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**PUTTING IT IN NEUTRAL: HOW SEQUENCE,
SEVERITY, AND SINCERITY OF INFORMATION
PRESENTATION AFFECT STUDENT OPINIONS**

by

Michael Conklin*

I. INTRODUCTION

This article presents the findings of a study designed to measure how variations in the way college professors present information can affect students' interpretation of the information. The topic analyzed involves two competing theories of constitutional interpretation, originalism and living constitutionalism.¹ Variations on how the information was presented include the following: 1) informing the student which theory typically aligns with which political party; 2) making salient the student's political philosophy; 3) including a short argument in favor of the two theories of constitutional interpretation; 4) altering the sequence in which these two arguments appear; and 5) informing the student as to which theory of constitutional interpretation the professor allegedly prefers. These changes resulted in stark differences in which theory of constitutional interpretation the student elected to support. This is consistent with existing literature on cognitive biases, such as anchoring and the serial-position effect.²

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The results of this study serve as a valuable reminder to professors of the significance of how they present information as it pertains to biasing student beliefs.

This article also addresses effective strategies that can be implemented to minimize the anchoring effect and create a more neutral and conducive learning environment. Cognitive anchoring can also be utilized as a highly engaging topic for class discussion. Students educated on the wide-reaching effects of cognitive anchoring will be better equipped to acquire better outcomes in their academic, professional, and personal lives. This article provides pedagogical best practices for how to present the topic in a Legal Environment of Business course, as well as an interactive classroom activity to spark interest in the subject among students.

II. BACKGROUND

Accusations of Bias in Academia

There is a long history in academia of recognizing the importance of presenting controversial material in a neutral manner. In the landmark 1915 *Declaration of Principles on Academic Freedom and Academic Tenure*, the American Association of University Professors explicitly stated that when discussing “controversial matters,” professors should present “the divergent opinions of other investigators” and “above all” should “remember that [the professor’s] business is not to provide his students with ready-made conclusions, but to train them to think for themselves, and to provide them access to those materials which they need if they are to think intelligently.”³

American university professors are disproportionately liberal,⁴ but this does not *per se* prove that they are presenting information in a biased manner.⁵ Measuring the stated political

ideologies of professors is objective and straightforward. But measuring ideological bias in class lectures is a highly subjective endeavor.⁶ Someone from the far right is likely to view a moderate statement as biased because of how far it deviates from his position, and likewise with someone from the far left. This perception issue can be exacerbated when those on the extreme right and left associate exclusively with like-minded people and only consume news from like-minded media outlets.⁷

The amorphous nature of measuring classroom bias and its effects on student populations results in uncertainty as to whether it is a significant problem in modern academia. A 2008 attempt to study how faculty political ideology affects student ideology concluded that there is no causal relationship.⁸ However, this study did not directly compare the ideologies of the students to those of their professors. A 2016 study whose methodology allowed for such analysis found that professor ideology does affect student ideology.⁹ The study measured political self-identity of over 1,000 students before and after either an “Introduction to American Politics” or “Introduction to Economics” course. The results were then compared to the political ideology of the faculty who taught the courses.¹⁰ The study found:

Despite attempts to veil instructor ideological preference, and to present both sides of common ideological divides in a manner consistent with available evidence, instructors who self-identify as conservative are associated with a shift to the right amongst their students while instructors who self-identify as liberal have a similar effect in the opposite direction.¹¹

In recent years, college professors’ abilities to present information in an unbiased manner has received increased attention due to politically charged accusations that colleges function as liberal “indoctrination mills.”¹² College professors have been accused of “behav[ing] as political advocates in the

classroom, express[ing] opinions in a partisan manner on controversial issues irrelevant to the academic subject, and even grad[ing] students in a manner designed to enforce their conformity to professorial prejudices.”¹³

