, while institutions that were at least two standard deviations above the national mean for all public and private institutions were identified as meeting the elite high institutional resource criteria.

Institutional Characteristics

We identified whether an institution was private, a land grant institution, a MSI, offered a medical degree, and operated a hospital (each 1 = yes; 0 = no). Average list price of attendance for institutions, which included tuition, fees, room, board, books, and materials, was calculated for in-state and out-of-state students either living in campus housing or off-campus residences.

Student Demographics

Fall full-time enrollment was included in our models. We also included the proportion of Pell recipients and the proportion of international students for each institution. We constructed an ethnoracial diversity index (provided below) using the proportions of Asian and Pacific Islander, Black and African American, Hispanic and Latinx, Native American, multiracial/ethnic, white, and race/ethnicity unknown students, based on a similar measure created by Chang and Yamamura (2006). EP represents each ethnoracial student group proportion. The proportion of each ethnoracial group was squared, then summed together across all seven groups represented on campus. The sum is then subtracted from one, giving us a range from 0 (no ethnoracial diversity) to 1 (equitable ethnoracial representation/diversity).

$$Diversity\ Index = 1 - \sum_{k=1}^{n} EP^2$$

Faculty Demographics

Similar to the ethnoracial diversity index calculated for students, we used the proportions of Asian and Pacific Islander, Black and African American, Hispanic and Latinx, Native American, multiracial/ethnic, white, and race/ethnicity unknown faculty for those either on the tenure track or who were tenured. We also included the proportion of tenure stream international faculty and the proportion of non-tenure stream faculty at an institution.

Status Enhancing Pursuits

Related to possible intellectual and athletic "status enhancing pursuits," we included AAU membership (1 = yes) along with the log of the number of Nobel Prize mentions and Rhodes Scholars of an institution. All instances where an institution had no Nobel Prize mentions or Rhodes Scholars recipients were set as zero. We also included institutional membership (1 = yes) in "Power 5" intercollegiate athletic conferences (Atlantic Coast Conference, Big Ten, Big Twelve, Southeastern Conference, and Pacific-12 Conference).

Analyses

Descriptive statistics summarized our content analysis findings such as the number of articles mentioning elite and/or flagship institutions in journals, mention locations, and the features of available definitions of each institutional category. We calculated the proportion of articles mentioning flagship or elite institutions by dividing the number of yearly article mentions by the total number of articles published that year. A similar proportion was produced for the total number of article mentions for both institutional categories. Then, we calculated descriptive statistics for the organizational-

level data (Table 1). To clarify the relationships between flagship and elite status criteria derived from our content analysis and other institutional characteristics, we estimated linear probability models for each criterion, which provide easier to interpret coefficients as probabilities and comparisons across models, and are less sensitive to omitted variables (Breen et al., 2018; Gomila, 2021; Hellevik, 2009; Holm et al., 2015; Mood, 2009). We also estimated Poisson regressions with the total number of flagship and elite criteria met by institutions as outcome variables. Standard errors were clustered at the state-level for all models. Logged average total price of attendance and full-time student enrollments, a squared term of student enrollment, and the noted log Nobel Prize mentions and Rhodes Scholars of institutions were included in models. Flagship criteria models only included public institutions. Reference groups were public institutions (elite criteria models only), non-land grant institutions, non-Minority Serving Institutions, institutions not offering medical degrees, institutions not operating hospitals, non-AAU members, and non-Power 5 athletic conference members.

Limitations

Several limitations are notable for our study. We centered on public and private, not-for-profit four-year institutions. Community colleges do offer bachelor's degrees programs, but are often excluded because of their foundational missions and offerings. Our content analysis did not uncover evidence that community colleges are eligible for consideration as flagship or elite institutions; likely reinforced by an emphasis on exclusive admissions for these categories.

We defined selective admissions as the lowest quintile for reported admission rate and did not apply more restrictive approaches for this criterion. Additional restrictions such as specifying minimum sizes of entering cohorts would distort what selectivity in college admissions truly looks like based on available data. The varying cut-off points for what qualifies as "selective" admissions can also truncate our consideration of the selectivity continuum in U.S. higher education to focus on the most selective; transforming selectivity into exclusivity.

We are limited in our ability to use a full set of rankings or other measures of purported institutional prestige. Rankings are the clearest manifestation of institutional prestige, which is often equated to or interchanged with the educational quality (Bastedo & Bowman, 2010, 2011; Bowman & Bastedo, 2009; Espeland & Sauder, 2016). Similar to the limitations of defining selective admissions, prestige via college rankings can change depending on the lists used. Our inclusion of two of the original *USNWR* college rankings for "national" and "liberal arts colleges" attempts to return to the rankings seen as most influential in US higher education.

Table 1.
Descriptive Statistics of Institutional Data

Variable	*Mean*	*SD*	*Range*
Criteria variables			
Flagship total count (public only)	1.071	1.030	0-4
Elite total count	.537	.974	0-4
Selective admissions	.114	.317	0-1
Top 100 national or liberal arts ranking	.077	.266	0-1
Total revenue			
Resources 1 SD or more (public flagship)	.294	.456	0-1
Resources 2 SD or more (elite)	.313	.464	0-1
Research university	.159	.366	0-1
Liberal arts institution	.089	.285	0-1
Institutional characteristics			
Private institution	.572	.494	0-1
Land grant institution	.043	.203	0-1
Minority Serving Institution	.150	.357	0-1
Offers medical degree	.082	.274	0-1
Operates hospital	.040	.195	0-1
Average price of attendance	$41,109.31	$15,487.46	$8,245.00-$82,153.50
Student demographics			
Enrollment (FTE)	6,336.935	9,456.942	10-136,139
Pell students[a]	.374	.167	0-1
Ethnoracial diversity index	.053	.018	0-1
International students[a]	.048	.065	0-1
Faculty demographics			
Ethnoracial diversity index	.038	.017	0-1
International TS faculty[a]	.027	.040	0-1
Nontenure stream faculty[a]	.488	.362	0-1
Status enhancing institutional characteristics			
AAU membership	.021	.144	0-1
Nobel mentions	.057	6.085	0-170
Rhodes Scholars	1.301	10.941	0-365
Power 5 athletic conference member	.028	.164	0-1

[a]Variable is a proportion of group representation.

