

Self-censoring in college applications *

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Abstract

This paper investigates the role played by self-confidence in college applications. After documenting how much gender and social differences in self-confidence explain inequalities in access to college, we show that correcting underconfidence helps to close the gap in college applications. We collect unique data on student self-confidence using experiments on more than 2,000 French college applicants. We match this data with administrative data on real college applications. After measuring student under- (or over-) confidence in their academic abilities, we randomly corrected miscalibrated beliefs about relative academic ability by providing some students information on their real rank in the grade distribution. Our results show that the best female students and the best students from low socio-economic status systematically underestimate their rank in the grade distribution. As a result, they apply to less selective programs. Providing information on the correct position in the grade distribution made the best students apply to more ambitious programs with stronger effects for female and low-SES students.

JEL-codes: I24, J24, D91, C90

Keywords: matching mechanism, confidence, information treatment, survey experiment

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1 Introduction

Self-censoring is a major obstacle to social mobility and equality of opportunity. Certain students (e.g., females or students with lower socioeconomic status (SES)) do not apply to the best programs, even though they have a chance to be admitted. Applying to colleges is a high-stakes choice, and individuals often have uncertainty about their admission chances. Therefore, students who lack confidence in their relative academic ability may apply to less ambitious programs. If female students and those from lower SES are more prone to underconfidence, this may reinforce educational inequalities.

In this paper, we study college admission in France, a country, in which social segregation in the most prestigious programs is of particular concern ([Avouac and Harari-Kermadec, 2021](#)). In 2018, France introduced a new college admission mechanism (*Parcoursup*), which is based on the dynamic college-proposing deferred acceptance mechanism (DA). In *Parcoursup*, students apply to an unordered list of programs. Programs rank candidates, and during the main dynamic stage, the clearinghouse sends offers to applicants. On the first day, the clearinghouse sends all offers up to the capacity of each program. Whenever an applicant rejects an offer, the clearinghouse sends it to the next applicant in the university’s ranking. In total, the dynamic stage lasts 50 days.

According to French minister for education, Frédérique Vidal, a major goal of this reform was to reduce self-censorship ([Vidal, 2018](#)). However, the assessment of *Parcoursup* by the French Court of Auditors concluded that self-censoring remains a key challenge ([Cour des Comptes, 2020](#)): “Limits such as self-censorship of social, territorial or gender origin, still oppose guidance that better respects the plans of each student.” The reason is that students are restricted to list up to ten universities and thus have to self-select into the range of universities where they have admission chances. In this context, confidence can play a crucial role.

This paper studies the role of confidence and mechanism knowledge on application behavior and outcomes in the French college admissions. Therefore, we conduct a survey experiment with more than 2,000 participants of the French college admission mechanism *Parcoursup*. We provide an information provision treatment that corrects students’ beliefs about their rank in the grade distribution. We combine the survey data with administrative data to study actual application behavior and matching outcomes.

We have four main findings. First, we find that high-achieving female students and those from low SES are less confident in their relative academic ability. In the survey, we elicit

respondents’ beliefs about their rank in the overall GPA distribution in an incentivized way. While there are no differences in the bottom half of the distribution, we find that female and low SES students at the top of the distribution underplace themselves significantly more than male and high SES students, respectively.

Second, lower confidence is associated with less ambitious application portfolios and less prestigious matching outcomes. In general, underconfidence can be costly if students truncate their application portfolio from the top by not applying to the best programs. In contrast, overconfidence can harm students if they truncate their list from below, thus, risk remaining unassigned. We find that underplacement predicts applying to less prestigious “reach” programs, while the prestige of “safe” programs is not linked to confidence. Thus, underconfident students have less diversified application portfolios. In our context, the cost of miscalibrated beliefs is primarily driven by underconfidence and not overconfidence.¹

Third, providing feedback about the actual rank in the grade distribution makes the best students apply more ambitiously. We provide a randomized information treatment to correct students’ misperceptions about their rank, thereby exogenously shifting their confidence. Compared to the control group, students who are informed that they are at the top of the distribution apply to more ambitious programs. The effect of the treatment is primarily driven by females and low SES students, partly closing the gap in aspirations.

Fourth, we investigate the mechanism behind the confidence gap. For female students, the confidence gap is driven by females in schools with many good students. This pattern is in line with a within-school rank effect that they extrapolate to the national rank, failing to adjust for the quality of their school. For students from low SES, underconfidence is driven by students in schools with many low SES students, which is in line with the argument of [Genicot and Ray \(2017\)](#) that aspirations are formed through peers, their paths, and successes. While low-SES students have, on average, lower-achieving peers that drive their confidence down, attendance in schools with more high SES students mitigates this effect as school peers and their families are more likely to be higher achieving.

This paper contributes to the literature on the effects of informational frictions in matching mechanisms. [Kapor *et al.* \(2020\)](#) find that many applicants have biased beliefs about admission probabilities, which impact their matching outcomes. [Arteaga *et al.* \(forthcoming\)](#) find that feedback on non-placement risk as part of “smart matching plat-

¹This fact is not too surprising, as, in French college admissions, many universities are not very selective, and thus many programs are a safe choice for participants. The main stakes are in the program’s prestige. The prestigious programs are very competitive and only admit students from the top of the grade distribution.

forms” can lead overconfident individuals to add more programs to their list. [Larroucau et al. \(2021\)](#) find evidence for strategic mistakes (overconfidence and underconfidence) in the college admission mechanism in Chile, which they try to mitigate using personalized information about admission chances. Note that admission chances though related to confidence, are a more complicated concept, including information about the program’s selectivity and student priority.

Few papers specifically look at the relevance of self-confidence for matching markets. Closest to our setting, [Bobba and Frisancho \(2019\)](#) provide feedback about rank in the test score distribution after a mock exam. Correcting students’ beliefs about their rank in the test score distribution induces a steeper gradient between academic achievement and demand for academic high schools. [Pan \(2019\)](#) uses lab experiments and shows that underconfident agents are worse off when the Boston rather than Deferred Acceptance mechanism is used and when students submit rank-order lists before learning their centralized exam score. [Dargnies et al. \(2019\)](#) show that underconfidence causes unraveling in centralized labor markets.

Moreover, we contribute to the literature that studies the impact of confidence on education and career choices. In a related setting, [Guyon and Huillery \(2020\)](#) show that among middle-school students in France, those from low SES are more likely to underestimate their relative academic potential and that this is correlated with the propensity to choose an academic high school track. [Carlana et al. \(forthcoming\)](#) provide a mentoring program to high-achieving immigrant students in Italy, which makes male students more confident about their ability and more likely to pursue the highest educational track (while there was no gap for females at baseline). [Falk et al. \(2020a\)](#) and [Falk et al. \(2020b\)](#) show that a mentoring program for students from low SES can improve their self-assessment and make them more likely to enter an academic school track. [Reuben et al. \(2017\)](#) provide evidence that overconfidence contributes to the within-major gender gap in earnings expectations.²

More broadly we contribute to an extensive empirical literature documenting gender and social background gaps in confidence and aspirations in the lab and in the field, for example, [Niederle and Vesterlund \(2007\)](#); [Hoxby and Turner \(2013\)](#); [Bordalo et al. \(2019\)](#); [Landaud et al. \(2019\)](#); [Möbius et al. \(2022\)](#), and their relevance for economic outcomes, for example, [Barber and Odean \(2001\)](#); [Malmendier and Tate \(2005\)](#); [Ortoleva and Snowberg](#)

²Other studies have emphasized the role of competitiveness for study track choice (e.g., [Buser et al., 2014](#)) or absence of role models, for example, for females in STEM programs ([Breda et al., 2021](#)).

(2015); [Sterling et al. \(2020\)](#). We show that our simple survey measure of confidence is a good predictor of high-stakes behavior and causally impacts students' choices and placements.

Finally, this paper is also related to a recent literature in the economics of education that uses natural or field experiments to uncover how feedback on students' academic ability affects relevant outcomes. [Azmat and Iriberry \(2010\)](#) and [Azmat et al. \(2019\)](#) document the effect of knowledge of students' relative rank on their effort and grades in school and universities. [Andrabi et al. \(2017\)](#) provide individual performance information and average school performance to households with children and schools, documenting positive effects on scores. [Dizon-Ross \(2019\)](#) conducts a field experiment in Malawi, informing parents about their children's academic performance, which leads to an increase in investment in high-ability children's education. [Bergman \(2021\)](#) provides weekly feedback to parents about children's missing assignments, which corrects parental over-optimism about children's performance and improves performance.

The paper is organized as follows. In Section 2, we describe France's educational system and college admission mechanism that are relevant to our research question. In Section 3, we describe the surveys and admin data. In Section 4, we introduce the design of the main survey. Section 5 presents descriptive evidence of aspiration gaps from admin data. Section 6 presents the paper's main results on confidence and aspiration behavior. Finally, in Section 7, we conclude.

2 Institutional Setting

2.1 Education system in France

In France, students in secondary education follow the same curriculum until the age of 15 (*collège*). Afterward, they can attend high school (*lycée*) and graduate after three years with a high school diploma (*baccalauréat* or *bac*), which allows them to enter higher education. High schools are separated into distinct tracks that lead to three different types of diploma: *bac général* (preparing for university education), *bac technologique* (preparing for short-term studies), and *bac professionnel* (preparing for a vocational career).

After high school, students can enter higher education. The higher education system consists of mainly four types of institutions: public universities, technical universities (DUT), technical high-schools (BTS), and preparatory high schools (*classes préparatoires*).

aux grandes écoles, CPGE). The CPGEs constitute the highest educational track and prepare students in two years for admission to the very selective *grandes écoles*.

The different study programs in higher education can be separated into selective and non-selective programs. Many institutions, like CPGEs and technical universities, can select their students based on self-chosen criteria. In contrast, public universities are, in principle, not allowed to select their students and have to admit any bac-holder. In practice, however, non-selective programs that have more applicants than available places rank applicants according to some criteria. These criteria are discussed below.

The allocation of students to the majority of post-bac training is done via a centralized clearinghouse. Until 2018, a clearinghouse called Admission Post-bac (APB) was used and in 2018 it was replaced by Parcoursup. In the following, we describe the current mechanism.

2.2 Centralized admissions mechanism: Parcoursup

The Parcoursup mechanism is a real-time implementation of the college-proposing DA mechanism. Students can submit up to ten unordered wishes (including a maximum of 20 sub-wishes) for programs.³ In 2021, they had to submit their application list by March 11. After they submit their applications, the institutions rank students based on their own criteria.

When the mechanism starts, the clearinghouse sends out offers to students up to the capacity of each program. Students have to decide

- whether to accept an offer and renounce their remaining wishes (thereby, ultimately accepting the offer),
- whether to accept an offer and keep their remaining wishes, or
- whether to decline an offer.

Initially, students have four days to decide on an offer before the deadline is reduced to two days. Declined or renounced offers are automatically given to the student with the next highest priority. In 2021, the first offers were sent out on May 27 and the mechanism concluded on July 16. Students, who are unmatched after the main admission phase, can

³In many programs, students can make sub-wishes for each wish. For example, a student can apply to CPGE in science in up to 20 different schools. This would count as one wish and 20 sub-wishes. Additionally, they could then apply to nine license programs. For some programs, the number of sub-wishes is not limited (e.g., Sciences Po).

take part in the complementary procedure and reapply to the remaining seats. However, students face a significantly reduced choice set in the complementary phase.

3 Data Collection and Sample

3.1 Survey data

Recruiting Our research question requires conducting a large-scale survey with participants of the French centralized college admission procedure, Parcoursup. This implies that our target group consists primarily of French high school seniors aged 17 to 18 years, an age group that is notoriously hard to reach using traditional sampling techniques (like telephone screening).

Therefore, we recruited our sample using social media ads (Instagram, Snapchat, and Facebook). Social media is particularly suited as the overwhelming majority of our target group are active users. According to a Diplomeo survey from 2020, 89% of 16 to 18-year-olds in France use Instagram, and 82% use Snapchat (Leroux, 2020). The targeting options of the platforms allowed us to display the ads to only the relevant population: individuals living in France aged 17 to 18. Moreover, we targeted the ads by gender to obtain an approximately gender-balanced sample. The ad was shown to more than 530,000 unique users on Snapchat and to more than 550,000 unique users on Instagram and Facebook.⁴ Details on the recruitment procedure can be found in Appendix B.

The ad addressed students in the final year of the Baccalauréat, who are prospective participants of Parcoursup, and invited them to participate in a survey. Moreover, the ad offered participants the chance to win Amazon.fr gift cards for completing the survey. Individuals who clicked on the ad were redirected to the Qualtrics survey.

We administered two surveys (pre-survey and main survey), and the purpose of each will be explained in the following.

Pre-survey In order to assess subjects' confidence, we are interested in how subjects place themselves in the grade distribution relative to others. Therefore, we require a

⁴These numbers are lower bounds since they are based on our own ad activities. Additionally, we hired a social media agency to buy ads on our behalf, but we cannot identify to how many unique users their ads were shown on top of our ads. We expect the number to be much lower, as most of the ads budget was spent on our own ad.

reference group to which their grades can be compared. To form such a reference group, we conduct a pre-survey one and a half months before our main survey.

For the pre-survey, subjects were recruited via ads on Instagram and Facebook. We pre-screened the respondents and only allowed participation of those who are in the final year of the Baccalauréat général, plan to take part in Parcoursup in 2021, and are at least 16 years of age. The final sample consists of 1,001 students (see Appendix B for details).

Participants were asked for their demographic characteristics and grade point average in the first trimester of the bac. Based on the stated GPA, we form the distribution of grades to which we compare individuals in the main survey. Moreover, we ask for their demographic characteristics and contact details in order to invite them to the main survey.

