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Margaret Leighton and Jamin D. Speer

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bschoolecondor@st-andrews.ac.uk

Driven to Achieve: 40 Years of Evidence on College Students' Skills and Aspirations*

Margaret Leighton† and Jamin D. Speer‡

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Abstract

The past half century has seen dramatic changes in college enrollment. In this paper, we document how the skills and aspirations of college students have also changed. Using over 40 years of data on incoming college freshmen, we establish three key facts. First, students' goals have shifted away from the philosophical (e.g., finding meaning in life) towards the tangible (e.g., financial and family outcomes). Second, the share of students who are both of high ability and have high aspirations for tangible goals has risen steadily, with a particular increase in the 1970s and 1980s. Third, this rise is mirrored by a fall in students who, while quite strong academically, place low weight on life goals such as financial success, raising a family, or helping others.

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†University of St Andrews: mal22@st-andrews.ac.uk
‡University of Memphis: jspeer@memphis.edu

1 Introduction

College attendance patterns in the United States have seen unprecedented changes over the last half century. In 1970, 6.3 million students were enrolled as undergraduates in American colleges and universities. By 2010, this had tripled to 18.1 million (Hanson, 2024). The gender and racial makeup of the student body has changed considerably over this time, with women now outnumbering men (Goldin et al., 2006) and the share of students that is white dropping from 84% to 1976 to 55% in 2018 (Hanson, 2024).

In this paper, we document how college students have changed over time with respect to their life goals and self-rated abilities. Using data on incoming college freshmen from 1966 to 2010, we show that students' goals have shifted away from the philosophical (e.g., finding meaning in life) towards the tangible (e.g., financial and family outcomes), changing dramatically during the 1970s and early 1980s but remaining fairly steady since then. Abilities, meanwhile, have been trending upwards, with again the sharpest increases in the period up to 1985.

To understand how goals and abilities are related in the freshman population, we identify four student types by clustering a subset of these characteristics. These types reveal that trends in goals are largely driven by students who are well-rounded high-achievers: students with high ability across different domains have been increasingly arriving at college with high aspirations for financial well-being, family formation, and helping others. In contrast, in the 1970s, high-achieving college freshmen were more likely to place low weight on such outward-facing life goals.

We are not the first to note that college students have changed in important ways over this period. Altonji et al. (2012) show that the entire population was more skilled on average in the late 1990s than the late 1970s, with most of the change explained by an increase in parental education. It is also well-established that college outcomes have changed over time, including an increase in completion rates since 1990 (Denning et al., 2022), reversing a prior trend of declining completion rates (Bound et al., 2010). In this paper we expand on the first point, documenting changes in student abilities over a wider range of dimensions. Data on aspirations are rarely available at such scale: our insights on the evolution of student goals can help understand the evolution in other outcomes such as college completion and later labor market behavior.

2 Data

Our study draws on data from The Freshman Survey (TFS) administered by the University of California Los Angeles's Higher Education Research Institute (1966-2010) (HERI). TFS has gathered detailed data on incoming college freshmen across the United States annually since 1966. Colleges opt in to the survey, paying a fee in return for analysis of their school's results. The survey coverage is extensive, although changing year-on-year: our data includes responses from over 15 million students across nearly 2,000 institutions. To facilitate nation-level analysis, HERI provides weights to make each year's data nationally representative of college students. Due to the large size of the data, we take a random 20% sample of the full data from 1966 to 2010.

In the survey, students are asked to rate the importance of a list of aspirations (e.g., being well-off financially, helping others, raising a family), and to rate their own abilities in a variety of areas (e.g., mathematics, writing, drive to achieve) as compared with the average person their age.[1] The exact set of questions varies somewhat over time: we restrict our analysis to those questions which have been asked consistently (annually, or periodically recurring).