Identifying highly resourced or "wealthy" institutions presents another set of challenges. Our standard deviation approaches for total resources based on the means of public for flagship institutions and then both public and private four-year institutions four-year institutions to identify elite institutions considers the vast resource disparities across U.S. higher education (Taylor & Cantwell, 2019). We could have included endowment data from

reliable sources such as the National Association of College University Business Officers, but such data are not available for all institutions, nor are they all linked to individual institutions as some systems do not clearly identify how much of an endowment is connected to each institution. Thus, relying on such data would have also greatly reduced our sample size for analyses.

Lastly, the temporal variation of some institutional characteristics further contributed to our decision to analyze organizational data cross-sectionally. The approach provides a snapshot of where institutions currently exist in relation to the organizational boundary work creating elite and flagship statuses amongst one another that has developed across the past four decades, building on our content analysis of the higher education literature. We also explored multinomial logistic regression models with all possible combinations of meeting one or more criteria as an elite or flagship institution to identify trends submerged in our total count models. Unfortunately, given sample sizes and number of combinations, the models would not converge. Thus, we used linear probability models to examine the variation in institutional characteristics corresponding to certain criteria and meeting one or more flagship and elite criteria.

Findings

Content Analyses of Higher Education Literature

We first sought to understand how often scholars used the flagship and elite categories and where they were used through a content analysis of 40 years of peer-reviewed scholarship. Table 2 presents the summary statistics of the sampled articles. Elite institutions were referenced more often than flagships. Nearly two-thirds of articles (63.0%) discussed elite institutions while a little over a third of articles (37.0%) discussed flagships. Approximately a third of articles (32.6%) discussed elite and/or flagship throughout the text, followed by only including these institutional categories in the literature review (22.5%) and discussion sections (13.9%). Only 94 articles (10.0%) included a discernable definition of elite and/or flagship institutions. Over half utilized quantitative analyses (55.4%), nearly a third were qualitative inquiries (29.0%), few used mixed methods (2.7%), and slightly over an eighth of articles were reviews or theoretical agenda setting (12.9%). As seen in Table 3, the *Journal of Higher Education* accounted for the largest percentage of articles included in our sample (22.6%) followed by the *Review of Higher Education* (15.7%), and *Research in Higher Education* (13.3%).

Figure 1 provides a longitudinal view of when articles were published with lines and associated LOESS (locally estimated scatterplot smoothing) curves representing the proportion of articles that discussed elite institutions, flagship institutions, and the total number of articles mentioning these

Table 2. Overview of Article Characteristics Discussing Elite and Flagship Institutions, 1980-2020

Variable	*N*	*Percentage*
Institutional type discussed		
Elite	590	63.0%
Flagship	347	37.0%
Mentions of institutional type		
Mentioned only once	506	54.0%
Mentioned more than once	431	46.0%
Location of mentions		
Abstract	3	0.3%
Introduction	74	7.9%
Literature review	211	22.5%
Methodology	110	11.7%
Analysis/results	104	11.1%
Discussion	130	13.9%
Throughout article	305	32.6%
Definitions of institutional type		
Inclusion of any definition	94	10.0%
Methodology		
Quantitative	519	55.4%
Qualitative	272	29.0%
Mixed Methods	25	2.7%
Review or theoretical agenda setting article	121	12.9%
N	937	

Notes: Among articles included in the sample, 61 discussed both elite and flagship institutions. Each article was treated as separate observation to focus on how authors discussed each institutional type.

categories among all articles published each year by the journals included in our sample. Prior to 1990, the proportion of articles using "elite" or "flagship" to describe institutions was quite low (less than five percent). The proportion of articles using these institutional categories steadily increased from 1990 to 2000 with the discussion of elite institutions increasing at a slightly higher rate. A marketable increase in usage of elite and flagship categories is notable between 2000 and 2010. Since 2010, the proportion of articles using elite and flagship categories continued to increase with approximately 12 percent of all articles mentioning these categories in 2020.

Table 3.
Institutional Type by Journal, 1980-2020

Journal	*Elite*	*Flagship*	*Journal Total*
American Educational Research Journal	27 (2.9%)	13 (1.4%)	40 (4.3%)
Economics of Education Review	73 (7.8%)	43 (4.6%)	116 (12.4%)
Educational Evaluation and Policy Analysis	20 (2.1%)	22 (2.3%)	42 (4.5%)
Educational Researcher	20 (2.1%)	3 (0.3%)	23 (2.5%)
Innovative Higher Education	24 (2.6%)	22 (2.3%)	46(4.9%)
Journal of College Student Development	25 (2.7%)	22 (2.3%)	47 (5.0%)
Journal of Diversity in Higher Education	32 (2.4%)	17 (1.8%)	49 (5.2%)
Journal of Higher Education	136 (14.5%)	76 (8.1%)	212 (22.6%)
Research in Higher Education	68 (7.3%)	57 (6.1%)	125 (13.3%)
Review of Educational Research	12 (1.3%)	0 (0.0%)	12 (1.3%)
Review of Higher Education	88 (9.4%)	59 (6.3%)	147 (15.7%)
Sociology of Education	65 (6.9%)	13 (1.4%)	78 (8.3%)
Total	590 (63.0%)	347 (37.0%)	937 (100.0%)

Note: Percentages calculated with total number of articles as denominator.