Main survey The main survey was fielded between February 18 and March 11, that is, in the three weeks before participants had to finalize their application lists in Parcoursup.

Participants for the main survey were recruited via ads on Instagram, Snapchat, and Facebook. On the landing page, respondents were informed about the survey and asked for consent regarding the raffle terms and the privacy policy. Of the 14,590 respondents that consented to participate, 48% dropped out when asked for their name, demographics, and contact details.⁵ Another 24% dropped out when asked to state the programs (city, institution, and program) they plan to apply for in Parcoursup in free-text form. In the end, 3,446 completed the survey. While the completion rate may appear low, it is not surprising for several reasons (cf. [Allcott et al., 2020](#)). First, the sample does not consist of participants who signed up for a survey panel and, thus, showed a general interest in sharing their data. Participants may have clicked on the link out of curiosity but decided to opt out after finding out that the survey asked for personal information. Second, respondents clicked on the ad while browsing social media, hence, they may not have been prepared to complete a 12-minute survey that contains a number of reasonably tedious free-text responses (such as the application list). Although we tried to keep the survey concise, it is arguably less entertaining and requires a longer attention span than the content typically consumed on social media. Importantly, only 1.8% dropped out after they were assigned to the treatment (treatment assignment happened right before the treatment was provided). Hence, it is unlikely that the treatment is an important driver for attrition.

⁵Subjects were informed that all analyses will be anonymized and that their personal information would only be used to match their responses to the administrative records and to contact them in case that they won a gift card.

Data cleaning We cleaned the data from duplicate entries that were identified based on mail address, phone number, and name.⁶ If a respondent completed the survey more than once, we consider their pre-treatment answers from the first entry and their post-treatment answers from the final entry. The treatments are cumulated. That is, a respondent who received one treatment in the first attempt, and another treatment in the second attempt, is treated as receiving both treatments. Overall, we applied the described procedure to 81 duplicate entries.

3.2 Administrative data

The administrative data consists of the universe of Parcoursup 2021 participants, including their background characteristics, application choices, and matching outcomes. For each candidate, we observe their demographic characteristics (gender, age, socioeconomic background), the school in which they graduated, and their high school diploma grade in four honors categories.⁷ Moreover, we observe the complete list of programs that they applied to, the offers they received including their date, and the response given by the student to each offer.

To construct the variable for socioeconomic background, we use parents' socio-professional category (PCS), a classification of occupations and hierarchical positions (Insee, 2016).⁸ We classify manual workers, low-skilled employees (working and retired), and the unemployed as low socioeconomic status. The SES of the parents is used to classify applicants: An applicant is classified as being from low SES if both of her parents are low SES (or if one is low SES and the other parent is missing). Otherwise, a student is classified as "Not low SES."⁹

Matching of data For the main analysis, we match the survey respondents with the Parcoursup administrative data. Therefore, we have asked respondents in the main survey

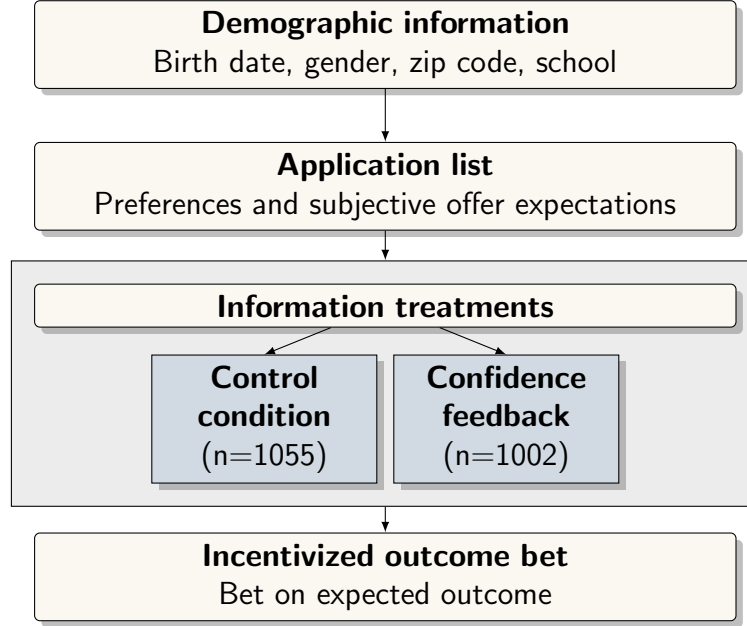
⁶The motivation for taking the survey multiple time may have been to take part in the raffle for gift cards multiple times (although we excluded this possibility in the consent form).

⁷In France, the GPA of the *bac* translates to the following honors (*mention*): In our data, 13% earn "Highest honors" (*Très bien*), 22% earn "High Honors" (*Bien*), 30% earn "With Honors" (*Assez bien*), and 35% are not granted honors (*Pas de mention*).

⁸Following Insee (2016), the 42 PCS categories can be grouped into manual workers, low-skilled employees, intermediate occupations, and high-skilled occupations.

⁹To simplify the exposition, we will use high SES in the text referring to all students who are not low SES.

Figure 1: Survey Design



for their national student number (INE).¹⁰ For respondents, who did not provide their INE, we match based on school, postal code, birth date, and gender. For those not identified uniquely, we compare their survey application lists and the admin data. This procedure allows us to match 3,199 respondents successfully.

4 Survey design

Figure 1 gives an overview of the survey flow of the main survey. In the following, we describe the stages of the survey in detail.

Demographic information We collect demographic information regarding birth date, gender, zip code, and school name. These variables allow us to match the data to the administrative data in case subjects do not provide a student number (INE).¹¹

¹⁰The INE is an 11-digit, unique identifier that is, for example, given on their report cards. As students also needed the INE to sign up on Parcoursup, many of them knew where to look it up.

¹¹After demographic information, the survey collected the data on planned ranked application lists, believed admission chances, information acquisition, and peer preferences. All these data are not used in the current project and were collected for a complementary project.

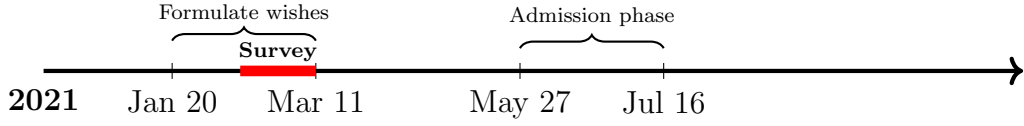


Figure 2: Timeline of the survey and Parcoursup

Confidence treatment In the first treatment arm, we vary respondents’ confidence about their academic ability relative to others. First, we elicit subjects’ beliefs about their rank in the grade distribution in an incentivized way. Second, we correct these beliefs for subjects in the treatment group by informing them about their true rank.

To this end, we ask all respondents for their most recent trimester grade point average (GPA). Next, we ask for their belief on how they rank in terms of this GPA compared to a sample of 1,000 students from France that we surveyed in the pre-survey. We carefully explain how the reference sample is drawn and the characteristics of the sample (only 2021 Bac Générale students who report participating in Parcoursup 2021 and who were recruited via Instagram and Facebook ads). Subjects are asked for their percentile rank on a slider from 0 to 100. They are told that we will raffle ten 100 Euro Amazon.fr gift cards among the participants who provide the correct belief (+/- 3 percentiles).

A random half receives feedback on their true rank in the grade distribution. On the slider, we show their true rank with the distance to their guess in green (if it deviates by at most three ranks), in yellow (if it deviates by at most ten ranks), or in red (if it deviates by more than ten ranks). Correspondingly, the feedback states: “You are X ranks too optimistic/pessimistic” in green, yellow, or red font. Screenshots of the treatment are provided in Figures D.12 to D.14.

Incentivized outcome bet Finally, we asked respondents to bet on the program they think they will attend. They were asked to choose one program from their submitted application list. We told them that those who correctly predicted the outcome could win one of twenty 50 Euro gift cards.¹²

Figure 2 presents the timing of the survey relative to the dates of Parcoursup. We conducted the survey right before the application deadline, so we expect that treatment

¹²After the mechanism ended, we contacted 20 respondents and asked which program they accepted. 15 of them responded, and, among those, eight indicated the program they bet on (and received the gift card), while seven indicated a program different from their bet.

intervention can affect the application behavior. The survey and the main hypotheses were pre-registered in AEA RCT Registry, project number AEARCRT-0007218.¹³

5 Aspiration gaps by gender and SES

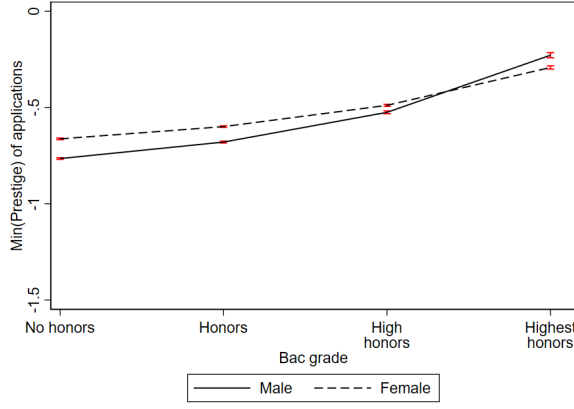
To motivate our analysis, we first present descriptive results for aspiration gaps by gender and socioeconomic status based on the administrative data. We begin by looking at the prestige of the application list. The prestige of a program is defined as the (z-standardized) average bac grade level of the enrolled students.

Figure 3a shows the minimum prestige (i.e., the prestige of the “safe” program) and Figure 3b shows the maximum prestige (i.e., the prestige of the “reach” program) of the application list by grade level and by gender. The figure shows only small gender differences in the prestige of the “safe” program. At the same time, the best female students apply to significantly less prestigious “reach” programs than the best male students. Female students’ more modest application behavior translates into actual consequences, with the highest honor students being matched to programs with a 0.35 standard deviations lower prestige (see Figures A.1b in the Appendix). An alternative measure of aspirations is whether students apply to at least one of the prestigious preparatory classes (CPGE). In Figure A.1a in the Appendix, we show that the best female students are also significantly less likely to apply to CPGE. Among students receiving “highest honors,” female students are 17 percentage points less likely to apply to a CPGE. Again, this gap translates into a gender gap in admissions to CPGE, with the highest honor females being 17.9 percentage points less likely to be matched to a CPGE (see Figure A.2a in the Appendix).

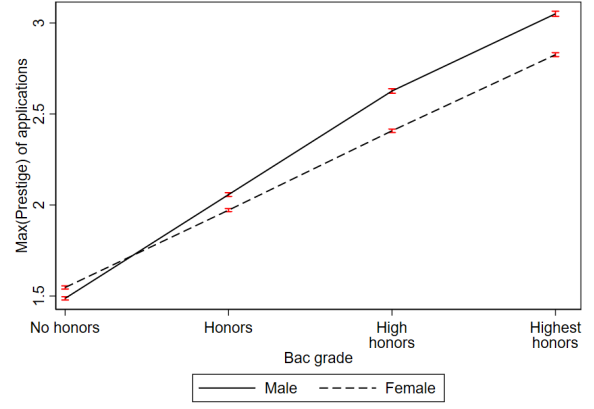
Moreover, we find remarkable aspiration gaps by socioeconomic background. While we do not find strong differences in the prestige of the “safe” program (see Figure 3c), students from lower SES apply to significantly less prestigious “reach” programs, with the largest differences among the best students (see Figure 3d). Also, lower ambition in terms of applications has real consequences as the highest-honor low SES students are ultimately matched to programs with 0.55 standard deviations lower prestige than the highest-honor

¹³We have primarily followed the pre-registration but deviated in the following two aspects. First, the survey had two treatment interventions- the second provided advice on strategic behavior in the Parcoursup mechanism. We decided to move the results of the second treatment to a separate paper, which focuses on students’ strategies within the matching mechanism. Second, we focus on high-achieving students while we have not expected it in the pre-registration, as we did not expect most of the variation in confidence and prestige of the selected programs to happen among high-achieving students.

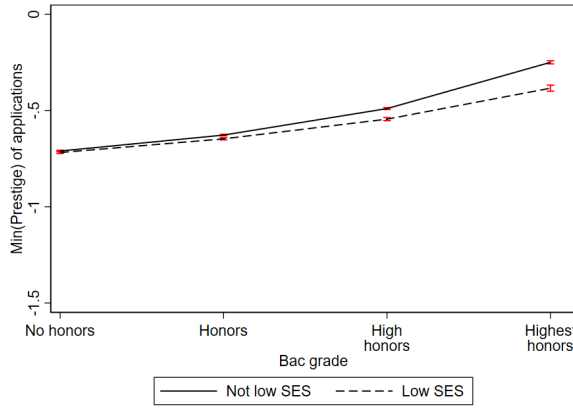
Figure 3: Prestige of applications by honors and gender/SES



(a) Min(prestige) by gender



(b) Max(prestige) by gender



(c) Min(prestige) by SES



(d) Max(prestige) by SES

Notes: The figures show the minimum and maximum prestige of the programs in the application list by honors level and gender/SES. Prestige of a program is defined as the mean grade level of all enrolled students. 99% confidence intervals are based on predicted values from a regression on the interaction of honors level and female/low SES.

high SES students. This pattern is also reflected in applications to CPGE, where highest-honor students from low SES are 14.7 percentage points less likely to include a CPGE in their application list (see Figure A.1c), and are 10.7 percentage points less likely to be matched to a CPGE.

These patterns are consistent with the hypothesis that especially the best female and low SES students are less confident in their relative academic ability and, therefore, apply to

less ambitious “reach” programs. However, it could also be driven by different preferences over programs or peers, asymmetries in information about the prestige of the programs or admission chances, and (in the case of low SES) differences in budget constraints that constrain the choice set. In the following sections, we use our survey data to identify the role of confidence in application behavior.