Cognitive Anchoring

The methodology of this research allows for the effects of cognitive anchoring to be measured as a potential factor in how information presentation affects student perceptions. Cognitive anchoring was first researched in the 1974 landmark paper by Nobel Prize-winning psychologists Daniel Kahneman and Amos Tversky.¹⁴ Since then, numerous papers have confirmed the effects of cognitive anchoring in a variety of settings. Cognitive anchoring is a heuristic whereby the timing and type of information improperly affects how it is perceived.¹⁵ This is accomplished because the anchor changes the point of reference used in making decisions.¹⁶ Cognitive anchoring is a well-documented phenomenon. However, there is a gap in the research pertaining to how it would affect student perceptions in a classroom setting.

A 1990 study found that cognitive anchoring plays an incredibly significant role in juror decision-making. The study assigned mock jurors to one of three different groups. They all heard an identical case summary. The only difference was that the plaintiff’s attorney’s request for damages was altered.¹⁷ The requests were either \$10,000, \$75,000, or \$150,000.¹⁸ Mock jurors who received the \$10,000 request awarded \$18,000. The ones who heard the \$75,000 request awarded \$62,800. And the ones who heard the \$150,000 request awarded \$101,400.¹⁹ The disparity between an \$18,000 award and a \$101,400 award for the same factual case may be hard to believe, but a later, similar study produced similar results.²⁰

Judges are also susceptible to the effects of cognitive anchoring despite their high educational and professional attainment and their familiarity with legal judgments. Sentencing recommendations by probation officers heavily

influence judges' rulings.²¹ In a hypothetical survey of German judges, a two-month sentencing recommendation resulted in an average sentence of 18.78 months, while a recommendation of thirty-four months resulted in an average sentence of 28.7 months.²²

A 2019 study found that cognitive anchoring is so powerful that it even affects legal decisions when the anchor is subtle and irrelevant.²³ The study presented mock jurors with a criminal case study that contained either subtle anchors to high numbers (the defendant was on Eighty-First Street on March 31st and was apprehended forty-five minutes after the alleged crime) or subtle low numbers (the defendant was on First Street on March 2nd and was apprehended three minutes after the incident).²⁴ Despite all relevant facts of the case remaining constant, mock jurors in the high group returned sentences that averaged thirty-one percent higher than those in the low group.²⁵

People may also be anchored to act in accordance with stereotypes, such as those involving their race and gender. In a 1999 study, Asian-American female college students were given a math test that began with either questions about their ethnicity, their gender, or control questions irrelevant to ethnicity and gender.²⁶ Participants who were given questions about their Asian heritage—and therefore primed to consider their Asian ethnicity—outperformed the other two groups on the math test.²⁷ Participants who were given questions about their female gender—and therefore primed to consider their gender—underperformed the other two groups.²⁸ The survey therefore found that even subtle reminders of one's identity in a group may cause them to act in accordance with the stereotypes—both positive and negative—regarding that group.²⁹

While cognitive anchoring has been identified as “one of the most reliable results of experimental psychology,”³⁰ it is not equally as effective on everyone. Individuals with extreme political beliefs are not as susceptible to cognitive anchoring regarding political topics. A 2015 study found that individuals

with self-professed extreme political leanings often provided estimates and responses that were well outside of the range expected with cognitive anchoring.³¹ Those with more moderate beliefs followed the more expected cognitive anchoring cues.³² The study found that “belief superiority” was in large part responsible for the lack of effectiveness of cognitive anchoring for those with extreme beliefs.³³ These more “extreme” individuals typically consume more political information than their more moderate counterparts.³⁴ These individuals “consume more political media, . . . are more willing to discuss contentious issues with opponents, and have more self-confidence in general”³⁵

Serial-Position Effect

The methodology of this research also allows for the results of the serial-position effect to be measured as a potential factor in how information presentation affects student perceptions. The serial-position effect occurs when the sequence of information presented affects perceptions of the information.³⁶ In the landmark 1974 Tversky and Kahneman study, participants were randomly assigned one of two math problems and given only five seconds to answer.³⁷ The problems were either “ $8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$ ” or “ $1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8$.”³⁸ Despite the product of these questions being the same, 40,320, the median answer for the latter problem was 512, while the median answer for the former problem was 2,250.³⁹