Table 4 identifies the four common attributes of flagship and elite institutions were discernible in the articles: (1) college admissions selectivity, (2) research capacity or intensity, (3) institutional resources or wealth, and (4) rankings or related aspects of prestige. College admissions selectivity was the most common feature of both elite institutions (70.8%) and flagship institutions (58.6%). College rankings and related aspects of prestige was the second most common feature of elite institutions (18.5%), followed by institutional resources or wealth (13.8%). Research capacity or intensity was the second most common feature of flagship institutions (31.0%), followed by institutional resources or wealth (17.2%). Usage of research capacity and rankings or related aspects of prestige significantly differed between elite and flagship definitions identified among articles. Authors rarely used more than one institutional feature in their definitions.

What Institutional Characteristics Align with Flagship Status Criteria?

Building on our content analysis that established the criteria used to identify institutions as elite or a flagship, we assessed the organizational characteristics associated with these criteria. We first compared flagship criteria with an established list of flagship campuses from the Institute for Higher Education Policy (IHEP) (Mugglestone et al., 2019) used by researchers (e.g., Baker, 2019). We applied the four flagship criteria (undergraduate admissions selectivity, research capacity or intensity, institutional resources or wealth, and rankings or related aspects of prestige) to identify institutions plausibly

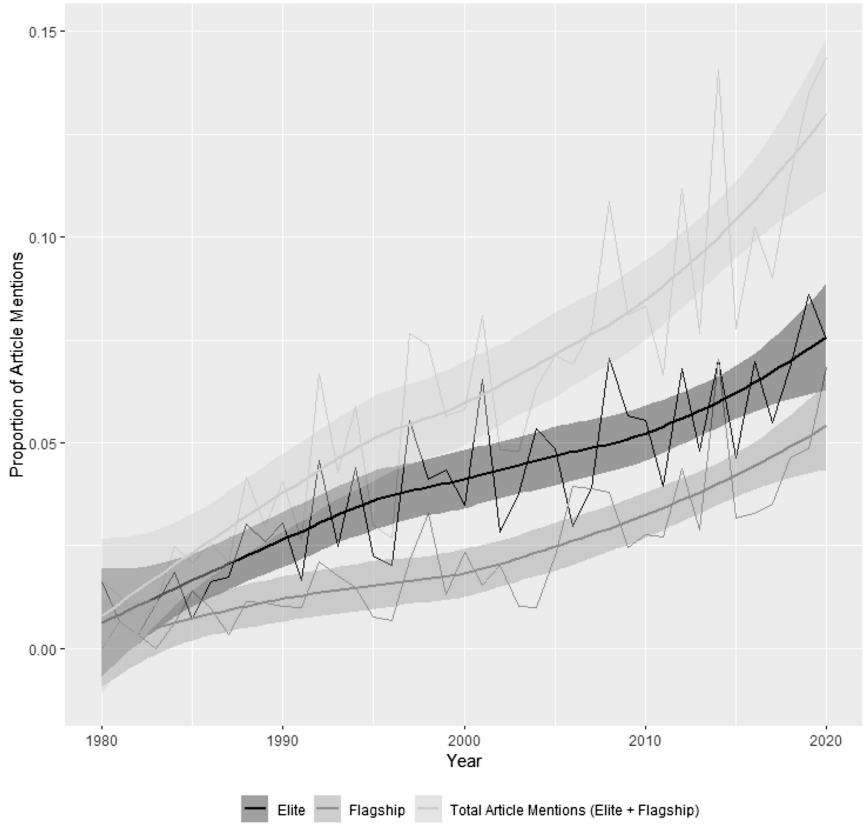

Figure 1. Proportion of Articles Mentioning Each Institutional Category by Year, 1980–2020

defined as flagships (Table 5). Slightly over one-third of public institutions (35.92%) met zero criteria, nearly one-third (31.76%) only met one criterion, and approximately a quarter of public institutions (24.69%) met two criteria. Only 33 public institutions met three criteria (4.58%) and 22 institutions met all four criteria (3.05%).

In Table 6 we compared which institutions met literature-defined criteria with the commonly used IHEP list (full list of institutions meeting at least one criterion available upon request). The IHEP flagship group admits a significantly higher share of all applicants (68.40%) compared to institutions that met two (38.74%) and four literature-derived criteria (35.48%). Turning to campuses with high rankings, 22 IHEP flagships (44%) were ranked in the *USNWR* top 100, compared with 22 of 34 institutions (65%) in the two criteria group and all 22 institutions (100%) of the four criteria group.

Table 4.
Definitional Features of Elite and Flagship Institutions, 1980-2020

Definition feature	*Elite*	*Flagship*
Admissions selectivity	46 (70.8%)	17 (58.6%)
Research capacity or intensity	7 (10.8%)	9 (31.0%) ***
Institutional resources or wealth	9 (13.8%)	5 (17.2%)
Rankings or related aspect of prestige	12 (18.5%)	3 (10.3%) *
Other definitional focus	7 (10.8%)	1 (3.4%) *
Average definitional features (range 0-3)	1.24	1.21

Note: Percentages calculated within each institutional type (elite: n = 65; flagship: n = 29).
* $p<.05$, ** $p<.01$, *** $p<.001$.