6 Confidence and college application behavior

In the following, we present evidence of applicants’ confidence and its effect on application behavior and outcomes. First, we assess the level of over- and underconfidence about GPA rank and how it correlates with the applicant’s gender and socioeconomic status. Second, we investigate whether differences in confidence are associated with different application behavior. Third, we study the causal effect of confidence on application behavior by analyzing the impact of our information treatments, in which we exogenously shift the confidence of a random subset of respondents.

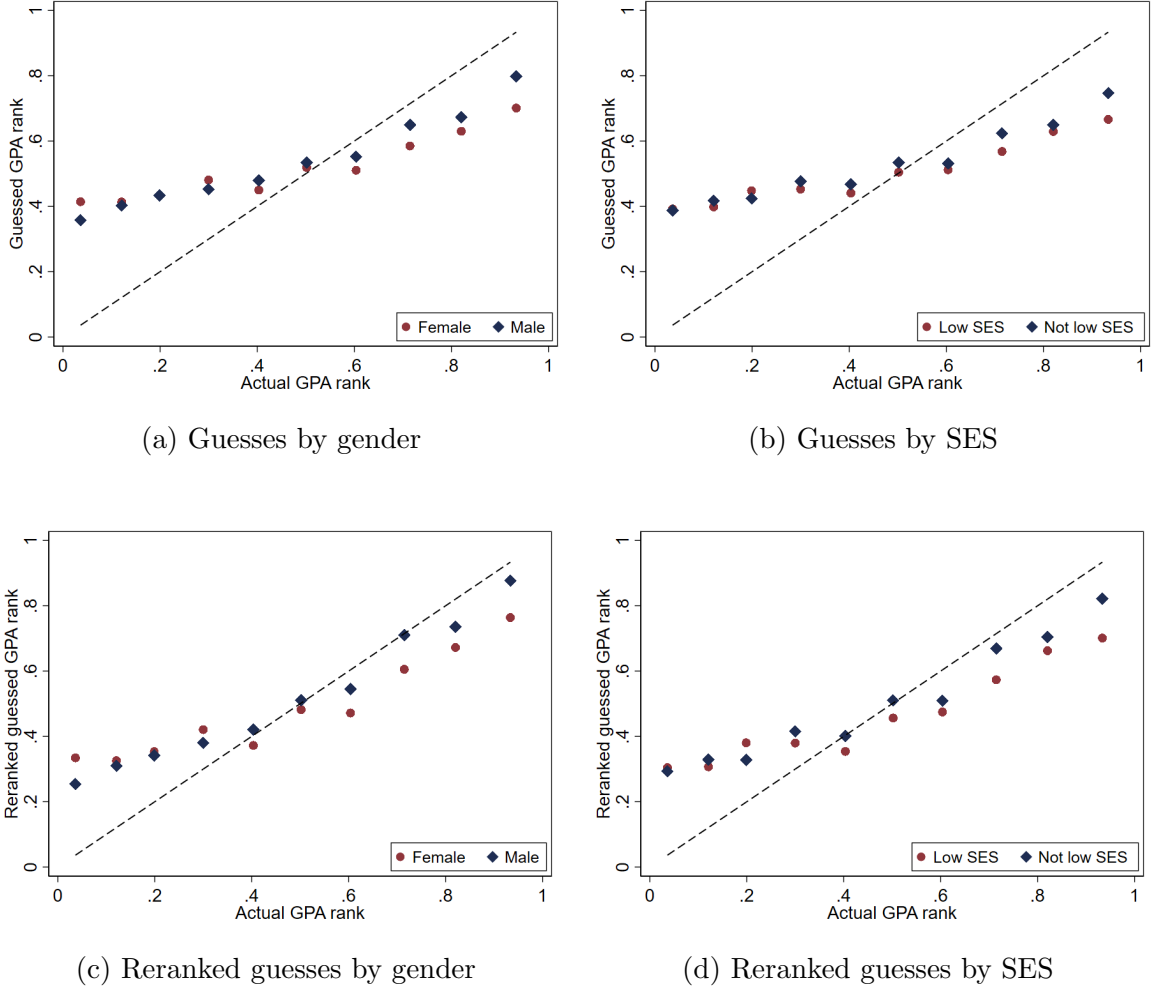
6.1 Misperceptions about GPA rank

Figure 4 shows individuals’ beliefs about their rank in the GPA distribution by their actual rank. The higher the rank, the better the student’s GPA. The figures show the mean guess in bins of 10 ranks each.

Figure 4a shows that males and females in the bottom half overplace themselves similarly. In contrast, female students whose GPA is in the top half appear systematically more underconfident than male students. In Figure 4b, we observe a similar pattern by socioeconomic status: While low SES students in the bottom half of the distribution do not differ systematically, those in the very top of the distribution underplace themselves more.

Figures 4a and 4b exhibit the general pattern that students in the bottom half of the GPA distribution overestimate their rank on average (the mean guesses are above the 45-degree line), while students in the top half underestimate their rank (the mean guesses are below the 45-degree line). This pattern of over- and underplacement is, to a certain degree, mechanical due to mean reversion: subjects at the very top of the distribution can only err by underestimating their rank, while the opposite is true for those at the very bottom of the distribution. Hence, in Figures 4c and 4d, we follow an approach similar to [Hvidberg](#)

Figure 4: Average guessed GPA rank by actual rank



Notes: The figure shows the guessed GPA rank by actual GPA rank. The dots are mean guesses in bins of 10 ranks each. Panels (a) and (b) use the stated guesses to calculate the mean. Panel (c) and (d) use the rank of the guess instead of the stated guess. The dotted line shows the 45 degree line.

et al. (2020) and rerank individuals based on their stated guesses. That is, we replace the stated guess of the percentile rank with the percentile rank of the stated guess.¹⁴

Figure 4c shows that male subjects in the top half estimate their rank quite well on average after controlling for mean reversion. Subjects in the bottom half still overplace themselves on average, but less than before reranking them. Nevertheless, the gender difference remains: Female students with above-average GPAs are more likely to underplace

¹⁴For example, if the maximal guessed rank in the sample was 90, we would replace the rank with 100 since no other individual stated a higher guess.

themselves than male students. In Figure 4d, we observe that also high-performing low SES students are still less confident after reranking.

In Table A.2, we use regressions to test the statistical significance of these patterns. Male students are indeed significantly less likely to underplace themselves and are more likely to be accurate about their GPA rank. However, the interaction terms show that the gender difference is driven by respondents with a GPA in the top half. We find substantially stronger underplacement by the highest-honor female students (“Très bien”).

In Table A.3, we run the same estimations but now consider the difference in confidence by SES. Again, we observe that low SES students are, on average, more likely to underplace themselves and are less likely to have accurate beliefs. When we interact grade levels with socioeconomic status, we observe that the best students drive the SES confidence gap.

6.2 Correlation of confidence and application behavior

Next, we are interested in whether being miscalibrated about GPA rank is associated with different application behavior. In particular, we study whether individuals, who underplace or overplace themselves, apply to more or less prestigious programs and to which programs they are matched. In this section, we only consider subjects in the control group to ensure that our information treatment does not affect the outcomes.

Estimation strategy To estimate whether confidence predicts application behavior and outcomes, we estimate regressions of the following specification:

$$(1) \quad Y_i = \alpha_0 + \alpha_1 \text{confidence}_i + \alpha_2 \text{true rank}_i + \alpha_3 X_i + \epsilon_i$$

where

$$(2) \quad \text{confidence}_i = \text{guessed rank}_i - \text{true rank}_i,$$

and Y_i are outcome variables that characterize the application list, the incentivized outcome bet, and the final match. For the application list, we study the prestige of the “reach” and the “safe” program, the average prestige of the list, and whether applicants include at least one CPGE in their list. For the outcome bet, we consider the program’s

Table 1: Correlations of confidence with application behavior and outcomes

	Application list				Outcome bet	Final match	
	(1) Max Prestige	(2) Min Prestige	(3) Mean Prestige	(4) One CPGE	(5) Prestige	(6) Prestige	(7) CPGE
<i>Panel A: Confidence</i>							
Confidence	0.683*** (0.203)	0.130 (0.093)	0.476*** (0.140)	0.329*** (0.076)	0.549** (0.232)	0.432** (0.186)	0.159*** (0.055)
True rank	1.755*** (0.268)	0.317*** (0.120)	1.357*** (0.190)	0.632*** (0.099)	1.639*** (0.296)	1.934*** (0.237)	0.260*** (0.073)
<i>Panel B: Underplacement</i>							
Underplacement	-0.537* (0.306)	-0.260 (0.175)	-0.520** (0.265)	-0.535*** (0.146)	-0.736* (0.416)	-0.477 (0.345)	-0.275*** (0.098)
True rank	1.416*** (0.244)	0.293*** (0.108)	1.158*** (0.174)	0.540*** (0.089)	-1.448*** (0.266)	1.763*** (0.216)	0.224*** (0.062)
<i>Panel C: Overplacement</i>							
Overplacement	0.873*** (0.286)	0.052 (0.107)	0.503*** (0.162)	0.222*** (0.081)	0.484* (0.284)	0.465** (0.207)	0.089* (0.049)
True rank	1.664*** (0.260)	0.249** (0.112)	1.247*** (0.179)	0.501*** (0.092)	1.465*** (0.276)	1.832*** (0.216)	0.188*** (0.065)
Bac Grade FE	✓	✓	✓	✓	✓	✓	✓
Observations	1042	1042	1042	1042	942	914	914

Notes: Confidence is the difference between the guessed rank and the true rank. In Columns (1), the dependent variable is the z-standardized maximal prestige (in terms of average mention) of the application list, in Column (2), minimum prestige of the application list, in Column (3) the average prestige of the application list, and in Column (4) an indicator whether at least one CPGE is included in the list. In Column (5) the outcome is the prestige of the incentivized bet, in Column (6) the prestige of the final match and in Column (7) it is an indicator of whether the final match is a CPGE. Only the control group and students from Bac Generale are included. Significance levels are indicated by * < .1, ** < .05, *** < .01.

prestige, which the students predicted they would attend in the end. For the final match, we look at the prestige of the final match and whether the final match is a CPGE.

The variable Confidence_i is positive if an individual overplaces herself and negative if an individual underplaces herself. Since we control for the actual rank, α_1 measures the influence of confidence. We also include indicators for Bac grades to control for academic ability more flexibly.

Results Table 1 shows the regression results for the confidence variable (the guessed rank minus the actual rank) and the true rank. Note that if subjective beliefs about own ability did not matter and everyone applied according to their true academic ability, we

would expect only the actual rank to predict applications and outcomes, not the confidence variable.

But in fact, Panel A shows that confidence about relative academic ability is highly predictive of application behavior, holding true ability constant. Column (1) shows that less confident applicants apply to less prestigious “reach” programs (Max Prestige), even controlling for the actual rank. Being ten percentiles more confident is associated with a 0.07 standard deviations higher prestige of the “reach” program. In contrast, there is no significant difference in the prestige of the “safe” program (Min Prestige) by confidence. Higher confidence also predicts the average prestige of the application list, and more confident respondents are more likely to include one of the very prestigious CPGE in their application portfolio (see Columns (3) and (4)). Being ten percentiles more confident about one’s rank is associated with a two percentage points higher probability of applying to a CPGE. These results suggest that lack of confidence could harm students since they apply less ambitiously. In contrast, overconfidence does not seem harmful since it does not affect the selectivity of the “safe” program in the list.

These findings are underscored by the results for the prestige of the incentivized outcome bet in Column 5.¹⁵ The results show that higher confidence is associated with a bet on a more prestigious program.

Even if higher confidence makes students apply to more prestigious programs, it may be inconsequential if they are not admitted to these programs. However, our results show that higher confidence affects the final match. In Column (6) of Table 1, we observe that the differences in application behavior also translate into different matching outcomes. Controlling for grades, being ten percentiles more confident is associated with a 0.04 standard deviations higher prestige of the final match. Moreover, an individual, who is ten percentiles more confident, is 1.6 percentage points more likely to be matched to a CPGE.

In Panel B and C, we investigate whether underconfident or overconfident students drive these differences. In Panel B, overplacement is the guessed rank minus the actual rank if an individual overplaces herself and zero otherwise. Conversely, underplacement is the true rank minus the guessed rank if an individual underplaces herself and zero otherwise. Both underplacement and overplacement contribute to the gap in the “reach” program prestige and the propensity to include a CPGE in the application list. Moreover,

¹⁵The sample size is reduced since for some students we could not match the programs that they indicated in the survey to the programs in the administrative data.

both underplacement and overplacement explain the final match prestige and whether a respondent is matched to a CPGE.

6.3 Can information treatments improve application behavior?

In the following, we study whether an information treatment that corrects respondents' misperception about their relative rank has a causal effect on their application behavior. Since the grade feedback has different consequences for individuals, who are informed that they are at the top of the distribution compared to individuals, who are not at the top, we focus on the differential effect of the treatment by initial confidence and bac grade.

Estimation strategy First, to estimate whether the information treatment impacts application behavior and outcomes, we estimate the following regressions:

$$(3) \quad Y_i = \beta_0 + \beta_1 \text{Confidence}_i + \beta_2 \text{Grade feedback}_i \times \text{Confidence}_i \\ + \beta_3 \text{Grade feedback}_i + \beta_4 \text{True rank}_i + \beta_5 X_i + \epsilon_i,$$

where Y_i and Confidence_i are defined as above. In this specification, β_1 measures the influence of confidence in the control treatment, as studied in the previous section. It represents the “confidence gap,” that is, the variation in application behavior due to differences in subjective beliefs about own ability. The coefficient β_2 measures how much the information treatment affects the impact of confidence on application behavior. Moreover, β_3 estimates the effect of the information treatment on individuals that are well calibrated (whose guessed rank is equal to the actual rank). Finally, X_i includes Bac grade fixed effects to control for ability differences more flexibly.