3 Trends in goals and abilities

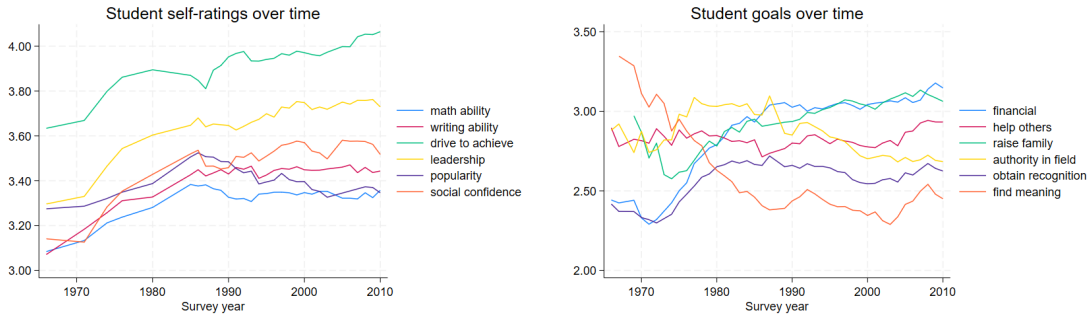
The left panel of Figure 1 shows students' average self-rated abilities in math, writing, drive to achieve, leadership, popularity, and social self-confidence over time. The self-rated abilities generally trend up over time, but the relative ranking of the six abilities is similar across the sample period. Increases in the drive to achieve are perhaps the most marked: this measure rises from an average of 3.63 in 1966 to 3.89 in 1985, and exceeds 4.0 by the end of the sample period. Ratings of leadership, writing ability, and self-confidence follow a similar pattern at lower levels. Students' self-ratings of math ability rose steadily from 1966 to the mid-1980s but have stagnated since then.

The right panel of Figure 1 plots ratings of selected goals: being very well-off financially, helping others who are in difficulty, raising a family, becoming an authority in one's field, obtaining recognition from colleagues for contributions to one's special field, and developing

[1] The abilities questions are on a 5-point scale: highest 10% of population, above average, average, below average, or bottom 10%. The goals questions are on a 4-point scale from "essential" to "not important".

a meaningful philosophy of life. In the late 1960s and early 1970s, the goal of highest importance for students was developing a meaningful philosophy of life. Raising a family, helping others and becoming an authority were close ties for second place, while being financially very well-off was near the bottom of the list. Through the 1970s and 1980s, we see a great reversal in students' aspirations from the philosophical to the material: financial aspirations move from the bottom to the top of the ranking by 1990, while developing a meaningful philosophy moves from the top to the bottom. Since the late 1980s, most aspirations have held relatively steady over time. As of 2010, financial and family concerns are essentially tied at the top, followed by helping others, with developing a meaningful philosophy a somewhat distant sixth.[2]

Figure 1: **Average self-rated abilities and goals over time**



SOURCE: TFS 1966-2010, weighted

4 Trends in student types

To what extent are these goals and abilities related? Drawing on a subset of the ability and goals measures plotted in Section 3, we use k-means clustering to partition the population of students into four 'types': individuals displaying similar combinations of goals and abilities. While the exact partitions vary based on randomly selected initial centroids, something resembling these four types appears consistently across iterations of the clustering process.[3]

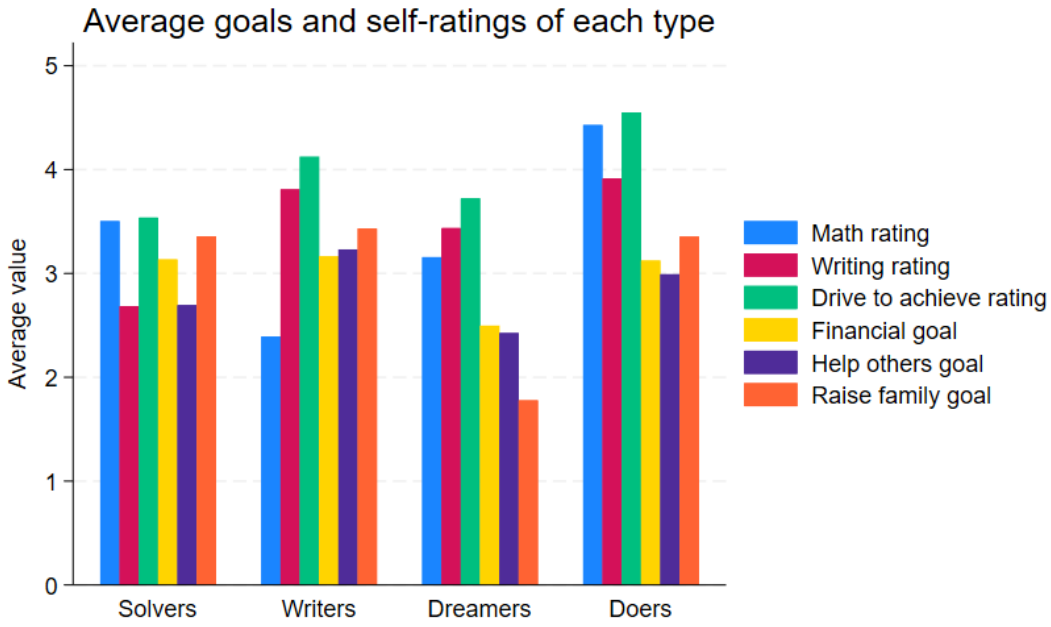
Figure 2 plots average values of each characteristic for our four types. The four types