Table 5.
Number of Institutions by Total Flagship and Elite Criteria Met

	Organizational Type			
	Elite		*Flagship*	
Total criteria met	*n*	*%*	*n*	*%*
Zero	1,749	69.96	259	35.92
One	370	14.80	229	31.76
Two	241	9.64	178	24.69
Three	69	2.76	33	4.58
Four	71	2.84	22	3.05
N	2,500	100.00	721	100.00

Note: Flagship counts only included public institutions

Insofar as high rankings indicate institutional prestige, applying the literature definition, even when high ranking is not an explicit criterion as with the first literature-based group, it yielded a better ranking group. By some measures such as total and research revenues, so-called flagship campuses look similar. In other words, all definitions of flagship we examined produce public university campuses with large budgets and high levels of research funding compared to all of U.S. higher education.

Table 6.
Mean Values for Key Variables by Flagship Definition Groups

	Percent Admitted	*Total Revenue*	*Researc Revenue*	*Percent ranked in top-100*
50 State Flagships	68.40	$2,314,758	$341,720	44.00
	(20.91)	(2,004,187)	(276,235)	(50.01)
2 Literature Criteria Flagship	38.74**	$2,394,206	$353,248	64.71
	(11.41)	(2,382,470)	(326,890)	(58.51)
4 Literature Criteria Flagship	35.32**	$3,248,343	$318,212	100.00 **
	(32.48)	(2,510,320)	(43,565)	(0.00)

Note: Total and research revenues reported in thousands of dollars. Means calculated within each group (IHEP Flagship: n = 50; 2 Literature Criteria Flagship: n = 34; 4 Literature Criteria Flagship: n = 22). Standard deviations provided in parentheses. Significance, identified by asterisks, indicates difference between IHEP list and two- or four-criteria group.

* $p<.$ 05, ** $p<$ .01, *** $p<$ .001.

Table 7 provides the linear probability models examining the likelihoods of public institutions meeting each literature-derived flagship status criteria based on their institutional characteristics and the Poisson model of the total number of flagship status criteria met. Land grant institutions were more likely to be research universities. While MSIs were less likely to be research universities, universities offering medical degrees were more likely to be research universities. Higher average list price of attendance corresponded to higher likelihoods of operating highly selective admissions, be a research university, both highly ranked and resourced, and meeting more flagship status criteria overall.

Regarding student and faculty demographics, public institutions with larger enrollments were more likely to be highly resourced and meeting more flagship status criteria overall. The squared enrollment measure suggests public institutions can become too large, being less likely to be highly resourced and meet fewer flagship status criteria overall, but more likely to be a research university. Interestingly, institutions with higher proportions of Pell-eligible students were more likely to operate highly selective admissions. Public institutions with more ethnoracially diverse student bodies were less likely to be highly resourced, but more likely to be highly ranked. Public institutions with higher proportions of international students were more likely to operate highly selective admissions, be a research university, and highly ranked. Public institutions with more faculty ethnoracial diversity were more likely to be research universities, highly resourced, and meeting more flagship status criteria overall. Public institutions with higher proportions of non-tenure stream faculty were more likely to be research universities.

Table 7.
Regression Models of Flagship Criteria Met by Institutions

Variable	*Highly Selective Admissions* b	SE	*Research University* b	SE	*High Institutional Resources* b	SE	*Top 100 USNWR Ranking* b	SE	*Total Criteria Met* b	SE
Institutional characteristics										
Land grant	.026	.050	.176***	.057	-.027	.033	.071	.045	.095	.061
Minority Serving Institution	.034	.038	-.138***	.050	-.008	.041	.023	.019	-.059	.060
Offers medical degree	.023	.065	.159**	.067	-.027	.019	-.007	.042	.089	.055
Operates hospital	-.008	.088	.003	.059	.004	.025	.072	.064	-.043	.061
Average price of attendance (log)	.161 *	.082	.245***	.075	.400***	.089	.162***	.053	.770***	.163
Student demographics										
Enrollment (FTE) (log)	.084	.341	-.551	.358	1.957***	.380	-.266	.212	7.043***	1.144
Enrollment (log) squared	-.004	.020	.042*	.022	-.093***	.021	.014	.012	-.357***	.061
Pell student proportion	.270 **	.136	-.141	.184	-.221	.150	-.080	.069	-.135	.273
Ethnoracial diversity index	.156	.113	.024	.119	-.329***	.118	.068*	.039	-.221	.226
International student proportion	1.064 *	.500	1.200*	.633	-.159	.394	1.094*	.472	1.146	.824
Faculty demographics										
Ethnoracial diversity index	.096	.146	.319*	.180	.436***	.162	-.107	.078	1.151***	.278
International TT faculty proportion	-.371	.290	.604	.536	.119	.372	.202	.166	-.174	.640
Nontenure stream faculty proportion	-.212	.130	.557***	.113	-.193	.141	-.088	.088	.171	.199
Status enhancing pursuits										
AAU member	.182 *	.107	-.172*	.090	-.027	.036	.415***	.133	.185***	.064
Nobel mentions (log)	.065	.046	-.061	.037	-.010	.015	.057	.054	.040	.029
Rhodes Scholars (log)	-.031	.030	.089***	.021	-.003	.010	.026	.026	.021	.022
Power 5 conference member	.004	.105	-.192***	.060	-.100**	.050	-.038	.077	-.048	.067

Table 7, cont.