Second, we study whether the information treatment has a differential impact on the students with the best grades by estimating the specification:

$$(4) \quad Y_i = \gamma_0 + \gamma_1 \text{Grade feedback}_i \times \text{Highest honors}_i \\ + \gamma_2 \text{Grade feedback}_i + \gamma_3 \text{Highest honors}_i + \gamma_4 X_i + \epsilon_i,$$

where Highest honors_i is a variable that indicates whether student i received the highest honors in their Bac or not. While γ_1 estimates the treatment effect of the rank feedback for

the highest honors students, γ_2 estimates the treatment effect for the remaining students. γ_3 estimates the baseline difference between the highest honors students and the other students. As above, X_i includes Bac grade fixed effects.

Results Table 2 shows the treatment effects on the application list, the outcome bet, and the final match. Panel A shows the differential treatment effect by confidence. In line with our results from Section 6.2, we find a sizeable confidence gap of 0.63 standard deviations in the prestige of the “reach” program. The interaction effect shows that the treatment closes the gap to a large degree (0.49 standard deviations), while there is no significant treatment effect on the prestige of the “safe” program. Moreover, the treatment reduces the confidence gap in terms of the mean prestige and the outcome bet.¹⁶ There is also an impact on actual outcomes, with the treatment significantly reducing the confidence gap in attending a CPGE.

In Panel B, we study the differential treatment effects by Bac grade. The table shows that the treatment has the strongest positive effects on the highest honors students. Note that these students received positive feedback about belonging to the top students in the rank distribution. The grade feedback increases the prestige of the “reach” program by around 0.2 standard deviations compared to the control group. For students with lower grades, there is no significant treatment effect. The treatment has no significant impact on the prestige of the “safe” program. Regarding the final match, we find positive but statistically insignificant effects on the prestige and the likelihood of being matched to a CPGE.

In Table A.4 in the appendix, we look separately at the treatment effect of the grade feedback on underplaced and overplaced respondents. The impact of the treatment on the “reach” program’s prestige is driven by reducing the confidence gap of both under- and overconfident students. In contrast, the effect on applying and being matched to a CPGE is mainly driven by a positive impact on underconfident students.

In the previous section, we have seen that high-achieving female students and those from lower SES are more likely to be underconfident. Hence, we check if these subgroups drive our treatment effect.

¹⁶For the outcome bet, we exclude participants who bet on a program for which they indicated a probability of 0 or 100 percent to receive an offer since the potential treatment effect would be bounded for these participants.

Table 2: Treatment effect of Grade feedback on outcomes (by confidence and bac grade)

	Application list				Outcome bet	Final match	
	(1) Max Prestige	(2) Min Prestige	(3) Mean Prestige	(4) One CPGE	(5) Prestige	(6) Prestige	(7) CPGE
<i>Panel A: By confidence</i>							
Confidence	0.627*** (0.168)	0.112 (0.080)	0.440*** (0.118)	0.278*** (0.065)	0.577*** (0.209)	0.429*** (0.159)	0.149*** (0.046)
Grade feedback	0.054 (0.044)	0.008 (0.024)	0.038 (0.034)	-0.009 (0.019)	0.073 (0.057)	0.002 (0.045)	0.025 (0.015)
Grade feedback × Confidence	-0.490*** (0.179)	0.036 (0.085)	-0.267** (0.127)	-0.107 (0.071)	-0.389* (0.222)	-0.105 (0.175)	-0.107** (0.054)
True rank	1.588*** (0.179)	0.287*** (0.085)	1.278*** (0.131)	0.524*** (0.071)	1.819*** (0.219)	1.682*** (0.167)	0.220*** (0.052)
<i>Panel B: By Bac grade</i>							
Grade feedback	0.007 (0.053)	0.012 (0.023)	0.021 (0.038)	-0.016 (0.019)	0.053 (0.061)	-0.031 (0.050)	0.009 (0.013)
Grade feedback × Highest honors	0.212** (0.095)	-0.022 (0.075)	0.086 (0.099)	0.039 (0.058)	0.033 (0.167)	0.121 (0.146)	0.066 (0.054)
Highest honors	0.918*** (0.075)	0.396*** (0.050)	1.043*** (0.072)	0.420*** (0.039)	1.332*** (0.114)	1.660*** (0.101)	0.181*** (0.035)
Bac Grade FE	✓	✓	✓	✓	✓	✓	✓
Observations	2022	2022	2022	2022	1567	1793	1793

Notes: Confidence is the difference between the guessed rank and the true rank. In Columns (1), the dependent variable is the z-standardized maximal prestige (in terms of average mention) of the application list, in Column (2), minimum prestige of the application list, in Column (3) the average prestige of the application list, and in Column (4) an indicator whether at least one CPGE is included in the list. In Column (5) the outcome is the prestige of the incentivized bet, in Column (6) the prestige of the final match and in Column (7) it is an indicator whether the final match is a CPGE. Only students from Bac Generale are included. Significance levels are indicated by * < .1, ** < .05, *** < .01.

Table 3: Heterogenous treatment effects of Grade feedback on Highest honors students

	Application list				Outcome bet	Final match	
	(1) Max Prestige	(2) Min Prestige	(3) Mean Prestige	(4) One CPGE	(5) Prestige	(6) Prestige	(7) CPGE
<i>Panel A: By gender</i>							
Female	-0.553*** (0.091)	-0.124 (0.128)	-0.605*** (0.129)	-0.348*** (0.065)	-0.509** (0.218)	-0.520*** (0.180)	-0.292*** (0.080)
Grade feedback	-0.090 (0.066)	-0.028 (0.151)	-0.241 (0.148)	-0.131 (0.082)	-0.086 (0.261)	-0.152 (0.219)	-0.081 (0.105)
Grade feedback × Female	0.414*** (0.122)	0.019 (0.171)	0.468** (0.184)	0.202* (0.106)	0.214 (0.323)	0.336 (0.278)	0.216* (0.120)
Observations	319	319	319	319	251	297	297
<i>Panel B: By SES</i>							
Low SES	-0.729*** (0.201)	-0.306*** (0.114)	-0.805*** (0.163)	-0.339*** (0.087)	-1.046*** (0.267)	-0.957*** (0.237)	-0.240*** (0.055)
Grade feedback	0.100 (0.073)	-0.037 (0.082)	0.026 (0.095)	-0.057 (0.060)	-0.103 (0.162)	-0.034 (0.144)	0.030 (0.061)
Grade feedback × Low SES	0.504** (0.242)	0.026 (0.148)	0.217 (0.227)	0.380*** (0.140)	0.781* (0.426)	0.411 (0.377)	0.234* (0.123)
Observations	314	314	314	314	248	293	293

Notes: Confidence is the difference between the guessed rank and the true rank. In Columns (1), the dependent variable is the z-standardized maximal prestige (in terms of average mention) of the application list, in Column (2), minimum prestige of the application list, in Column (3) the average prestige of the application list, and in Column (4) an indicator whether at least one CPGE is included in the list. In Column (5) the outcome is the prestige of the incentivized bet, in Column (6) the prestige of the final match and in Column (7) it is an indicator whether the final match is a CPGE. Only students from Bac Generale are included. Significance levels are indicated by * < .1, ** < .05, *** < .01.

In Panel A of Table 3, we focus on the highest honors students and observe that high-achieving females are driving the treatment effect. While there are no significant treatment effects for male students, high-achieving females apply more ambitiously after receiving the treatment. For the “highest honors” students, the treatment closes 75% of the gender gap in the prestige of the “reach program” (0.414/0.553), 77% of the gender gap in mean prestige of applications, and 57% of the gender gap in applying to CPGE. Moreover, the treatment closes 74% of the gender gap in being accepted to CPGE, even though the effects on CPGE application and enrollment are only significant at the 10 percent level.

In Panel B of Table 3, we look at heterogeneous treatment effects by SES and find that also here, the treatment effect is stronger for high-achieving low SES students. The treatment closes 69% of the gap in the “reach” program’s prestige, the full gap in applications to CPGE, and 75% of the gap in the prestige of the bet program. Moreover, the treatment closes 97% of the SES gap in being accepted to CPGE (at 10% statistical significance).

Summarizing the results of our intervention, we observe large effects on the highest honor female and low SES students. Importantly, feedback does not significantly affect lower-grade students. Thus, we show that a simple intervention can reduce the gender and SES gap in aspiration for the students for which we found the largest gaps: the highest honor students.

6.4 Mechanisms for the confidence gap

Our results show that in particular female and low SES students with very good grades underplace themselves. Note that in French high schools, students receive extensive feedback about their relative rank in class. So why are the best achieving female students and students from low SES less confident?

There are several theories of potential sources in the aspirations gap between low and high-SES students. Theories of socially dependent aspirations ([Appadurai, 2004](#); [Ray, 2006](#); [Genicot and Ray, 2017](#)) argue that social background directly affects aspirations, as beliefs about potential future development and own probability to succeed are formed based on observations of own background. Thus, students from low SES, especially in bad schools, are constrained by the stigma of low possibilities, which can affect their effort and lead to a poverty trap. [Hoff and Stiglitz \(2010, 2016\)](#) model that the beliefs about social inferiority of the surrounding social class directly affect self-confidence. The latter is in line

with our evidence and findings by [Guyon and Huillery \(2020\)](#). These theories, however, are harder to apply to explain the gender gap in confidence.

Given the in-class feedback, we pose an alternative channel that can drive the effect- the reference effect similar to “the big fish little pond effect.”¹⁷ If students naively extrapolate their rank from school to the national distribution, then students from better schools would be more likely to underplace themselves. “The big fish little pond effect” shows that high achieving students in better high schools have a less positive academic self-concept than high achieving students in less competitive schools. Some papers document that the effect is stronger for girls than for boys in high schools (e.g., [Marsh *et al.*, 2007](#); [Koivuhovi *et al.*, 2022](#)). These papers do not measure confidence, although academic self-concepts are related to it. This observation would also be in line with evidence from French high schools in [Laudaud *et al.* \(2019\)](#): girls, who are just admitted to a highly selective school, are less likely to select into the academic track than comparable girls in less selective schools, while there is no effect for boys. This channel cannot explain the SES gap, as high-achieving low SES are likely to be top of the class in schools and thus would project their rank to the top of the national distribution. Thus, the reference effect would likely lead low SES students to be more overconfident than high SES students.

Consequently, looking at better high schools, we can expect larger underconfidence for female students if a reference channel is present. As for low SES, the underconfidence should not relate to the school quality but might be more prominent in schools with a higher share of low SES.

In Table A.5, we regress the direction of misperceptions on grades and gender/SES by school quality. School quality is the share of students that obtain the highest honors in their Bac, and we split the sample according to this variable into below median and above median schools.

As shown in Panel A, the underplacement by very good female students is driven by those in above-median schools. While female students with the highest honors in good schools are 21.5 percentage points more likely to underplace themselves ($p < 0.01$), those in below-median schools are only 5.2 points more likely to underplace themselves (n.s.). These findings are consistent with the explanation that female students in good schools are

¹⁷The effect of rank in the schools is well documented and corresponds to particular peer effects. They indeed affect the choice of academic tracks [Delaney and Devereux \(2021\)](#), better test scores [Murphy and Weinhardt \(2020\)](#), and increased future earnings [Denning *et al.* \(2018\)](#). However, to our knowledge, there is no direct evidence of the rank effect on confidence, though the nature of the channel we discuss is very similar to rank effect

more prone to naive extrapolation of in-class rank to the national distribution. In Panel B, we do not find a similar asymmetry for students from low socioeconomic status.

In Table A.6, we split the sample into schools with a small or high share of students from low SES. In Panel A, we find that the share of students from low SES does not seem to play a role in the tendency of female students to underplace themselves. However, in Panel B, we find that the propensity of good low SES students to underplace themselves seems to be driven by those at schools with many low SES students. This result is in line with theories that background and peers inform about own prospects ([Genicot and Ray, 2017](#)), as low SES students in good high schools are more likely to see successful examples which would drive up their aspirations.

7 Conclusion

We document striking differences in the prestige of applications and placements between gender and SES background. While there might be many reasons for these differences, including preferences, information asymmetries about programs' prestige, and budget constraints, we investigate the channel of academic self-confidence. Data from our survey show gender and SES gaps in self-confidence, especially for high-ability students. These students potentially have the highest cost of underconfidence, as they have a high probability of acceptance to all programs. Self-confidence has a strong correlation with application behavior.

Our simple, cheap, and easily scalable intervention of providing feedback about the relative rank in the distribution of students decreases the importance of confidence in explaining the application behavior. Most strikingly, our intervention closes between 57% to 77% of the gender and 69% to 100% of the SES gap in the prestige of applications, the program students bet on, and (not significantly) the assignment for high achieving students. Thus, confidence has a causal impact on the selection of programs and final assignments.

Although the causal effect of confidence has been demonstrated in various settings, we show that underconfidence still plays a prominent role even in extremely high-stake environments and despite extensive within-class feedback about relative quality. Importantly, it causes gender and SES inequalities in the applications and assignments to prestigious programs. We expect the effects of similar interventions to be larger in countries where

students do not get feedback about relative ranks, like Germany, Finland, and many other countries.

Our results are relevant for market design, showing that the design of the admission markets needs to go beyond the selection of the mechanism but also consider the design of information relevant for students. Otherwise, the desired (e.g., stable) market outcomes might not be reached. The argument is similar to recent literature showing the importance of providing historical cutoff grades ([Immorlica *et al.*, 2020](#); [Hakimov *et al.*, 2021](#)), information about the quality of programs ([Hastings and Weinstein, 2008](#)), or admission chances ([Kapor *et al.*, 2020](#)). Our easy-to-scale intervention adds to the options of the designer and allows for cheap correction of the pre-existing gender and SES background inequalities among high-achieving students.