The serial-position effect is not just limited to numerical estimates. A 2013 study presented participants with two texts regarding a life story, one rich in details and the other poor in details.⁴⁰ Participants who were given the detailed text first were more likely to believe the story when compared to participants who were given the less-detailed text first.⁴¹ A 1998 study found that initial impressions of job interview candidates had unjustifiably high effects on how the applicant was perceived compared to later impressions.⁴² A 2005 study found that

because defense attorneys give their sentencing recommendation after the prosecutor does, the decision maker is more heavily swayed by the first recommendation heard, i.e., the prosecutor's.⁴³ The serial-position effect also plays a part in political elections, as being listed first on the ballot has been proven to increase a candidate's success in winning office.⁴⁴

However, the serial-position effect does not always place undue weight on the earlier information someone is exposed to. Sometimes the most recent information has a disproportionate effect. For example, a 1999 study found that witness testimony heard later in the trial was given more weight than earlier witness testimony.⁴⁵ In the medical field, a 1996 study found that when medical doctors are presented with a list of patient symptoms, their diagnosis places more emphasis on the symptoms presented last.⁴⁶

As with traditional cognitive anchoring, the impact of the serial-position effect can be mitigated by the intensity of an individual's confidence in his beliefs.⁴⁷ A 1969 study found that mock jurors were more likely to return an innocent verdict if their opinion throughout the case was innocent than if they went back and forth between innocent and guilty during the trial process.⁴⁸ When individuals felt a commitment to an internal opinion as to the defendant's guilt or innocence, that commitment mitigated any serial-position effect.⁴⁹ Similar to how those with strongly held political beliefs are more resistant to cognitive anchoring, when jurors reach a point at which they have made up their minds as to the defendant's guilt, they are less susceptible to the order in which information is presented.

III. METHODOLOGY

The data for this study were gathered in undergraduate Legal Environment of Business courses at two regional universities. The vast majority of students in these classes were business majors. During the first week of each semester—before any

revealed preferences from the professor would have occurred—a survey was given whereby students were asked about their political affiliation and their opinion on two theories of constitutional interpretation (the living Constitution view and the originalism view). There were eight different versions of the survey. The variations were:

- Whether or not arguments were presented for each of the two theories of constitutional interpretation and in what order they were presented
- Whether it was pointed out that Democrats generally favor the living Constitution view and Republicans generally favor the originalism view
- Whether the political affiliation of the survey participant was asked about at the beginning or end of the survey
- Whether the survey stated the professor's personal opinion on which theory of constitutional interpretation is best and whether that stated opinion was the living Constitution view or the originalist view

After surveys were excluded for being either illegible or incomplete, 314 usable surveys remained.

The political affiliation question instructed participants to “Select which one option best describes your political philosophy.” The options were “Strongly liberal,” “Liberal,” “Somewhat liberal,” “Somewhat conservative,” “Conservative,” and “Strongly conservative.”

The brief definition of each view, which was included in every survey, was: “The two main views of constitutional interpretation are living Constitution and originalism. The living Constitution view says that judges can alter the meaning of the Constitution to adapt with the times. The originalist view says that judges should adhere to the original meaning of the Constitution.”

At at least one point in each survey, the student was asked to select which option best describes his or her preferred view of

constitutional interpretation. The answer selections were “Definitely living Constitution,” “Living Constitution,” “Maybe living Constitution,” “Maybe originalism,” “Originalism,” and “Definitely originalism.”

The prompts presenting the case for each theory—when used—were as follows:

The case for the living Constitution:

The Constitution was written in the 1700s by an agrarian, slave-owning society. There have been vast changes in technology and public opinion since then. Determining what was meant by a document written in the 1700s is not only difficult, but would often lead to disastrous results if that intent was followed today. Therefore, judges must be allowed to alter the meaning of the Constitution.