Variable	*Highly Selective Admissions*		*Research University*		*High Institutional Resources*		*Top 100 USNWR Ranking*		*Total Criteria Met*	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Intercept / Constant	-2.158	1.987	-.961	1.656	-13.172***	1.820	-.448	1.200	-42.546***	5.849
R^2	.148		.574		.639		.553		.230	
Log likelihood	-98.888		-133.707		-32.708		152.954		-562.703	
BIC	316.416		386.054		184.0554		-187.270		1237.801	
N	515		515		515		515		515	

Notes: Unstandardized coefficients and standard errors reported for linear probability models for each flagship criteria and for Poisson model of total flagship criteria met. Robust standard errors clustered by state. Adjusted R-squared reported for linear probability models. McFadden's pseudo R-square reported for Poisson model of total flagship criteria met. Reference groups included non-land grant institutions, non-MSIs, institutions without medical degrees, institutions without hospitals, non-international students and faculty, tenure stream faculty, non-AAU member institutions, and non-Power 5 athletic conference member institutions. Reference groups included public institutions for only the total elite institutional criteria model.

* $p < .05$, ** $p < .01$, *** $p < .001$.

In relation to status-enhancing pursuits of public institutions, AAU members were more likely to operate highly selective admissions, be highly ranked, and meet more flagship status criteria overall, but less likely to be a research university. Institutions with more Rhodes Scholars were more likely to be research universities. Public institutions who competed in Power 5 athletics conferences were less likely to be research universities and highly resourced.

Our models call attention to a particularly concerning impact of organizational tautology on public institutions seeking flagship status. Organizational tautology has reinforced the belief that focusing on institutional exclusivity, wealth, and such high research intensity that warrants selection for exclusive group membership (i.e., AAU) that enhances institutional exclusivity, is required of public institutions to reach this status and included in the flagship category. Thus, pursuit of flagship status and categorical inclusion further reinforce existing inequalities that have accumulated from past historical eras and raise additional questions about which segment of the public these institutions aim to serve and value in an unequal society.

What Institutional Characteristics Align with Elite Status Criteria?

Although there are no established lists of all "elite" institutions, our combination of content analysis and regression models can uncover the organizational characteristics associated with elite status criteria. As noted in Table 5, over two-thirds of public and private institutions (69.96%) met zero criteria, while nearly fifteen percent (14.80%) met only one criterion, and slightly less than ten percent met two elite criteria (9.64%). Only 69 institutions (2.76%) met three criteria, and 71 institutions (2.84%) met all four elite criteria.

Turning to the regression models for elite criteria (Table 8), private institutions were less likely to be highly ranked and highly resourced, but more likely to be research universities. Land grant institutions were also more likely to be research universities. MSIs were less likely to be highly resourced, research universities, and meet multiple elite status criteria overall. Institutions offering a medical degree were more likely to be research universities. A consistent predictor across elite criteria was institutions' average list price of attendance, corresponding to higher likelihoods of operating highly selective admissions, being highly ranked and resourced, and meeting multiple elite status criteria overall.

Among student and faculty demographics, institutions with larger enrollments were less likely to be highly ranked and resourced, but met more elite status criteria overall. The enrollment-squared measure indicates reaching a threshold of large enrollment corresponded to higher likelihoods of being highly resourced and a research university. Institutions with more Pell-eligible students and student ethnoracial diversity were less likely to be highly ranked. More ethnoracial student diversity also correlated to lower likelihoods of

Table 8.
Regression Models of Elite Criteria Met by Institutions

Variable	*Highly Selective Admissions* b	SE	*Top 100 USNWR Ranking* b	SE	*High Institutional Resources* b	SE	*Research University* b	SE	*Total Criteria Met* b	SE
Institutional characteristics										
Private institution	.042	.057	-.091 *	.051	-.117 ***	.042	.152 ***	.043	-.176	.212
Land grant	-.015	.056	.012	.060	-.042	.036	.162 ***	.057	.067	.069
Minority Serving Institution	.026	.036	.008	.024	-.055 **	.025	-.078 *	.042	-.176 **	.077
Offers medical degree	-.009	.061	-.056	.042	.014	.042	.183 ***	.049	.044	.059
Operates hospital	-.033	.075	.077	.064	-.004	.053	.040	.052	.001	.066
Average price of attendance (log)	.133 **	.064	.309 ***	.069	.285 ***	.056	.037	.053	1.067 ***	.217
Student demographics										
Enrollment (FTE) (log)	-.050	.197	-.170 *	.093	-.832 ***	.185	-.221	.231	1.472 ***	.563
Enrollment (log) squared	.002	.012	.008	.005	.068 ***	.011	.027 *	.014	-.050	.031
Pell student proportion	.137	.122	-.242 ***	.072	-.038	.094	.020	.107	-.326	.438
Ethnoracial diversity index	.086	.107	-.085 *	.049	-.162 **	.068	-.016	.081	-.271	.249
International student proportion	1.161 ***	.428	1.060 ***	.178	.251	.255	.461 *	.243	1.403 **	.617
Faculty demographics										
Ethnoracial diversity index	.299 ***	.094	.170 **	.069	.334 ***	.073	.182 *	.098	1.843 ***	.317
International TT faculty proportion	-.405	.286	-.091	.205	.500	.360	.460	.43	3 -.295	.733
Nontenure stream faculty proportion	-.072	.095	-.127 **	.058	.067	.042	.397 ***	.074	.009	.170
Status enhancing pursuits										
AAU member	.203 *	.113	.239 **	.112	-.171 ***	.043	-.101 *	.057	-.141 **	.057
Nobel mentions (log)	.035	.038	.043	.044	-.033 *	.019	-.026	.020	-.083 **	.032

Table 8, cont.