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Appendix

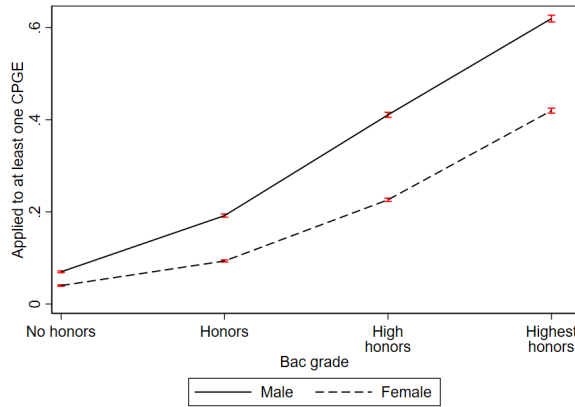
A Additional Tables and Figures

Table A.1: Balance table

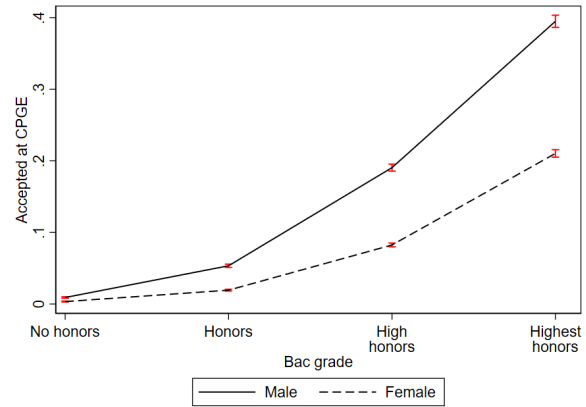
	Survey data			Admin data
	Control	Feedback	Total	
Female	0.625	0.612	0.618	0.558
Age	17.518	17.532	17.525	17.539
Low SES	0.309	0.305	0.307	0.259
GPA	13.714	13.700	13.707	
Honors				
No honors	0.235	0.233	0.234	0.258
Honors	0.326	0.355	0.340	0.336
High honors	0.269	0.272	0.270	0.263
Highest honors	0.170	0.141	0.156	0.144
Number of observations	1,055	1,002	2,057	420,745

Notes: The table shows the balance of descriptive statistics in the survey (control, grade feedback treatment, and total) and in the administrative data. For comparability, only Bac Général students are considered who graduate in 2021.

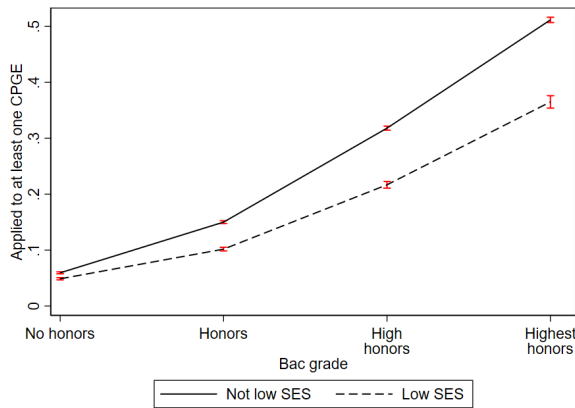
Figure A.1: Applications and match to CPGE by honors and gender/SES



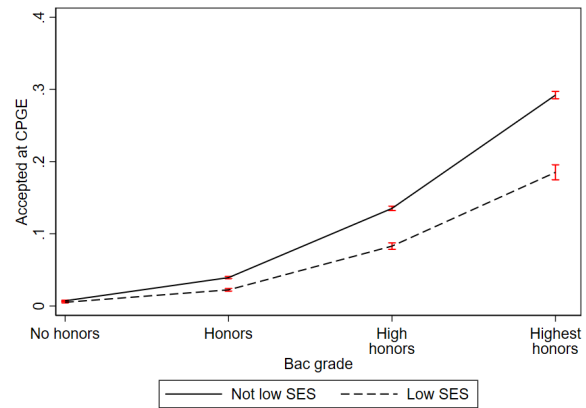
(a) Applied to CPGE by gender



(b) Matched to CPGE by gender



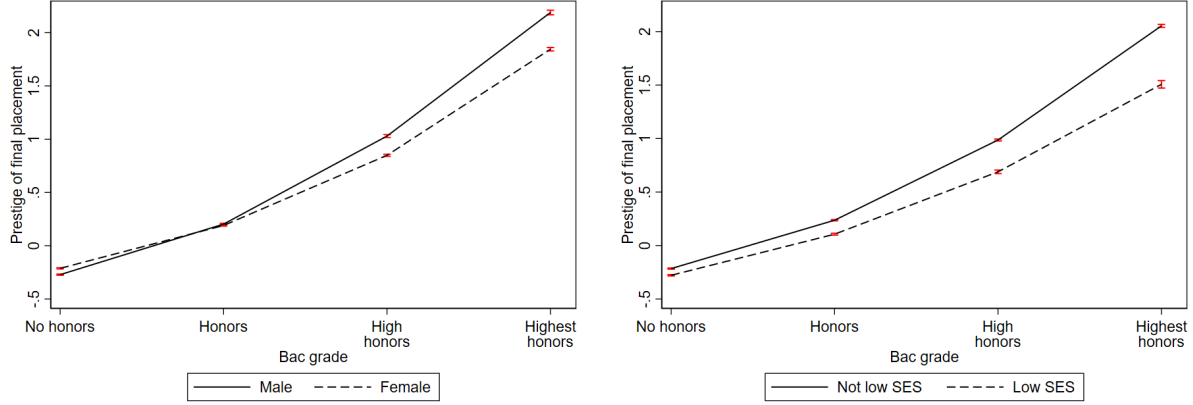
(c) Applied to CPGE by SES



(d) Matched to CPGE by SES

Notes: The figures show the propensity to apply to a preparatory class (CPGE) and to be ultimately matched to a CPGE by honors level and gender/SES. 99% confidence intervals are based on predicted values from a regression on the interaction of honors level and female/low SES.

Figure A.2: Prestige of match by honors and gender/SES



(a) Match prestige by gender

(b) Match prestige by SES

Notes: The figures show the prestige of the final match by honors level and gender/SES. Prestige of a program is defined as the mean grade level of all enrolled students. 99% confidence intervals are based on predicted values from a regression on the interaction of honors level and female/low SES.

Table A.2: Regression of belief accuracy on grades and gender

	Underplaced		Accurate (+/- 10)		Overplaced	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.066*** (0.019)	-0.017 (0.027)	-0.050** (0.022)	-0.104** (0.045)	-0.016 (0.021)	0.122*** (0.046)
Assez bien	0.186*** (0.022)	0.154*** (0.034)	-0.059** (0.029)	-0.118*** (0.045)	-0.127*** (0.030)	-0.036 (0.046)
Bien	0.258*** (0.024)	0.198*** (0.039)	-0.020 (0.030)	-0.104** (0.048)	-0.238*** (0.030)	-0.094* (0.048)
Très bien	0.264*** (0.030)	0.093** (0.047)	0.178*** (0.036)	0.282*** (0.058)	-0.442*** (0.028)	-0.375*** (0.044)
Female × Assez bien		0.059 (0.044)		0.102* (0.058)		-0.160*** (0.060)
Female × Bien		0.104** (0.050)		0.139** (0.062)		-0.243*** (0.062)
Female × Très bien		0.258*** (0.060)		-0.134* (0.073)		-0.124** (0.057)
Constant	0.058*** (0.018)	0.105*** (0.021)	0.413*** (0.026)	0.443*** (0.034)	0.529*** (0.026)	0.452*** (0.034)
Adj. R2	0.058	0.064	0.026	0.033	0.089	0.096
Observations	2034	2034	2034	2034	2034	2034

Notes: The table reports OLS regression estimates. In Columns (1) and (2), the dependent variable indicates whether the respondent's reranked guess underestimated the actual GPA rank by more than 10 ranks; in (3) and (4), whether he/she estimated within 10 ranks of the true rank, and in (5) and (6) whether he/she overestimated by more than 10 ranks. Only Bac Général students are considered. Significance levels are indicated by * < .1, ** < .05, *** < .01.

Table A.3: Regression of belief accuracy on grades and SES

	Underplaced		Accurate (+/- 10)		Overplaced	
	(1)	(2)	(3)	(4)	(5)	(6)
Low SES=1	0.060*** (0.022)	-0.036 (0.027)	-0.047** (0.024)	0.037 (0.046)	-0.014 (0.023)	-0.001 (0.047)
Assez bien	0.193*** (0.023)	0.143*** (0.028)	-0.070** (0.029)	-0.036 (0.037)	-0.123*** (0.030)	-0.107*** (0.039)
Bien	0.273*** (0.025)	0.228*** (0.031)	-0.039 (0.031)	0.002 (0.039)	-0.235*** (0.031)	-0.230*** (0.038)
Très bien	0.287*** (0.031)	0.219*** (0.036)	0.155*** (0.036)	0.230*** (0.043)	-0.442*** (0.028)	-0.448*** (0.035)
Low SES=1 × Assez bien		0.119** (0.047)		-0.074 (0.060)		-0.045 (0.062)
Low SES=1 × Bien		0.106* (0.056)		-0.097 (0.066)		-0.010 (0.065)
Low SES=1 × Très bien		0.228*** (0.076)		-0.277*** (0.083)		0.049 (0.064)
Constant	0.070*** (0.017)	0.113*** (0.020)	0.408*** (0.025)	0.371*** (0.030)	0.521*** (0.025)	0.516*** (0.031)
Adj. R2	0.055	0.059	0.025	0.029	0.087	0.086
Observations	2000	2000	2000	2000	2000	2000

Notes: The table reports OLS regression estimates. In Columns (1) and (2), the dependent variable indicates whether the respondent's reranked guess underestimated the actual GPA rank by more than 10 ranks; in (3) and (4), whether he/she estimated within 10 ranks of the true rank, and in (5) and (6) whether he/she overestimated by more than 10 ranks. Only Bac Général students are considered. Significance levels are indicated by * < .1, ** < .05, *** < .01.

Table A.4: Treatment effect of Grade feedback on outcomes (by under-/overplacement)

	Application list				Outcome bet	Final match	
	(1) Max Prestige	(2) Min Prestige	(3) Mean Prestige	(4) One CPGE	(5) Prestige	(6) Prestige	(7) CPGE
<i>Panel A: Underplacement</i>							
Underplacement	-0.683** (0.275)	-0.236 (0.161)	-0.562** (0.237)	-0.477*** (0.131)	-0.798* (0.407)	-0.525* (0.312)	-0.278*** (0.086)
Grade feedback	-0.009 (0.051)	-0.001 (0.023)	-0.002 (0.036)	-0.034* (0.019)	0.017 (0.059)	-0.003 (0.044)	0.002 (0.014)
Grade feedback × Underplacement	0.569* (0.329)	0.103 (0.191)	0.408 (0.290)	0.302* (0.172)	0.527 (0.534)	0.047 (0.411)	0.254* (0.138)
True rank	1.424*** (0.163)	0.267*** (0.075)	1.155*** (0.118)	0.451*** (0.063)	1.688*** (0.193)	1.554*** (0.151)	0.195*** (0.044)
<i>Panel B: Overplacement</i>							
Overplacement	0.793*** (0.245)	0.050 (0.095)	0.483*** (0.144)	0.208*** (0.074)	0.603** (0.264)	0.438** (0.189)	0.107** (0.046)
Grade feedback	0.122** (0.053)	0.009 (0.030)	0.070* (0.042)	-0.005 (0.023)	0.122* (0.070)	0.024 (0.056)	0.031 (0.019)
Grade feedback × Overplacement	-0.750*** (0.273)	-0.019 (0.114)	-0.359** (0.170)	-0.071 (0.085)	-0.553* (0.293)	-0.208 (0.226)	-0.091 (0.059)
True rank	1.505*** (0.174)	0.239*** (0.079)	1.198*** (0.124)	0.445*** (0.066)	1.694*** (0.207)	1.564*** (0.156)	0.181*** (0.046)
Bac Grade FE	✓	✓	✓	✓	✓	✓	✓
Observations	2022	2022	2022	2022	1567	1793	1793

Notes: Confidence is the difference between the guessed rank and the true rank. In Columns (1), the dependent variable is the z-standardized maximal prestige (in terms of average mention) of the application list, in Column (2), minimum prestige of the application list, in Column (3) the average prestige of the application list, and in Column (4) an indicator whether at least one CPGE is included in the list. In Column (5) the outcome is the prestige of the incentivized bet, in Column (6) the prestige of the final match and in Column (7) it is an indicator whether the final match is a CPGE. Only students from Bac Generale are included. Significance levels are indicated by * < .1, ** < .05, *** < .01.