[2] In Appendix Figures A.1-A.2 and A.3-A.4, we show these trends separately for male and female students and for white and minority students. While the levels of goals and abilities varies somewhat across groups, the trends are remarkably similar.

[3] Our clustering takes an an input six characteristics: three self-ratings (mathematics, writing, and drive to achieve) and three life goals (financial well-being, raising family, and helping others).

that emerge from our clustering procedure indicate that some goals and abilities are more closely correlated than others. We refer to the four types as Doers, Dreamers, Solvers and Writers. The Doers rate themselves highly across our three ability measures (math, writing, and drive to achieve); they also place a high value on all three of our clustered goals (being financially very well-off, helping others in difficulty, raising a family). These students are high achievers, well-rounded and confident in their abilities and broadly ambitious in their goals.

Figure 2: **Average values by student type**



SOURCE: TFS 1966-2010 and authors' calculations with k-clustering.

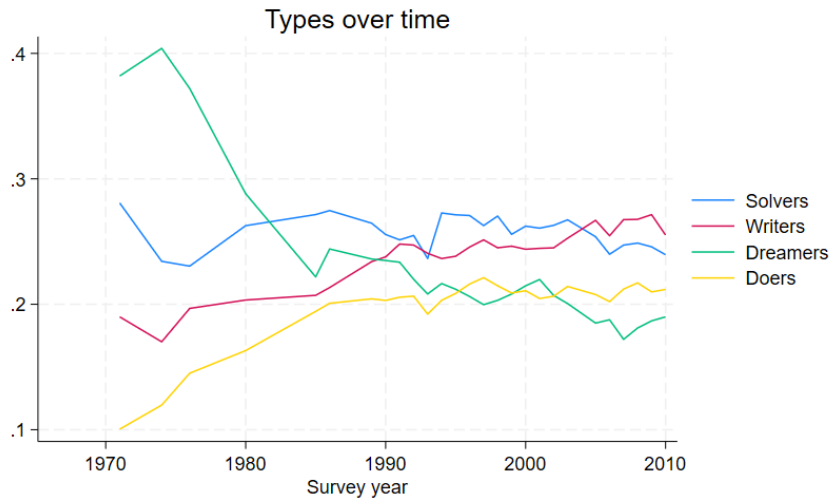
The Dreamers report somewhat lower abilities; however, they are still well-rounded, with similar levels across the three ability measures. The Dreamers contrast with the Doers in the relatively low value they place on the three goals. They place below-average value on the financial goal and the goal of helping others and well-below average on raising a family.

The Solvers and the Writers report life goals that are not dissimilar to the Doers, although the Solvers have a bit less interest in helping others. These two types differ primarily on their math and writing abilities: the Solvers rate their math ability highly, but their writing ability lower than the sample average; the Writers rate their writing ability highly, and their

math ability low.

Figure 3 shows the share of college entrants of each type over time. The trend is striking: in the 1970s, college was dominated by Dreamers, who made up about 40% of students, while only about 10% of students were Doers. Through the 1970s and 1980s, the share of Dreamers declined sharply, from 40% to 20%, while the share of Doers doubled from 10% to 20%. The share of Writers grew slowly but steadily over the period, rising from about 20% in 1971 to to just over 25% in 2010. The Solvers, meanwhile, have remained relatively constant, with minor fluctuations around the 25% share.[4]

Figure 3: **Prevalence of types over time**



SOURCE: TFS 1971-2010, weighted. Date range limited by data availability.