Variable	*Highly Selective Admissions*		*Top 100 USNWR Ranking*		*High Institutional Resources*		*Research University*		*Total Criteria Met*	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Rhodes Scholars (log)	.045	.030	.112 ***	.022	.052 ***	.015	.040 ***	.015	.151 ***	.032
Power 5 conference member	-.029	.107	-.044	.091	-.280 ***	.041	-.076	.046	-.249 ***	.094
Intercept / Constant	-1.344	.908	-2.224 ***	.747	-.409	1.020	-.622	.918	-20.702***	2.995
R^2	.177		.448		.676		.512		.294	
Log likelihood	-384.3507		-29.074		-129.080		-310.685		-1101.780	
BIC	909.212		198.659		398.671		761.882		2337.047	
N	1,125		1,125		1,125		1,125		1,125	

Notes: Unstandardized coefficients and standard errors reported for linear probability models for each elite criteria and for Poisson model of total elite criteria met. Robust standard errors clustered by state. Adjusted R-squared reported for linear probability models. McFadden's pseudo R-square reported for Poisson model of total elite criteria met. Reference groups included public institutions, non-land grant institutions, non-MSIs, institutions without medical degrees, institutions without hospitals, non-international students and faculty, tenure stream faculty, non-AAU member institutions, and non-Power 5 athletic conference member institutions. Reference groups included public institutions for only the total elite institutional criteria model.

* $p < .05$, ** $p < .01$, *** $p < .001$.

being a highly resourced university. Increased proportions of international students on campus corresponded to meeting each elite status criteria except being highly resourced, and meeting more elite criteria overall. Institutions with higher levels of faculty ethnoracial diversity were more likely to meet each elite status criteria and more criteria overall. Institutions with higher proportions of non-tenure stream faculty were less likely to be highly ranked, but more likely to be research universities.

AAU members were more likely to operate highly selective admissions and be highly ranked, but less likely to be highly resourced, research universities, and meeting more elite criteria overall. Notably, these findings likely reflect the fact that many research universities are not AAU members and several AAU members are large public universities with limited per-student resources. Institutions with more Nobel Prize connections were also less likely to be highly resourced institutions. Arguably, many resource-limited institutions are large and therefore have a higher chance of being associated with a Nobel Prize winner. The number of Rhodes Scholars an institution had corresponded to higher likelihoods of meeting each elite status criteria except operating highly selective admissions, and meeting more elite criteria overall. Lastly, Power 5 athletics conference members were less likely to be highly resourced and met fewer elite status criteria overall.

Similar to the flagship models, we find organizational tautology solidifies elite status and categorization behind beliefs in the requirement of and organizational approaches focusing on institutional exclusivity and wealth. Among status enhancing pursuits, research contributions and individual achievements (intellectually and athletically) were rarely promising endeavors to pursue elite status. These findings gesture toward the importance of status beliefs underlying organizational tautology and how metrics reinforce such beliefs to suggest that it is not so much *what* the individual does, but *where* the individual is that matters for embracing achievements and contributions, simultaneously reinforcing higher education inequalities.

Discussion

Researchers, policymakers, and the public discuss elite and flagship institutions as if there exists agreement on what institutions are included in these categories and how they are defined. While we do not expect institutions identified as "elite" or "flagships" to remain static, categories are legitimated through core features of the knowledge infrastructure and supported by data to establish stylized facts to understand societal inequalities (Fujimura, 1987; Hirschman, 2021). Our analyses highlight how empirical ambiguity and organizational tautology shape these two institutional categories, producing an ignorance loop within the inequality knowledge infrastructure

(Durant, 2020; Frickel & Edwards, 2014; Hirschman, 2021). A third-order inference problem also exists as people use status beliefs coupled with elite and flagship categories as proximate measures to identify differential quality among institutions based on who they think others view as members of those groups (Correll et al., 2017).

Our content analysis of peer-reviewed articles found that discussing elite and flagship institutions in the higher education literature grew rapidly following 2000. Echoing Hirschman (2021) and McCall (2013), the prominence and positioning of elite and flagship institutions emerged as stylized facts of the knowledge infrastructure relevant for higher education inequality discourse as conversations about social mobility, inequality, and how higher education facilitated both increased across society. Our content analysis also identified four criteria used to define elite and flagship institutions focused on exclusivity and institutional resources, but the infrequent usage of more than one criterion to identify these institutions. Additionally, a somewhat consistent group of organizational characteristics emerged to identify elite and flagship institutions as exclusionary and wealthy at their core using already collected quantitative or easily quantifiable measures. Although scholars appear to be in the process of standardizing these institutional groupings, differing from other stylized facts of inequality measurement developed during an overlapping era (Hirschman, 2021), the conceptual and empirical slippage of these categories makes consistent measurement of higher education inequalities difficult and limits synthesizing findings across studies and designing effective policies, not only constructing analytic samples.