Table A.5: Regression of belief accuracy on grades and gender by school quality

	Underplaced		Accurate (+/- 10)		Overplaced	
	(1)	(2)	(3)	(4)	(5)	(6)
	Few highest honors	Many highest honors	Few highest honors	Many highest honors	Few highest honors	Many highest honors
<i>By gender</i>						
Female	0.037*	0.034	-0.015	-0.046	-0.022	0.012
	(0.022)	(0.030)	(0.032)	(0.037)	(0.031)	(0.033)
Highest honors	0.572***	0.445***	0.217*	0.264***	-0.790***	-0.710***
	(0.118)	(0.064)	(0.119)	(0.071)	(0.061)	(0.044)
Female \times Highest honors	0.052	0.215***	-0.019	-0.201**	-0.033	-0.014
	(0.132)	(0.078)	(0.132)	(0.080)	(0.062)	(0.037)
Share low SES	-0.021	0.032	0.020	-0.002	0.001	-0.031
	(0.027)	(0.032)	(0.036)	(0.036)	(0.032)	(0.029)
Low SES	0.020	0.036	-0.015	-0.015	-0.006	0.022
	(0.023)	(0.033)	(0.032)	(0.038)	(0.030)	(0.033)
Constant	0.015	-0.023	0.140**	0.260***	0.845***	0.763***
	(0.047)	(0.048)	(0.067)	(0.062)	(0.061)	(0.056)
Observations	916	920	916	920	916	920
<i>By socioeconomic status</i>						
Low SES	0.010	0.025	-0.004	0.006	-0.005	0.030
	(0.023)	(0.034)	(0.034)	(0.041)	(0.033)	(0.038)
Highest honors	0.576***	0.568***	0.237***	0.161***	-0.813***	-0.729***
	(0.062)	(0.043)	(0.067)	(0.052)	(0.034)	(0.038)
Low SES \times Highest honors	0.117	0.054	-0.108	-0.114	-0.009	0.060
	(0.107)	(0.101)	(0.110)	(0.102)	(0.035)	(0.053)
Share low SES	-0.022	0.035	0.021	-0.006	0.001	-0.029
	(0.027)	(0.032)	(0.036)	(0.036)	(0.032)	(0.029)
Female	0.041*	0.079***	-0.017	-0.088***	-0.024	0.009
	(0.022)	(0.028)	(0.031)	(0.033)	(0.029)	(0.027)
Constant	0.019	-0.046	0.135**	0.280***	0.846***	0.766***
	(0.047)	(0.048)	(0.067)	(0.061)	(0.061)	(0.055)
Observations	916	920	916	920	916	920

Notes: The table reports OLS regression estimates. In Columns (1) and (2), the dependent variable indicates whether the respondent's guess underestimated the actual GPA rank by more than 10 ranks; in (3) and (4), whether he/she estimated within 10 ranks of the true rank, and in (5) and (6) whether he/she overestimated by more than 10 ranks. Only Bac Général students are considered. Significance levels are indicated by * < .1, ** < .05, *** < .01.

Table A.6: Regression of belief accuracy on grades and gender by share of low SES in school

	Underplaced		Accurate (+/- 10)		Overplaced	
	(1) Few low SES	(2) Many low SES	(3) Few low SES	(4) Many low SES	(5) Few low SES	(6) Many low SES
<i>By gender</i>						
Female	0.058** (0.028)	0.010 (0.024)	-0.034 (0.035)	-0.019 (0.033)	-0.024 (0.033)	0.009 (0.032)
Highest honors	0.461*** (0.068)	0.466*** (0.097)	0.271*** (0.075)	0.314*** (0.101)	-0.733*** (0.045)	-0.781*** (0.035)
Female \times Highest honors	0.158* (0.083)	0.180** (0.108)	-0.163* (0.086)	-0.165 (0.110)	0.005 (0.041)	-0.014 (0.032)
Low SES	0.021 (0.033)	0.037 (0.024)	0.020 (0.041)	-0.042 (0.031)	-0.041 (0.036)	0.005 (0.029)
Share highest honors	0.256 (0.206)	1.259*** (0.361)	0.055 (0.219)	-0.645 (0.433)	-0.311** (0.150)	-0.613 (0.381)
Constant	-0.032 (0.032)	-0.097*** (0.031)	0.209*** (0.045)	0.256*** (0.047)	0.823*** (0.041)	0.841*** (0.044)
Observations	918	918	918	918	918	918
<i>By socioeconomic status</i>						
Low SES	0.021 (0.033)	0.017 (0.024)	0.030 (0.043)	-0.025 (0.033)	-0.051 (0.041)	0.008 (0.032)
Highest honors	0.558*** (0.045)	0.550*** (0.055)	0.183*** (0.054)	0.234*** (0.061)	-0.741*** (0.038)	-0.784*** (0.033)
Low SES \times Highest honors	-0.015 (0.120)	0.173* (0.091)	-0.066 (0.121)	-0.149 (0.095)	-0.081 (0.062)	-0.024 (0.034)
Female	0.086*** (0.027)	0.029 (0.025)	-0.063** (0.032)	-0.036 (0.032)	-0.022 (0.027)	0.008 (0.028)
Share highest honors	0.272 (0.205)	1.301*** (0.364)	0.036 (0.217)	-0.679 (0.436)	-0.309** (0.150)	-0.622 (0.383)
Constant	-0.047 (0.032)	-0.101*** (0.031)	0.222*** (0.045)	0.259*** (0.047)	0.825*** (0.040)	0.841*** (0.044)
Observations	918	918	918	918	918	918

Notes: The table reports OLS regression estimates. In Columns (1) and (2), the dependent variable indicates whether the respondent's guess underestimated the actual GPA rank by more than 10 ranks; in (3) and (4), whether he/she estimated within 10 ranks of the true rank, and in (5) and (6) whether he/she overestimated by more than 10 ranks. Only Bac Général students are considered. Significance levels are indicated by * $< .1$, ** $< .05$, *** $< .01$.

B Recruitment and data collection

B.1 Pre-Survey

In January and February 2021, we aimed to recruit at least 1,000 students in Baccalauréat général that were planning to take part in Parcoursup 2021. The goal of the pre-survey was to form a reference group to which we could compare the grades of students in the main survey.

The pre-survey was fielded between January 20 and February 1, 2021. We recruited subjects via ads on Instagram and Facebook (targeted to French users aged 17 or 18). The ad is displayed in Figure B.1. It addressed students in the final year of the bac, who are prospective participants of Parcoursup. The ad offered the chance to win a 50 Euro gift card for completing a 3-minute survey.

On the landing page, subjects were pre-screened according to whether they are in the final year of the Baccalauréat, whether they plan to take part in Parcoursup in 2021, and whether they are at least 16 years of age. After we decided that we will form the reference group out of students in Baccalauréat général, we added a corresponding screening question.¹⁸

Table B.1 shows that 4,464 subjects started the questionnaire, of which 2,600 subjects were screened in. Among those, 1,264 participants completed the questionnaire. After removing respondents who were not in bac général, duplicates and invalid responses (e.g., nonsense entries or a grade point average of 0.0), the final sample to calculate the grade distribution consisted of 1,001 participants.

B.2 Main survey

For the main survey, we recruited 3,294 participants via social media ads. Among those, approximately 1,140 were recruited via Instagram and Facebook, and approximately 2,140 via Snapchat. The remaining participants were recruited via alternative channels.¹⁹

¹⁸On January 26, we had more than 70% of respondents from bac général and realized that it will be very costly to obtain a meaningful sample size for bac technologique and bac professionnelle. Hence, we decided to focus the reference group on bac général students.

¹⁹We also bought a small number of ads on Twitter and Google, but stopped these ads very soon as the response rate from our target group was very low. Moreover, we had a banner campaign on the website l'Etudiant (which provides information targeted at French highschool students), but also here the response rate was very low. As we only started to monitor the source of the link clicks after the campaign started, we can only provide an approximate breakdown by recruiting channel.

Figure B.1: Screenshot of ad for pre-survey



Notes: The screenshot shows the Facebook ad for the pre-survey. It addresses students in the final year of the bac, who participate in Parcoursup this year, and offers the chance to win a 50 Euro giftcard for completing a 3-minute survey. The Instagram ads used the same picture and text.

Table B.1: Sample sizes

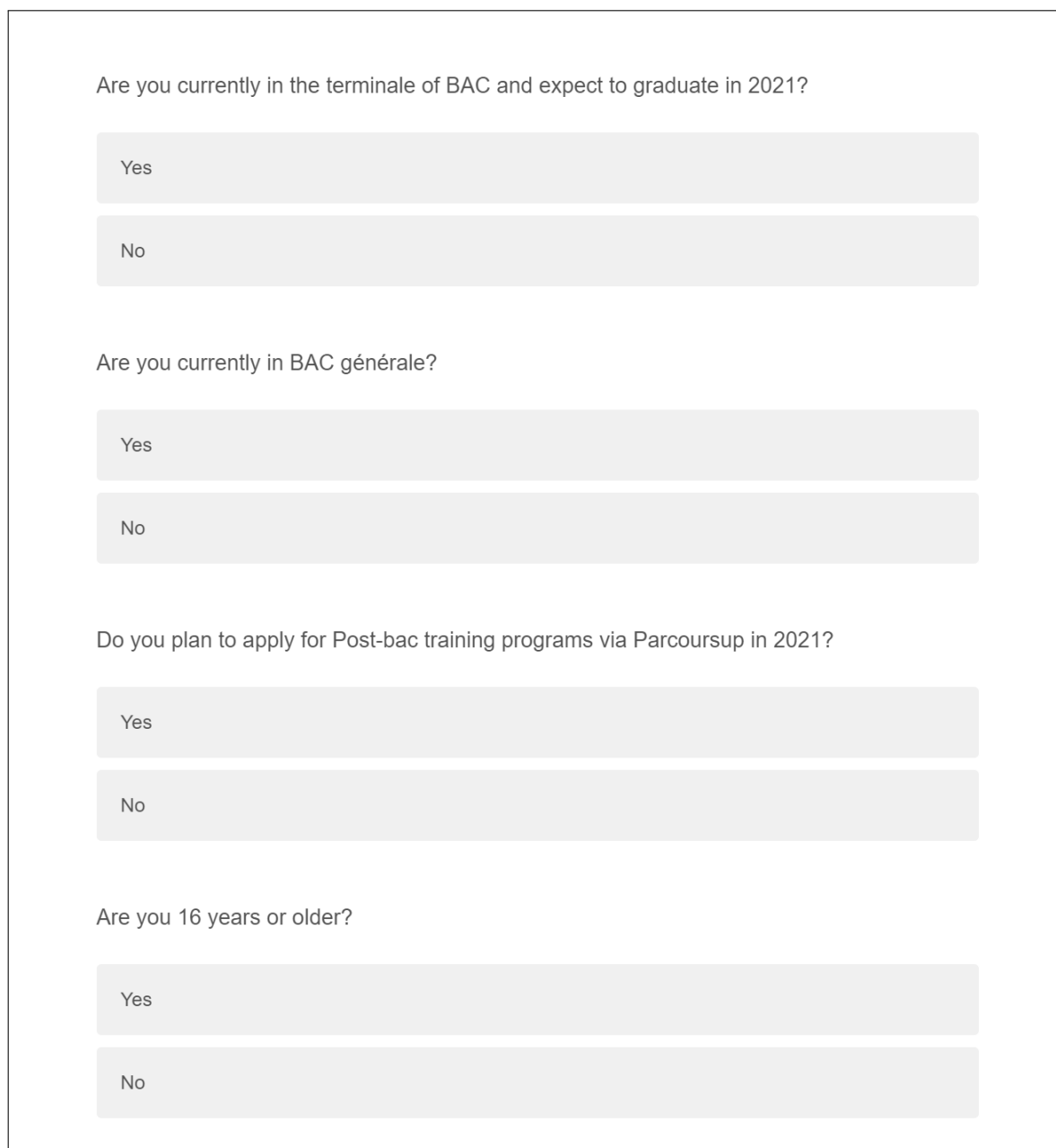
	Sample size
Main survey	N=14,969 started questionnaire N=14,590 consented to participate N=7,577 entered demographics N=4,101 entered application list N=3,653 assigned to treatment N=3,446 completed survey N=3,387 valid observations N=2,070 in Bac général
Pre-survey	N=4,464 started questionnaire N=2,600 passed pre-screening N=2,523 consented to participate N=1,311 entered demographics N=1,264 completed survey N=1,001 in Bac général and valid

Moreover, we re-contacted participants who participated in the pre-survey. In the pre-survey, we asked subjects for their consent to contact them again for our main survey and for their preferred way of being contacted (e-mail or SMS). These subjects were incentivized by an additional guaranteed 5 Euro gift card for participation (on top of participating in the raffle of the main survey). On March 5, we contacted a total of 556 subjects via SMS and among those 77 completed the survey. On March 4-6, we invited 665 via e-mail and sent out a reminder to unfinished respondents on March 9-10. Among those 168 completed the survey.

Ultimately, we recontacted subjects who were recruited on social media and started the survey but did not complete it. They were also offered an additional 5 Euro giftcard for completion. We sent out e-mails to those respondents who consented to be recontacted and entered their e-mail address. On March 9 and 10, we sent out 1,348 e-mails, of which 118 completed the survey.

C Instructions of pre-survey (translated)

Figure C.1: Screenshot of pre-screening questions



The screenshot displays a series of four pre-screening questions, each with two radio button options: 'Yes' and 'No'. The questions are as follows:

- Are you currently in the terminale of BAC and expect to graduate in 2021?
- Are you currently in BAC générale?
- Do you plan to apply for Post-bac training programs via Parcoursup in 2021?
- Are you 16 years or older?

Each question is followed by two light gray rectangular buttons labeled 'Yes' and 'No'.

Notes: Subjects are pre-screened as to whether they belong to the target group. The survey only continues if they affirm all questions.

Figure C.2: Screenshot of welcome screen and consent form

Welcome to the survey

You are invited to take part in a research study about Parcoursup. The study is administered by researchers at the University of Lausanne, Switzerland, and funded by the Swiss National Science Foundation (Project number 189152).

The study consists of a **survey of around 3 minutes** that we ask you to complete. **You can only participate in the survey if you are doing your BAC in June 2021 and plan to take part in Parcoursup in 2021.**

If you participate in the survey, you will enter a raffle and **can win one of ten gift cards of 50 Euro each** that can be redeemed at Amazon.fr. Only participants who complete the survey and provide correct information can participate in the raffle.

This survey is part of a larger project about applicants' behavior in Parcoursup. If you meet the requirements, we will invite you for **another survey in February/March 2021 (for which a separate raffle of giftcards will be conducted).**

[▸ Privacy Policy](#)

Please indicate if you have read and understood the information in this form and if you consent to participate in the study.