The analysis of these four types sheds further insight into how the college population has changed since the 1970s: rather than a secular trend whereby all students are shifting their values away from finding meaning and towards financial well-being, we see shift in student types, with well-rounded high achievers increasingly coming to college with wide-ranging ambitions to raise families, help others, and be financially well-off. This is in contrast to a previous era, where such academic high-performers would have been more focussed on the life of the mind.

[4]Figure A.5 in the Appendix breaks this down by gender. While there are some substantial level differences across gender, particularly when it comes to Solvers and Writers, the trends are nearly identical.

5 Discussion

We have shown that college students' self-rated abilities and life goals have changed considerably over the last few decades. These patterns could have implications for important outcomes like major choice, college persistence, and early-career outcomes, and they could also be reflected in how students approach their coursework and classroom performance.

Two limitations of our analysis should be highlighted. First, while the survey questions we present here were asked in a consistent way over the study period, the interpretation students made of these questions may have changed. There is less risk of this for objective concepts like 'raising a family,' but it could potentially distort responses around more subjective concepts (notably, 'developing a meaningful philosophy of life').

Second, while the trends highlighted in this paper demonstrate that college students have changed substantially over the past half century, our data do not allow us to compare them to young people who do not attend college. Whether these changes represent differential selection into college, or society-wide changes that equally affected non-college goers, is an important area for future research.

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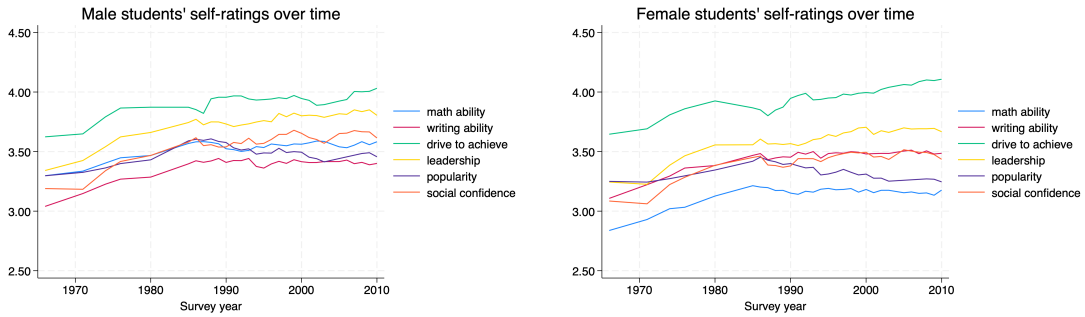
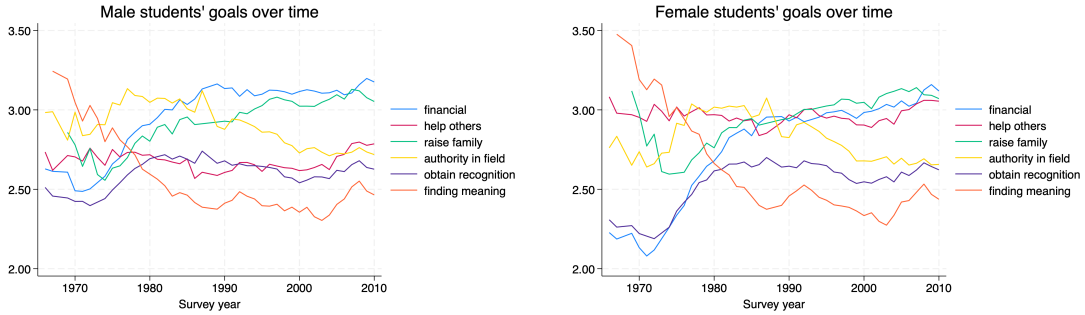
6 Appendix Figures