A case involving the right of people to acquire contraceptives such as the birth control pill illustrates why the living Constitution view is best. In this case the originalists on the Court applied their rigid interpretation of the Constitution and held that there was no right to contraceptives (and therefore voted to allow states to ban contraceptives). Luckily, they were outnumbered by the living Constitution justices on the Court who read into the Constitution a newly discovered right to contraception. Thanks to this living Constitution view, people now have a right to contraception, along with other rights that weren't originally intended.

The case for originalism:

The Supreme Court should faithfully apply the Constitution in their cases. What's the point of having a Constitution if unelected judges can

change its meaning based on their personal preferences?

There is already a system in place for changing the meaning of the Constitution, the amendment process. It has been effectively used to amend the Constitution to give women the right to vote, end slavery, set term limits on the president, and allow 18-year-olds to vote.

Student responses were quantified by attributing a number to each potential answer. For political affiliation, the responses were given a one through six, with one being “Extremely liberal” and six being “Extremely conservative.” The constitutional theory answer selections were also assigned a one through six, with one being “Definitely living Constitution” and six being “Definitely originalism.” This scale allowed for more nuanced differences to be analyzed when compared to the binary response options of only liberal/conservative or living Constitution / originalism.

Hypothesis One

It was hypothesized that in the surveys in which students were first asked to provide their political affiliation—and informing them of which theory of constitutional interpretation is aligned with which political party—there would be higher correlations between political affiliation and chosen constitutional interpretation theory. Meaning, liberals would be more likely to choose the living Constitution theory and conservatives more likely to choose the originalism theory. It was hypothesized that this would be due to the anchoring effect, because being reminded of their political affiliation up front would cause students to act consistently with that belief in their response to which theory they support.

Hypothesis Two

It was hypothesized that when arguments in favor of the two theories were presented, the arguments for the theory presented

first would be disproportionately favored due to the serial-position effect.

Hypothesis Three

It was hypothesized that when the professor's alleged opinion was stated, students would disproportionately choose the theory they believe the professor agrees with, either because the students trust the professor's subject-matter expertise or because the students believe that agreeing with the professor will in some way be advantageous.⁵⁰

IV. RESULTS

Overall

The data supported hypothesis one, supported hypothesis two in part, and did not support hypothesis three. The average political ideology for all students was 3.67, which, on a six-point scale, is only a slight 0.17 favoring of conservatism. The average response as to which constitutional theory is preferred was 3.11, which is closest to the "Maybe living Constitution" response.

The r^2 coefficient was used to measure the relationship between each student's political affiliation and chosen theory. An r^2 of 1 would mean there is a perfect correlation between political affiliation and theory selected (every "Strongly liberal" would have selected "Definitely living Constitution," and every "Strongly conservative" would have selected "Definitely originalism"). An r^2 of 0 would mean there is no correlation between political affiliation and theory selected. And an r^2 of 0.5 would mean that the model explains 50% of the variability of the response data around its mean.

Hypothesis One

When students were first asked about their political affiliation and informed of which theory correlates with each political affiliation before being asked about which theory they

prefer, they were more likely to choose the theory that typically aligns with their political affiliation. For surveys that first asked about political affiliation and identified which political affiliation is associated with which theory, the r^2 was a strong 0.71. For surveys that did not, the r^2 was still significant but only 0.51. Therefore, the practice of reminding students of their political affiliation and which theory of constitutional interpretation it aligns with resulted in a 39% increase in the students' chosen theory corresponding to their political affiliation.

Hypothesis Two

The results partially supported hypothesis two. For surveys that presented the case for the living Constitution view before the case for the originalism view, there was a 13% increase in support for the living Constitution (the average response initially was 2.75 and went to 2.38 after hearing the case for the living Constitution). The effect on participants who were exposed to the argument for originalism first was only negligible, increasing support for originalism less than 2% (the average response initially was 3.04 and went to 3.08 after hearing the case for originalism).