☐ Yes, I consent to participate in this study

☐ No, I do not agree to participate in this study

Notes: Subjects are welcomed and asked for consent to the privacy policy. The privacy policy informed that their responses will be matched to administrative data and pseudonymized afterwards. On the next screen, they are asked for their demographic details similar to Figure D.2 below (omitted here).

Figure C.3: Screenshot of question on bac type and GPA

Please indicate the type of BAC you are pursuing


Générale

Technologique

Professionnelle

Please report your grade point average (GPA) in the first trimester of the terminale.

0 2 4 6 8 10 12 14 16 18 20




Notes: Subjects are asked for their bac type and their GPA in the previous trimester.

Figure C.4: Screenshot of question on guessed rank in the GPA distribution

Imagine that we compare your moyenne generale to 100 randomly selected students who also completed this survey (i.e. French students in terminale of Bac generale who take part in Parcoursup 2021, recruited on Instagram and Facebook).

How many students (out of 100) do you think would have a lower moyenne generale than you?

0 10 20 30 40 50 60 70 80 90 100



Vous pensez que vous faites partie des 50 % des meilleurs étudiants.

Notes: Subjects are asked to guess their rank in the GPA distribution (only hypothetical).

D Instructions of main survey (translated)

Figure D.1: Screenshot of welcome screen and consent form

Welcome to the Parcoursup survey

You are invited to take part in a research study about applicants' behavior in Parcoursup. The study is administered by researchers at the University of Lausanne, Switzerland, and funded by the Swiss National Science Foundation (Project number 189152).

The study consists of a **survey** that we ask you to complete. **You can only participate in the survey if you plan to apply to study programs on Parcoursup in 2021.** The survey will ask you for your considerations around your application intentions and your expectations regarding the outcome.

If you participate in the survey, you will enter a sweepstake and **can win one of 40 Amazon.fr gift cards of 100 Euro** each (terms and conditions apply). You will only participate in the sweepstakes if you give complete answers. During the survey you have additional chances to win Amazon.fr gift cards of 50 Euro and 100 Euro each.

We may invite you for two more surveys in June 2021 and September 2021, for which you can earn additional gift cards.

Please note that participation in this study is entirely voluntary and that you may discontinue participation at any time. In this case, you will not be compensated.

[▸ Privacy Policy](#)

[▸ Terms of Sweepstakes](#)


Contact information

For any questions and comments, and to exercise your right to access or erase your personal data, please contact Dr Renke Schmacker at parcoursup@unil.ch.

If you agree to participate in this study, please give your consent by checking the box below.

☐ I have read and understood the Privacy Policy and the Terms of the Sweepstakes, and I consent to participate in this study

☐ No, I do not consent to participate in this study.



Notes: Subjects are welcomed and asked for consent to the privacy policy and terms of participation. The privacy policy informed that their responses will be matched to administrative data and pseudonymized afterwards.

Figure D.2: Screenshot of demographic questionnaire

Please answer the following questions about yourself.

Please insert your first name and last name

First name

Last name

What is your birth date?

Year

Month

Day

What is your sex?

Male

Female

Other

What is your ZIP code?

Please name the school that you attend.

To be able to take part in the sweepstakes, we need your contact details to send you the voucher in case of winning. Please decide whether you prefer to be contacted via eMail or phone (SMS).

Your contact details may be used to invite you to the follow-up survey on Parcoursup in June and/or September 2021. Your contact details will not be used for other purposes and will be deleted directly after the survey ends (by December 2021 at the latest).

Contact me via eMail

Contact me via SMS

Notes: Subjects are asked for their demographic characteristics and contact details.

Figure D.3: Screenshot of elicitation of application list

In the table below, please name the programs that you plan to apply for on Parcoursup. You can name up to 10 programs. If you plan to apply to more programs, please list your 10 most preferred programs. Please enter the name and city of the institution and the program.
Example: Lyon, Université Jean Monnet, Licence Histoire

	City	Institution	Program
1	<input type="text" value="Paris"/>	<input type="text" value="Sorbonne"/>	<input type="text" value="Licence Droit"/>
2	<input type="text" value="Lille"/>	<input type="text" value="Université de Lille"/>	<input type="text" value="Licence Droit"/>
3	<input type="text" value="Angers"/>	<input type="text" value="Université Angers"/>	<input type="text" value="Licence Droit"/>
4	<input type="text" value="Marseille"/>	<input type="text" value="Aix-Marseille"/>	<input type="text" value="Licence Droit"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>	<input type="text"/>

Notes: Subjects are asked to indicate the programs they plan to apply to in Parcoursup. By clicking on [+], they could extend the list and enter a maximum of 10 programs.

Figure D.4: Screenshot of preference elicitation

Below you see the programs that you just entered. First, please assign to your favorite program the number 100. Next, indicate your preference for every other program relative to your favorite program. Therefore, assign to every other program a number of points from 0 to 100.

Example: If you like a program half as much as your favorite program, assign it a value of 50.

Paris, Sorbonne, Licence Droit	<input type="text" value="100"/>
Lille, Université de Lille, Licence Droit	<input type="text" value="70"/>
Angers, Université Angers, Licence Droit	<input type="text" value="90"/>
Marseille, Aix-Marseille, Licence Droit	<input type="text" value="70"/>

Notes: Subjects are asked for their relative preferences for the programs they indicated on the previous screen.

Figure D.5: Screenshot of belief elicitation about offer probability

Please indicate for each program how likely you think it is that you receive an offer from that program. In particular, indicate for each program the probability in percent that you receive an offer from that program.

Example: If you think that there is a 50 percent chance that you receive an offer from that program, assign it a value of 50.

Paris, Sorbonne, Licence Droit	<input type="text" value="20"/>
Lille, Université de Lille, Licence Droit	<input type="text" value="80"/>
Angers, Université Angers, Licence Droit	<input type="text" value="40"/>
Marseille, Aix-Marseille, Licence Droit	<input type="text" value="70"/>

Notes: Subjects are asked for their beliefs about receiving an offer from the programs they indicated in Figure D.3.

Figure D.6: Screenshot of question for information acquisition

Below you see the programs that you just entered. Please indicate for each program whether you obtained the respective information about the program. You can tick multiple boxes per training.

	Paris, Sorbonne, Licence Droit	Lille, Université de Lille, Licence Droit	Angers, Université Angers, Licence Droit	Marseille, Aix- Marseille, Licence Droit
Visited the program website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended open days or (online) info session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Studied the course program of the training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed program with my teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed program with my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed program with my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Notes: Subjects are asked whether they acquired information about the programs they indicated on the screen in Figure D.3.

Figure D.7: Screenshot of question for certainty of preferences

Imagine that you acquire all the relevant information about the program, curriculum, job prospects, the city, living arrangement etc. associated with the following programs:
Paris, Sorbonne, Licence Droit
and
Lille, Université de Lille, Licence Droit.

What is the probability that you reverse your original preferences and start to prefer "Lille, Université de Lille, Licence Droit" over "Paris, Sorbonne, Licence Droit"?

0% 10% 20% 30% 40% 50%

☐ Impossible Very likely

Notes: Subjects are asked how likely they think it is that they would start to prefer their second most preferred program over their most preferred program once they acquired all information.

Figure D.8: Screenshot of question for importance of being among the best and risk

Please indicate whether you agree to the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I would rather join a training that admits me as one of the first students than a training that admits me as one of the last students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my future training, I would prefer to be among the students with the best high school grades rather than among the students with the lowest high school grades.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? Please tick a box on the scale.

Not at all willing to take risks									Very willing to take risks
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes: Subjects are asked for importance of being among the best students and for their risk preferences.

Figure D.9: Screenshot of question for coordination with peers

Please indicate whether you agree to the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I share my application intentions with my friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am more likely to accept an offer from a program if one of my friends has accepted an offer from that training.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am more likely to accept an offer in a city if one of my friends has accepted an offer in that city.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes: Subjects are asked whether they coordinate their applications with their peers.

Figure D.10: Screenshot of question for GPA and type of bac

Please indicate the type of BAC you are pursuing.

Générale

Technologique

Professionnelle

Please report your moyenne generale in the first trimester of the terminale.

0 2 4 6 8 10 12 14 16 18 20

18

Notes: Subjects are asked for their bac type and their GPA in the previous trimester.

Figure D.11: Screenshot of question for rank in the GPA distribution

In January 2021, we have asked 1000 students from all over France for their moyenne generale in the first trimester of the terminale. These students are in **Bac générale and take part in Parcoursup in 2021**. The sample is representative of Parcoursup participants from Bac générale in terms of gender (57.4 percent female, 42.6 percent male) and was recruited on social media (Facebook and Instagram).


If we rank you and the survey participants by your moyenne generale, **how many percent of those do you expect to have a lower grade point average than you have?**

Among the participants whose answer is correct (+/- 3 percentage points), we will raffle **ten 100 Euro Amazon.fr vouchers**.*

*The terms and conditions for the participation sweepstakes apply, except that only those respondents enter this sweepstakes, whose response is +/- 3 percentage points from the true value. The winner of this sweepstake will be determined after the end of Parcoursup in September 2021.

0 10 20 30 40 50 60 70 80 90 100

73



Vous pensez être parmi les 27 % meilleurs étudiant.e.s en termes de moyenne général.

Notes: Subjects are incentivized to guess their rank in the GPA distribution.

Figure D.12: Screenshot of grade feedback (red)


You expected that 73 % of students in the comparison group have a lower moyenne generale than you have.

Based on the moyenne generale that you reported, **IN FACT 98 % of students in the comparison sample have a lower GPA than you have.**

Vous êtes 25 points de pourcentage trop pessimistes.

0 10 20 30 40 50 60 70 80 90 100

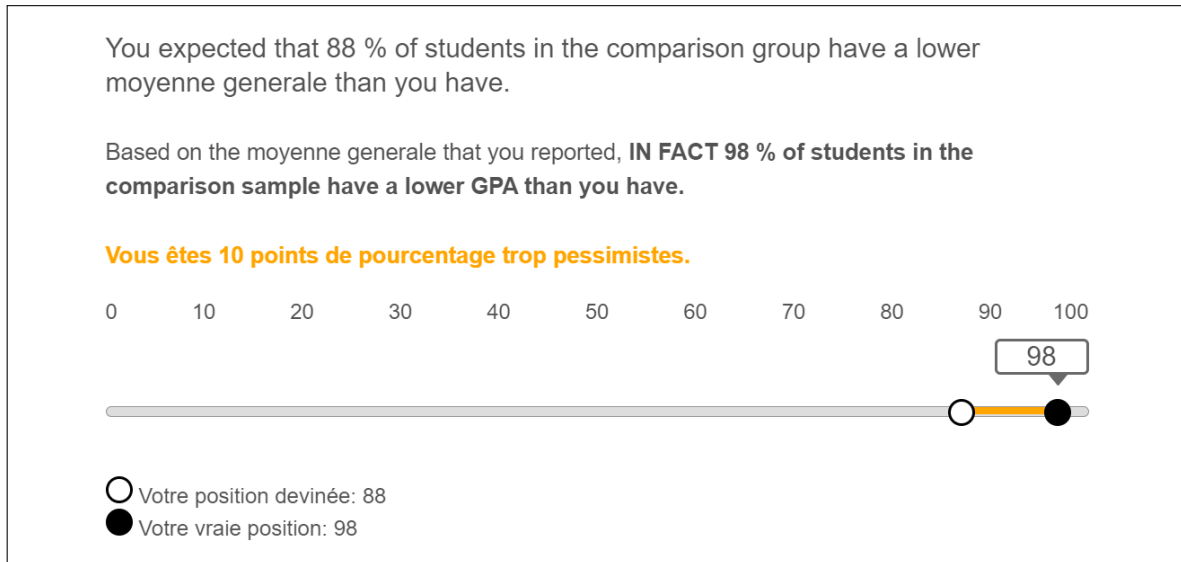
98



○ Votre position devinée: 73
● Votre vraie position: 98

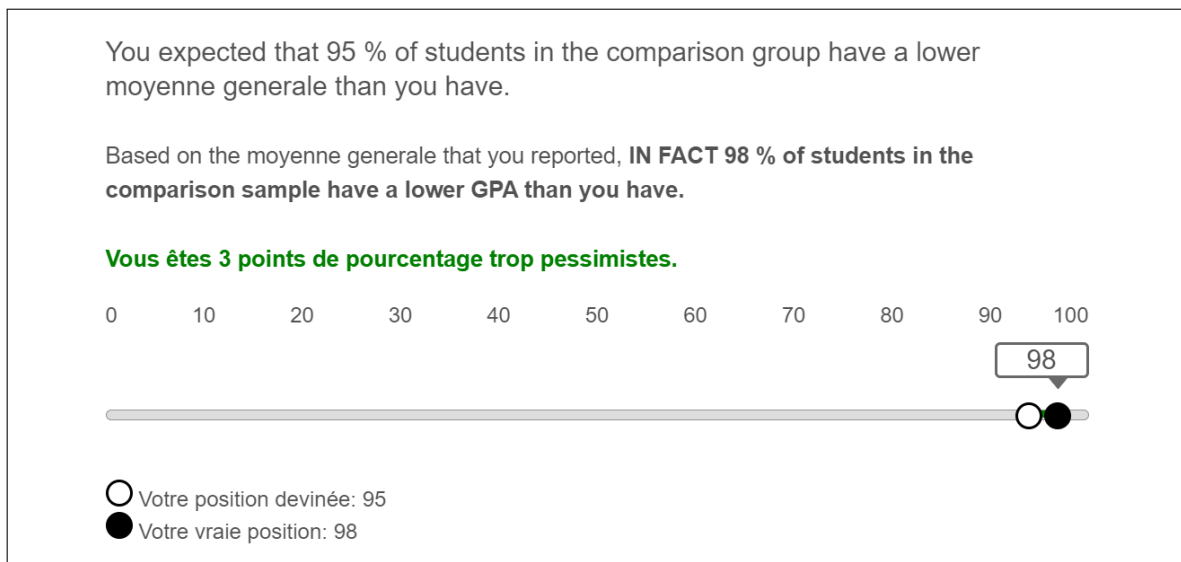
Notes: In this example, the subject underestimated their rank by more than 10 percentiles.