Figure A.1: **Self-rated abilities over time: males and females**



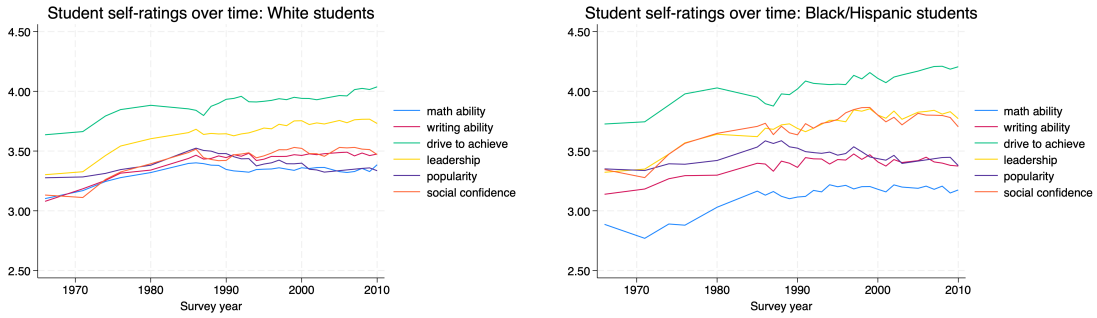
SOURCE: TFS 1966-2010

Figure A.2: **Aspirations over time: males and females**



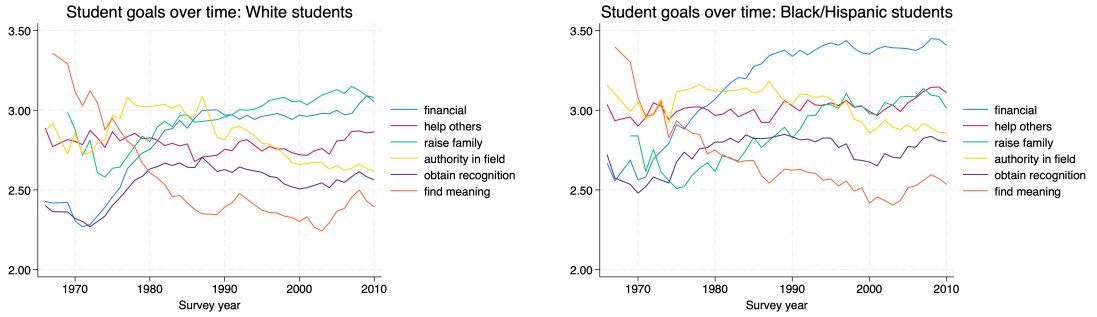
SOURCE: TFS 1966-2010

Figure A.3: **Self-rated abilities over time: white and Black/Hispanic**



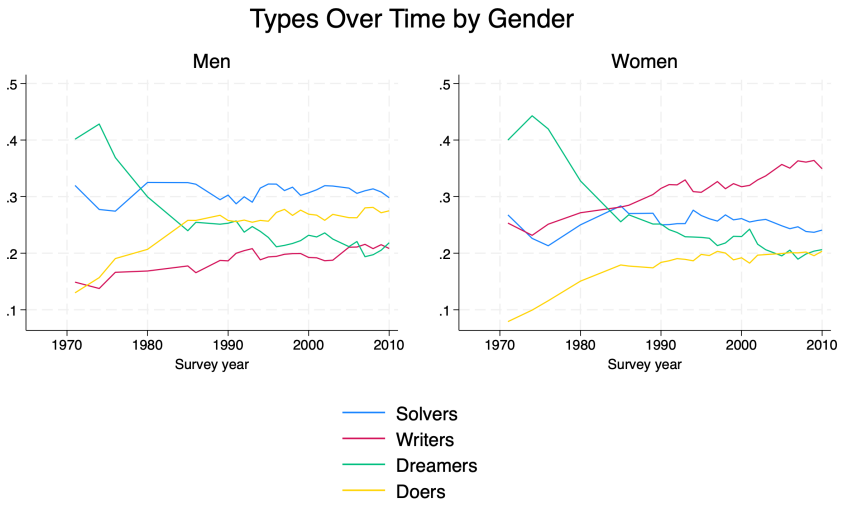
SOURCE: TFS 1966-2010

Figure A.4: **Aspirations over time: white and Black/Hispanic**



SOURCE: TFS 1966-2010

Figure A.5: **Prevalence of types over time by gender**



SOURCE: TFS 1971-2010, weighted