Building on our content analysis, we explored how meeting one or more criteria could present different groups of institutions as elite or flagships at a given time point. In line with arguments that elite and flagship institutions are exclusive sectors of higher education, our analyses show that to some extent, being too large and having an ethnoracially and socioeconomically diverse student body were negatively associated with being part of these influential sectors. Despite the emphasis of promoting social mobility through higher education (Chetty et al., 2017a, 2017b), enrolling low-income students negatively correlated with being highly ranked in elite criteria analyses, but was positively correlated with public institutions operating highly selective admissions. These findings reflect the tension between institutions striving for more exclusive status, while also attempting to address social mobility and access goals. Relatedly, our analyses found that having a higher price tag, and thus exclusivity through a substantial financial barrier to attendance, further accentuates organizational status beliefs that higher-priced college educations equates to higher quality educations.

Faculty ethnoracial diversity was more positively related to elite and flagship status criteria compared to student ethnoracial diversity. Contrasting findings existed for more student ethnoracial diversity among public institu-

tions with higher likelihoods of being highly ranked, but lower likelihoods of being highly resourced. Similarly, institutions with higher levels of student ethnoracial diversity were less likely to be highly ranked or highly resourced in our elite status criteria models. Consistently, more international students and faculty ethnoracial diversity on campus were positively associated with elite and flagship status criteria. These findings suggest how racially marginalized and minoritized students and faculty are currently incorporated within broadened conceptions and marketing of diversity in higher education (Holland & Ford, 2021). Unlike pitting diversity and exclusivity against each other, our findings complement past studies of higher education and elite communities whereby how diversity is crafted, presented, and embedded within and in service of organizational goals and practices can bolster perceptions of prestige, exclusivity, and advantages in society (Ahmed, 2012; Berrey, 2015; Ford & Patterson, 2019; Holland & Ford, 2021; Khan, 2011, 2012; Khan & Jerolmack, 2012; Stevens, 2007; Thomas, 2020; Warikoo, 2016). Therefore, our regression analyses highlight a component of recent boundary work among institutions attempting to further identify as elite and/or flagships is to utilize diversity as a distinguishing feature to accentuate the symbolic boundaries already in place and further support elitism in higher education (Binder & Abel, 2019; Holland & Ford, 2021).

However, not all forms of organizational diversity were positively associated with elite and flagship status criteria. MSIs met fewer elite criteria overall, less likely to be research universities in both flagship and elite analyses, and less likely to be highly resourced in the elite models. These findings relate to broader stereotypes and denigration of MSIs as lower quality institutions, but simultaneously operating as critical engines of opportunity for racially marginalized and minoritized communities and beyond despite deliberate and persistent underfunding since their founding (Aguilar-Smith, 2021; Aguilar-Smith & Yun, 2023; Allen & Jewell, 2002; Anderson, 1988; Byrd, 2021; Conrad & Gasman, 2015; Garcia, 2019; Hamilton & Nielsen, 2021; Harris, 2021; Vargas & Villa-Palomino, 2019). Our analyses suggest how diversity can be another form of institutional resource and wealth when it is in the service of historically white institutions and the whiteness of those institutions and elites in society (Bonilla-Silva & Peoples, 2022; Byrd, 2017; 2021; Holland & Ford, 2021; Moore, 2008; Ray, 2019). Moreover, the structural inequalities and status-seeking pressures facing MSIs and public regionals as well (see Orphan, 2018; Warshaw et al., 2021) reinforce the exclusivity of elite and flagship groupings because resources and selectivity are often central to their defining features while MSIs and public regionals are more accessible despite less institutional resources to promote their educational missions. Supporting Holland and Ford (2021), our analyses suggest how diversity can reinforce institutional prestige among more selective campuses but not so for less selective campuses.

Our regression analyses also clarify how status enhancing pursuits of institutions connect to elite and flagship status. While AAU members met more flagship criteria, they met fewer elite criteria. Research intensity is an important feature of AAU membership, but current members must vote on the possible inclusion or expulsion of institutions, and institutions can voluntarily leave. The features of this group are not relegated to only research capacity and contributions, but also reflect Correll and colleagues' (2017) third-order inference problem of trying to identify group members related to other features of quality and status. Moreover, when considering meeting more than one elite criteria, these findings highlight how intellectual and scientific pursuits can be devalued in favor of being highly resourced and more selective, which can bolster private liberal arts institutions in this status seeking endeavor. The findings for mention of the Nobel Prize likely reflect similar relationships between research, institutional resources, and these two categories. The positive association of Rhodes Scholars and meeting more elite criteria suggests a balance between research and exclusivity centered on the educational missions of institutions that such individual awards offer in pursuit of status. Seeking elite status through Power 5 athletics conference memberships resulted in fewer criteria met, especially being highly resourced, and gestures toward how such pursuits do not translate to particular forms of organizational status nor necessarily positively impacting an institution's financial position. To reiterate, our findings suggest that organizational tautology and truncating the organizational qualities to narrow metrics about higher education institutions (quantification and commensuration) bolsters a belief that achievements only matter as much as where they occur, which ultimately amplifies existing higher education inequalities.

Organizational Tautology and Elite and Flagship Institutions as Stylized Facts

Our analysis of organizational-level data provides a window into the crafting of stylized facts that influence identifying and interpreting of higher education inequalities. Elite and flagship categories represent the application of organizational status beliefs to situate institutions within an unequal higher education system. These groupings are linked to institutions themselves as they differentiate amongst each other and lobby for resources in an ever-constraining financial and policy environment; echoing the organizational behaviors noted by Espeland and Sauder (2016). These categories are also crafted by policymakers and researchers who are intimately involved with data to construct different, and as our analysis shows, inconsistent views of higher education inequality. Differing from the measurement and interpretation of the top 1% (Hirschman, 2021; McCall, 2013), our study uncovers how institutional categories are created from status beliefs through the boundary work of organizational tautology, reinforcing the creation of these groups.