However, in both instances when the argument for the alternative theory was then presented, students were more significantly persuaded. After being told the argument for the living Constitution last, support for it increased 14% (from 3.08 to 2.65). And when the argument for originalism was presented last, support for it increased 25% (from 2.38 to 2.97).

Hypothesis Three

This hypothesis was not only unsupported by the evidence, but the inverse conclusion was supported. When the students were told that the professor subscribed to originalism, they were more likely to favor the living Constitution view (an average of 2.83 compared to the overall average of 3.08). And when the students were told that the professor subscribed to the living

Constitution view, they were more likely to favor originalism (an average of 3.48 compared to the overall average of 3.08).

V. DISCUSSION

Hypothesis One

This hypothesis predicted that when students were first asked about their political affiliation and informed of which theory correlates with each political affiliation before being asked about which theory they prefer, they would be more likely to choose the theory that typically aligns with their political affiliation. The 0.51 r^2 value for the group that was not reminded of their political affiliation nor told which political philosophy aligns with each theory—while significantly less than the 0.71 r^2 value from the group that was—still demonstrates a significant correlation. The limitations of this study render it unable to determine if this is a result of conservatives and liberals naturally being drawn to originalism and living constitutionalism, respectively, or if many students were already aware of which theory aligns with which political ideology. The results could also be due, in small part, to the veracity of the students' beliefs.⁵¹ Based on this author's experience teaching students at this level, it is unlikely that a significant number of the students surveyed were familiar with these two theories at the time they took the survey—the first week of class.

As illustrated in the Asian-American female math test study,⁵² people can become anchored to a given trait, belief, or association even when it is pointed out in a subtle manner. This new, anchored mindset then affects the way in which they interpret newly presented information. This is an important principle for college professors to learn and adapt their teaching styles to accommodate. Students may be anchored to a number of preexisting traits, beliefs, or associations that affect their class performance. Some students may enter class with the preexisting anchor that the study of law is boring. Others may be anchored

to notions that the law is anti-business, anti-black, anti-conservative, anti-poor, or a number of other preconceived notions.⁵³ These anchors are not only hard to overcome because of how powerful they are as a cognitive heuristic⁵⁴ but also because they are difficult to identify. Students are unlikely to recognize that their prior political leanings function to bias the way they interpret information. And even if they did, they would be unlikely to share such information with their professors.

College professors are well-advised to consider the importance of political ideology when deciding the way controversial topics are presented. For example, pointing out which Supreme Court opinions are written by conservative justices and which are written by liberal justices may do more harm than good if it causes students to be either hypercritical or undiscerning before first considering the merits of the case. The practice of a conservative student discovering that he agrees with some liberal positions and a liberal student discovering that he agrees with some conservative positions is a valuable experience that could lead to greater tolerance of opposing views. This also enhances the students' critical thinking skills, which is a common learning objective for a Legal Environment of Business class. This is because dismissing positions outright without consideration is a poor method of fostering critical thinking skills.

Additionally, professors should be mindful to present controversial topics by utilizing a mix of different teaching methods to accommodate the various learning methods of the students.⁵⁵ This is consistent with the other findings of this research, as this type of flexible learning is associated with more democratic and less authoritarian teaching styles.⁵⁶ College professors should also be mindful of how their own traits, beliefs, and associations may bias their teaching pedagogy. Judging a student's paper in light of a poor performance on his or her previous paper, apparent inattentiveness in class, or

perceived lack of respect for the professor is also a manifestation of cognitive bias.

The mindfulness required to foster an unbiased learning environment also extends beyond just monitoring the subtle ways in which the professor presents information. It also requires attention to the chosen textbook, required readings, guest speakers, etc.⁵⁷ Professors should consider if these resources were chosen because they present certain controversial information consistent with the professor's personal beliefs or because they provide the best arguments for both sides, thereby allowing the students to arrive at their own conclusions.

