

Data and Methods:

The Universal Problem of Campus Expression

authors: PAYTON JONES, KEVIN PRICE, NICOLE BARBARO, ALEXANDER ARNOLD

Since 2019, Heterodox Academy has been conducting the annual Campus Expression Survey (CES) to learn more about how free expression is experienced on university campuses in the United States. The CES is a survey that represents various universities and aims to understand open discussion, diverse viewpoints, and constructive disagreements in classrooms. It tries to answer questions like:

- Who is hesitant to share their opinions?
- What topics do students avoid discussing?
- What are the potential consequences students fear when speaking up, and whom do they worry about, e.g., fellow students or professors?

The core construct measured by the CES from 2019-2022 is how reluctant students are to express their views on various controversial topics. In measuring student reluctance, we controlled for “general” reluctance—that is, reluctance to express views about any topic, controversial or not.

In our research brief, “The Universal Problem of Campus Expression”, we examine whether students’ level of reluctance varies in any interesting way depending on where a respondent’s institution is, or what type of institution a respondent is enrolled in. To do this, we group the 2019-2022 CES data by college and region.

Campus Expression Surveys from 2019-2022 received 5,950 respondents. After filtering out responses of questionable quality and responses that did not enter a legible name for an institutional affiliation, the analysis for the Universal Problem of Campus Expression research brief used data from 5,203 respondents. All respondents were between 18-24 years old. For each Campus Expression survey we aimed as much as possible to make the sample representative of the general population of college students as measured by the **National Center for Education Statistic's Integrated Postsecondary Education Data System (IPEDs)**, which tracks demographic information about college students in the US.

Gender breakdown of sample

- ≈60% female
- ≈38% male
- ≈2% non-binary/non-conforming or other

Race/ethnicity breakdown of sample

- ≈54% White
- ≈18% Hispanic/Latino
- ≈13% Black/African-American
- ≈7% Asian
- ≈5% Multiracial
- ≈3% Middle Eastern/American Indian/Alaska Native/Native Hawaiian/Pacific Islander/Other

Using Z-scores to standardize reluctance measures

To better compare different regions and types of colleges, we standardized responses by calculating z-scores. First, this means that various reluctance scores are centered - a score of 0 would mean that a college or region is exactly equal to the national average. Second, a score value other than zero represents the number of standard deviations away from the national average. For example, the University of Rhode Island had a reluctance score of 0.9, meaning that students' reluctance was roughly one standard deviation higher than the national average.

Using standardized reluctance scores that control for general reluctance allows us to be more precise, repeatable, and to measure what we actually want to measure.

What is the average from 2019-2022 CES data?

For students with reluctance scores of around zero (between -0.5 and 0.5):

- 31.7% were reluctant to talk about politics
- 17.8% were reluctant to talk about race
- 22.8% were reluctant to talk about religion
- 15.0% were reluctant to talk about gender
- 52.4% were reluctant to talk about at least one of those four topics

A reluctance score of 1 means that the student is one standard deviation more reluctant than the national average. For students with reluctance scores of about 1 (between 0.5 and 1.5):

- 59.3% were reluctant to talk about politics
- 40.8% were reluctant to talk about race
- 42.8% were reluctant to talk about religion
- 33.8% were reluctant to talk about gender
- 89.4% were reluctant to talk about at least one of those four topics

A reluctance score of -1 means the student is one standard deviation below the national average. For students with reluctance scores of about -1 (between -0.5 and -1.5):

- 18.3% were reluctant to talk about politics
- 11.8% were reluctant to talk about race
- 14.9% were reluctant to talk about religion
- 11.4% were reluctant to talk about gender
- 28.5% were reluctant to talk about at least one of those four topics

The vast majority of respondents (88.4) fell in one of these three climates.

Using Bayes factors for comparisons between institutional types

To test various statistical hypotheses for this research brief, we use Bayes factors rather than p -values. The reason for this is simple. Consider the hypothesis that students at R1 schools are more reluctant to speak about controversial topics compared to other schools. If we run a statistical analysis where R1 schools have slightly higher z-scores and $p = 0.15$, we cannot be sure whether R1 schools are meaningfully similar to other schools, or whether we lack enough data to detect a meaningful difference. This is an important limitation of p -values for our purposes.

Using Bayes factors circumvents this problem by comparing the evidence for two competing hypotheses. For this research brief, we compared hypotheses of the form “there is an effect (a meaningful difference)” with hypotheses of the form “there is no effect” (no meaningful difference).

We assume that a Bayes factor > 3 suggests our data favors the “meaningful difference” hypothesis. We assume that a Bayes factor $< 1/3$ suggests our data favors the “no meaningful difference” hypothesis. We assume that a Bayes factor between $1/3$ and 3 suggests that we don’t have enough data to tell the difference, and that we should refrain from any conclusion at all.