Future research could further clarify how organizational status beliefs and boundary work undergird the usage of elite and flagship institutional categories, particularly by examining longitudinal changes in these possible relationships and processes.

Future research could provide insights into the relationship of status, leadership, and innovation, and the construction of institutional categories beyond only four-year institutions. If we take the meanings of "elite" and "flagship" to heart, referring to leadership and innovation, we must ask: can other institutions such as community colleges be elite or a flagship? Community colleges are part of systems and have varied resources and outcomes that could fit under common approaches used to delineate flagship status among public four-year institutions. Moreover, many community colleges are lauded for their important contributions to equity and broadening access so often critiqued of four-year institutions who hold the designators as "elite" or a "flagship" that challenges how much of a leader such institutions are in the U.S. higher education system. Therefore, future research could further clarify and reimagine these categories to uphold the ideals of leadership and innovation similar to the emerging approaches to revise institutional rankings around social mobility opportunities provided by institutions to embrace the important work being done at community colleges.

College rankings and their relationship to perspectives of organizational prestige, quality, and reputation continue to be central to discussions about higher education, both among insiders and the broader public. Espeland and Sauder (2016) noted that institutions' focus on rankings and where they fit on these lists, despite their many imprecisions, "magnifies these statistically insignificant differences in ways that produce real consequences for schools as external audiences treat these distinctions as if they were meaningful. These distinctions become increasingly important and taken for granted, along with the advantages and disadvantages associated with the numbers" (p. 31). Organizational tautology occurs through commensuration, or the truncating of multiple qualities to a single metric, and self-fulfilling prophecies that lead to cumulative (dis)advantages and increasing inequality across the U.S. higher education system (Espeland & Sauder, 2016; Espeland & Stevens, 1998; Merton 1968a, 1968b). An institution is elite because it is highly ranked; it is highly ranked because it is elite. Our findings also support research by Correll and colleagues (2017) on the reinforcement of status advantages when people think about how other people may view organizations to make decisions when quality is uncertain. The measurement imprecision shaping rankings and institutional comparisons could be an important contribution of future research to explore the recent choices by highly ranked institutions to remove themselves from different rankings lists and becoming test-optional to answer the question: how does removal of oneself from college rankings and/or use of a common quantitative evaluation tool known to hinder educational op-

portunities possibly accentuate elite status claims? That is, how do higher education institutions change the metrics and their associated meanings that matter for status in a highly unequal landscape (Taylor & Cantwell, 2019)?

Our exploration of how elite and flagship institutions are stylized facts based on organizational status beliefs and boundary work establishes these categories as reserved for only four-year institutions that are exclusive and rejective of broad access missions in admissions practices, and uncommonly wealthy in the form of institutional resources. Elite institutions are particularly oriented around prestige as reflective in college rankings that are, themselves, based on higher education insiders sharing their perceptions of what institutions are more prestigious than others, and thus, deserving of higher rankings (see also Binder & Abel, 2019). Although institutional prestige via college rankings is not as commonly used to identify public flagship institutions, similar organizational status beliefs are likely at play in the decision to select certain institutions as flagships among several in a state-fitting criteria for this category, noted in previous research (see Astin, 1985; Bowen et al., 2005, 2009; Kerchner & Schuster, 1982). Research intensity is most central for identifying flagships, especially when an institution is part of an exclusive research group such as the AAU, but not for elite institutions. This differentiation likely reflects the rise of research funding in earlier eras and public universities' pursuit of such funds, particularly as state financial support has drastically eroded away (Slaughter & Rhoades, 2004). Future research could extend our foundational approach to examine these historical changes more closely to highlight when particular criteria take on more importance in the boundary work of organizational tautology and crafting elite and flagship categories for analysis, policy, and everyday life.

Each of the criteria used to identify elite and flagship institutions influence organizational analyses, campus decision-making, and higher education-related policies that can impact societal opportunity and inequality. Elite and flagship institutions, like all stylized facts in the inequality knowledge infrastructure (Hirschman, 2016, 2021), are malleable by researchers and actors intimately involved in and with higher education. Thus, those who create and refine these institutional categories craft their own positions and adjust organizational boundaries around them (Lamont, 1992; Lamont & Molnar, 2002). Being identified as "elite" by one's organizational peers can make you part of the proverbial club, leading to changes in perceptions and treatment by others (Binder & Abel, 2019; Espeland & Sauder, 2016; Merton, 1968a, 1968b). Scientists at your university are viewed differently at conferences, by reporters for news stories, and when applying to grants in relation to the institutional capacity around them to carry out proposed projects (Lamont, 2009). Students are viewed as distinguished, perhaps more meritorious, which shapes fellowship applications along with internship

and graduate school prospects (Lamont, 2009; Posselt, 2016; Rivera, 2015). Graduates from well-resourced, top-ranked doctoral programs continue to find placement among similar, well-resourced and exclusive institutions as faculty (Clauset et al., 2015; Wapman et al., 2022; Way et al., 2019; Zhang et al., 2022). Material opportunity is made real through such boundary work crafting elite and flagship institutions and interpreting why they matter in research, policy, social interaction, and life chances. The continual imprecision and slippage about what situates an institution as elite or a flagship will further make analyses and organizational comparisons imprecise while resting on unacknowledged organizational status beliefs within an ignorance loop shaping the actors creating these stylized facts (Durant, 2020; Frickel & Edwards, 2014; Hirschman, 2021), the unequal opportunity structure, and higher education's role within it.

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