Professors should also be upfront with students about how dissenting voices are welcome in class.⁵⁸ This way, even if students feel the professor's personal bias is on display in the manner in which the professor presents information, they will be more likely to offer counterpoints that will hopefully serve as a reminder to the professor to present alternative views. Also of note is how professors—consciously or otherwise—can incentivize or disincentivize dissenting views from students based on the way they respond. If the professor attacks and dismisses dissenting opinions from students, then the students will quickly learn to keep these views to themselves. Conversely, if the professor excitedly praises dissenting opinions, then the class will feel more encouraged to present them.⁵⁹

Hypothesis Two

This hypothesis predicted that when arguments in favor of the two theories were presented, the theory presented first would be disproportionately favored due to the serial-position effect. While the opposite outcome was observed—the theory presented last was disproportionately favored—this is still an example of the serial-position effect. This unpredicted result is not entirely surprising because, as illustrated in the literature review, the serial-position effect can sometimes result in the

highest significance being placed on the last piece of information one is exposed to.⁶⁰

For legal topics that are up for debate, such as which method of constitutional interpretation is best, are overseas tax shelters ethical, or should businesses be required to offer paid maternity leave, the professor's bias could be limited by intentionally ordering the sequence of the information presented for both sides. For example, if a professor were a strong originalist, he could choose to present the arguments in favor of originalism first and the arguments for the living Constitution last. This would prevent an occurrence where the professor—consciously or otherwise—sets up the living Constitution arguments to be dismantled immediately afterward.

Combating the effects of anchoring is no easy task. Cognitive anchoring is so highly prevalent that “it has proved to be almost impossible to reduce”⁶¹ However, two studies have produced potential mitigation strategies. One found that the implementation of a procedural priming task can reduce the magnitude of the anchoring effect.⁶² The study randomly assigned participants into two groups.⁶³ The first group was instructed to find similarities between two images, while the other group was instructed to find differences.⁶⁴ Both groups were then given an anchoring test.⁶⁵ While both groups ultimately fell prey to the anchoring bias, the group that was given the procedural priming task of finding differences fared better than their counterparts who looked for similarities.⁶⁶ A second study showed that implementing a “consider-the-opposite” strategy, in which one actively generates reasons why the anchor is inappropriate, also minimized anchoring bias.⁶⁷ This “consider-the-opposite” strategy is an excellent pedagogical tool for a Legal Environment of Business course because it coincides nicely with critical thinking, which is a common learning objective for that course.

Another way to combat the impact of the serial-position effect on a professor's bias is to teach the concept of anchoring

and the serial-position effect early in the semester. Students who are more aware of the phenomenon may be better equipped to combat it in their own recall of information.⁶⁸ Students with training in the concept of the serial-position effect may also serve to bring attention to instances of the phenomenon when the teacher and other students may be unaware it is happening.⁶⁹

Hypothesis Three

This hypothesis predicted that when the professor's alleged opinion was stated, students would disproportionately choose the theory they believe the professor agrees with. Informing students of the professor's alleged opinion did affect responses, but in the opposite direction than predicted. It is challenging to provide a definitive explanation for this result. Perhaps the students felt pressured and were demonstrating a rebellious nature by disagreeing with the professor. Perhaps students felt the professor would respect their willingness to advocate for the alternative position. Regardless, professors should strive to embody a neutral disposition in which both sides to controversial topics are presented in such a convincing manner that students are left unclear what the professor personally believes.