Figure D.13: Screenshot of grade feedback (yellow)



Notes: In this example, the subject underestimated their rank by 10 percentiles.

Figure D.14: Screenshot of grade feedback (green)



Notes: In this example, the subject underestimated their rank by 3 percentiles.

Figure D.15: Screenshot of mechanism knowledge quiz

Please select the statement that correctly describes the rules of Parcoursup. There is only one correct statement.

Among the participants who give the correct answer, we will raffle **ten 100 Euro Amazon.fr gift cards**.*

By accepting the offer from a program, you renounce to receive any other offers in the future.

Accepting the offer from a program can reduce your chances of receiving an offer from another program you prefer in the future.

Universities cannot withdraw a tentatively accepted offer, so there is no harm in tentatively accepting an offer and waiting for later offers.

When you receive two offers (or more), you can accept both and wait for future offers to come.

*The terms and conditions for the participation sweepstakes apply, except that only those respondents enter this sweepstakes who give the correct answer. The winner of this sweepstake will be determined after the end of Parcoursup in September 2021.

Notes: Subjects are incentivized to choose the correct statement.

Figure D.16: Screenshot of mechanism knowledge feedback

You did not provide the correct solution.

Explanation

Accepting the offer from a program does not imply that this will be your final choice, nor that you renounce receiving other offers in the future (including offers from programs you may prefer). When you accept an offer while being on the waiting list of other programs, Parcoursup asks you which programs you prefer to the one you accepted. These programs are kept in your preference list.

The correct solution:

Universities cannot withdraw a tentatively accepted offer, so there is no harm in tentatively accepting an offer and waiting for later offers.

Explanation

Universities cannot withdraw an offer they made that has been accepted by a candidate. There is therefore no risk in accepting an offer. In addition, many candidates are on the waiting list of a program they prefer to the one they accepted. **The position on the waiting list can only improve over time.** Indeed, this position improves by one rank every time a candidate rejects an offer from this program. **It is therefore possible that a program you particularly like makes an offer to you very late in the process.** As a result, there is no risk in waiting until the end of the process and observe all offers that you could get. **Patience can only improve your chances of receiving an offer from your preferred program.**

Notes: In this example, the subject chose the wrong answer.

Figure D.17: Screenshot of bet on outcome

Please bet on the program that you think you will attend. This means that the program makes you an offer and that you accept that offer.

We will raffle **20 x 50 Euro Amazon.fr gift cards** among those respondents for whom the **expectation matches the final outcome.***

Paris, Sorbonne, Licence Droit
Lille, Université de Lille, Licence Droit
Angers, Université Angers, Licence Droit
Marseille, Aix-Marseille, Licence Droit

*The terms and conditions for the participation sweepstakes apply, except that only respondents are eligible to win who have predicted their final placement. After Parcoursup has ended (in September 2021), we will draw respondents and ask them to provide proof that they accepted an offer from the training that they predicted (e.g., by sending a screenshot from Parcoursup or a scan of the acceptance letter from the training). Only those respondents who reply within one week and can provide proof of acceptance, will win the gift card. If a person who was drawn cannot provide proof of acceptance or does not reply, we will draw a replacement winner until the 20 gift cards are distributed.

Notes: Subjects are incentivized to bet on the program they expect to attend.

E Instructions of follow-up survey (translated)

Figure E.1: Screenshot of welcome screen and consent form

Welcome to the Parcoursup survey

You are invited to take part in the second wave of a research study about applicants' behavior in Parcoursup. The study is administered by researchers at the University of Lausanne, Switzerland, and funded by the Swiss National Science Foundation (Project number 189152).

The study consists of a survey that we ask you to complete. The survey will ask for your experiences with Parcoursup. For completing the survey, you receive a 5 Euro Amazon.fr giftcard sent to your e-mail address. During the survey you have additional chances to win Amazon.fr gift cards of 20 Euro each.

Please note that participation in this study is entirely voluntary and that you may discontinue participation at any time. In this case, you will not be compensated.

[▸ Privacy Policy](#)

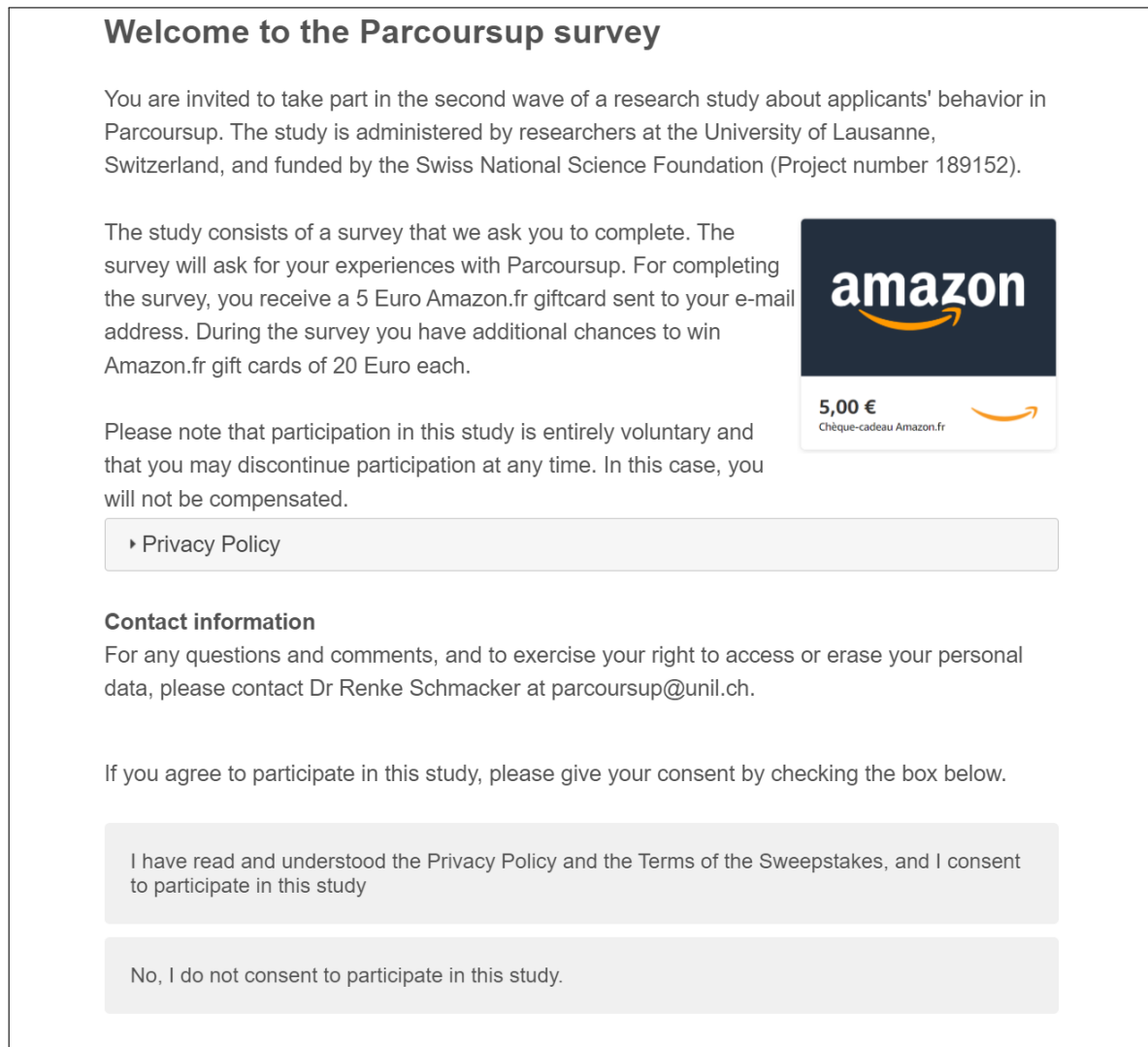
Contact information

For any questions and comments, and to exercise your right to access or erase your personal data, please contact Dr Renke Schmacker at parcoursup@unil.ch.

If you agree to participate in this study, please give your consent by checking the box below.

I have read and understood the Privacy Policy and the Terms of the Sweepstakes, and I consent to participate in this study

No, I do not consent to participate in this study.



Notes: Subjects are welcomed and asked for consent to the privacy policy and terms of participation. The privacy policy informed that their responses will be matched to administrative data and pseudonymized afterwards.

Figure E.2: Screenshot of recall question

We ask you to **remember which program you indicated as most, second and third preferred in the last survey in March 2021.**

If your response matches with your response from the last survey, you enter a sweepstakes to win one of ten **20 Euro Amazon giftcards.**

If you liked programs equally well (i.e. you gave them the same number between 0 and 100), you can put them in any order and your response will be counted as correct.

Most preferred program

Lille, Université de Lille, Licence Droit ▾

Second most preferred program

Paris, Sorbonne, Licence Droit ▾

Third most preferred program

Angers, Université Angers, Licence Droit ▾

▸ Terms of Sweepstakes

Notes: Subjects are incentivized to recall the programs they indicated as most, second, and third most preferred in the main survey. The dropdown menu shows their application list from the main survey.

Figure E.3: Screenshot of question on updated preferences

Please indicate which program is your most preferred, second most preferred and third most preferred program **from today's perspective**.

Most preferred program

Please indicate the name of your most preferred program

City	<input type="text" value="Bordeaux"/>
Institution	<input type="text" value="Université de Bordeaux"/>
Program	<input type="text" value="Licence Droit"/>

Second most preferred program

Third most preferred program

Notes: Subjects are asked to indicate their current most, second, and third most preferred program. The dropdown menu shows their application list from the main survey. If they click “Other”, they can type in a new program.

Figure E.4: Screenshot of question on information acquisition

Below you see the programs that you were planning to apply to. Please indicate for each program whether you obtained the respective information about the program. You can tick multiple boxes per training.

	Paris, Sorbonne, Licence Droit	Lille, Université de Lille, Licence Droit	Angers, Université Angers, Licence Droit	Marseille, Aix- Marseille, Licence Droit
Visited the program website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended open days or (online) info session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Studied the course program of the training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed program with my teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed program with my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed program with my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Notes: Subjects are asked whether they acquired information about the programs they indicated in the main survey.

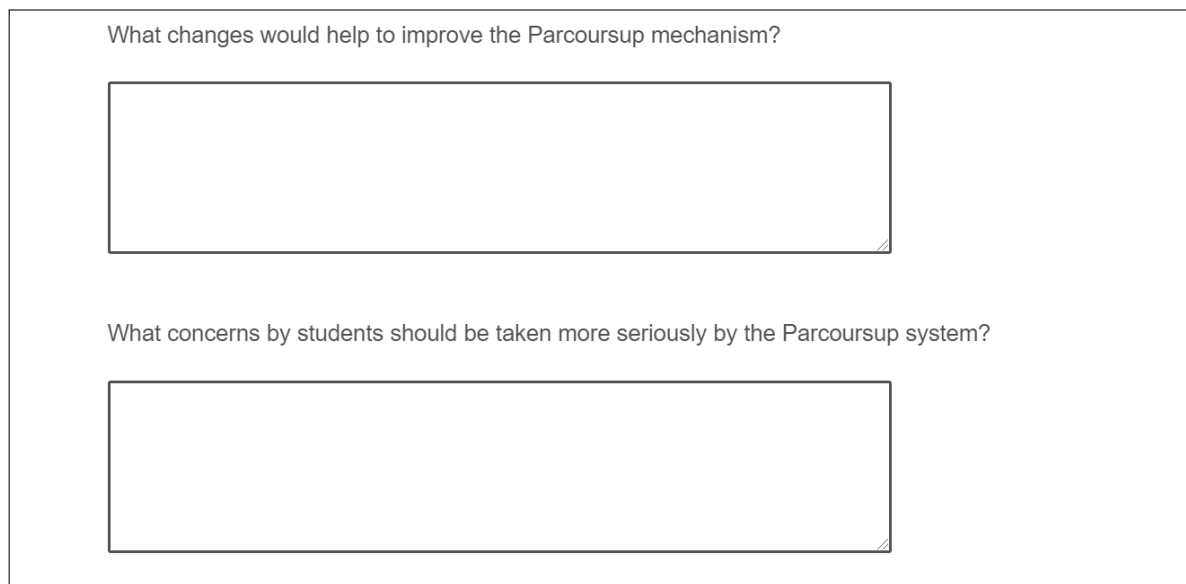
Figure E.5: Screenshot of questions on perceived stress

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way.

	Never	Almost never	Sometimes	Fairly often	Very often
How often have you felt that you were unable to control the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt confident about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt that things were going your way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt difficulties were piling up so high that you could not overcome them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you been angered because of things that were outside of your control?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes: Subjects are asked questions from the Perceived Stress Scale ([Cohen et al., 1983](#)).

Figure E.6: Screenshot of free-text questions on concerns and improvements



What changes would help to improve the Parcoursup mechanism?

What concerns by students should be taken more seriously by the Parcoursup system?

The image shows a screenshot of a survey form. It contains two free-text questions, each followed by a large rectangular text input box. The first question is 'What changes would help to improve the Parcoursup mechanism?' and the second is 'What concerns by students should be taken more seriously by the Parcoursup system?'. The input boxes are empty and have a small diagonal line in the bottom right corner, indicating they are text areas.

Notes: Subjects are asked for their concerns and possible improvements to the mechanism.