The finding that students were not persuaded to adopt the professor's point of view should not be interpreted as contradictory to the results in the Baxter study, in which student political ideology shifted to be more in line with professor ideology.⁷⁰ In the present study, students were simply told what the personal belief of the professor was. This level of professor bias falls far short of what would likely occur in a semester-long American Politics course, which is what was used in the Baxter study.⁷¹

Living Constitution Favored over Originalism

Although outside the scope of this research, it is interesting to note that the students in these surveys—despite being more conservative than liberal—demonstrated an overall preference for the living Constitution theory over originalism. This finding

remained constant in the survey versions when the arguments for each side were presented. Perhaps among college students the word “originalism” is associated with old-timey notions such as antiquation, intolerance, and dogmatism.

Natural Check Against Biased Teaching

The results of this survey should not be interpreted as calling for increased surveillance and disciplinary measures for potentially biased teaching pedagogy. The practice is difficult to quantify objectively, and the harm to academic freedom would likely outweigh any benefits incurred. Additionally, there is evidence to suggest that a naturally occurring check against proselytizing in the classroom already exists. A 2006 study found that the larger the perceived ideological divide between the student and professor, the worse the student’s end of course evaluation of the professor will be.⁷² Since these evaluations are frequently linked to professor promotions and career opportunities, this creates an incentive for professors to limit how far they are willing to go in promoting their own opinions at the expense of welcoming alternative views.

Difficulty of Pedagogical Implementation

The suggestions for professors in this article are easier said than done. A professor who strongly subscribes to the living Constitution theory may view all the arguments for originalism as blatantly weak and believe that the implementation of originalism would lead to severe harm to the judicial system. Such a person may find it difficult to present both sides with a neutral disposition. Additionally, such a person may find it difficult to fight the urge to actively promote the living Constitution theory over originalism. As the Supreme Court has emphasized, “the overriding importance [of higher education is] preparing students for work and citizenship.”⁷³ And being a good citizen clearly entails not causing harm to the judicial system.

Another difficulty in implementing the suggestions of this article is that it is not a simple, binary endeavor. Instructional

bias must be differentiated from the act of challenging students' positions with criticism.⁷⁴ This can be a highly nuanced distinction and is made increasingly difficult by the subjective nature of identifying the distinction. A strongly conservative student and a strongly liberal student may define the difference between instructional bias and the healthy challenge of ideas very differently in a variety of circumstances.

An additional challenge is the inherent line-drawing exercise involved in identifying which topics should be presented in a neutral manner inviting dissent and which should not. Most would likely agree that the different theories of constitutional interpretation should be presented neutrally, encouraging students with different viewpoints to voice arguments for their beliefs. And most would likely agree that a topic such as women being barred from the practice of law need not be presented in a manner suggesting that both sides have equal merit. But between these two extremes lie issues that some would view as open for debate and others would view as settled issues inappropriate to encourage disagreement with.

There is a danger in not recognizing that some ideas—such as women being allowed to practice law—are settled issues that should not be up for debate. The following quote from Stanley Fish serves as an example of the thought process that can flow from failing to recognize this:

The moment a teacher tries to promote a political or social agenda, mold the character of students, produce civic virtue, or institute a regime of tolerance, he or she has stepped away from the immanent rationality of the enterprise and performed an action in relation to which there is no academic freedom protection because there's nothing academic going on.⁷⁵

What is so immanently irrational about professors utilizing their course subjects to produce civic virtue? And by what mechanism is such behavior barred from the realm of academia? And if

tolerance is not to be promoted, on what grounds is a professor justified in stopping a student acting to silence a fellow student from voicing a given belief?

To add to the difficulty professors face when considering the dangers of presenting controversial topics in a biased manner, they are in essence given mixed messages regarding the issue. Basic teaching pedagogy trains professors on how to present information in a manner that leads to the desired student-learning result. Faculty members who excel at this are praised for their effective teaching skills. But this same behavior, when used on an undefined category of topics, is labeled indoctrination and is forbidden.

Application for Legal Environment of Business Courses

The topic of cognitive anchoring is highly relevant to many business courses, including both undergraduate and graduate Legal Environment of Business courses. Furthermore, students find the topic highly engaging due to the expansive real-world applicability. Students are often surprised to learn how much cognitive anchoring affects juror decision-making and judges' verdicts. This realization sparks passionate discussion in the classroom regarding judicial fairness, the ethics of manipulating outcomes through cognitive anchoring, and how cognitive anchoring could apply to the students' personal lives. The topic of cognitive anchoring and the examples available in the legal field also help dispel the frequent misconception that the law is more of an objective, exact science rather than the subjective endeavor that it often is. And as previously stated, the strategy of "consider-the-opposite" for combating the cognitive anchoring bias aligns with the common Legal Environment of Business learning objective of critical thinking.⁷⁶

Beginning a lesson on cognitive anchoring with an in-class demonstration is a powerful way to build interest in the subject and avoid the inevitable claim from students that surely they would not fall prey to the cognitive anchoring demonstrated in the research. An easy way to do this is by randomly distributing

one of two surveys to each student in the class. Each survey contains only two questions. The second question in each survey is the same: “What is your best estimate as to the population of France?” The first question is either “Is the population of France more or less than 30 million?” or “Is the population of France more or less than 150 million?”⁷⁷ Provided that you have at least twenty students participating,⁷⁸ there is a high probability that the average estimate on the second question will be significantly higher in the latter group than in the former.⁷⁹

Class discussions on cognitive anchoring are beneficial to students’ success in their academic, professional, and personal lives. For example, these discussions can illustrate:

- The importance of viewing contested political issues with a neutral and open mindset
- The importance of students making a positive first impression with their professors, bosses, and dating partners
- Conversely, the importance of being amiable to changing opinions about others
- The positive effect of an attorney mentioning a colleague who charges \$500 an hour before explaining that he charges “only” \$300 an hour
- The importance of immediately controlling the narrative during a workplace conflict or when addressing a public relations issue

Simply put, cognitive anchoring is a highly engaging topic to discuss in class, and students benefit immensely from not only learning how to effectively use this tool but also to be aware of the ways it can be used against them.

VI. CONCLUSION

The findings of this research emphatically demonstrate how necessary it is for professors to be mindful of the manner in

which they present information. The careful implementation of the suggestions in this article will be no easy task, but given that even slight variations can result in significant biases in student response, this is something of utmost importance. Professors must diligently strive to present information in a neutral manner regardless of their personal beliefs. The lack of ideological diversity in academia⁸⁰—and recent accusations of “indoctrination mills”⁸¹—further emphasizes the need for controversial topics to be presented in a neutral manner.

The results of this study also call attention to the nuanced and underdeveloped topic of addressing potential biases in information presentation, therefore encouraging replication with variation in future research. Such variations could include measuring how demographic factors such as age, gender, and GPA affect responses. Additionally, a future study done in a less polarizing political environment could help inform how much the results are attributable to partisanship. Finally, similar studies conducted at flagship universities could be conducted to measure any variation between institution type.

¹ Originalism was chosen instead of strict constructionism because it was determined to be less confusing to students who were unfamiliar with the concepts.

² For ease of reading, the term “serial-position effect” is used throughout this article. However, it should be noted that the primacy effect and the recency effect are both manifestations of the serial-position effect. The former is when the first pieces of information in a list are given disproportionate relevance and the latter is when the last pieces of information in a list are given disproportionate relevance. Henry L. Roediger, III & Robert G. Crowder, *A Serial Position Effect in Recall of United States Presidents*, 8 BULL. PSYCHONOMIC SOC’Y 275, 275 (1976).

³ AM. ASS’N OF UNIV. PROFESSORS, DECLARATION OF PRINCIPLES ON ACADEMIC FREEDOM AND ACADEMIC TENURE 298 (1915),

<https://www.aaup.org/NR/rdonlyres/A6520A9D-0A9A-47B3-B550-C006B5B224E7/0/1915Declaration.pdf>.

⁴ Colleen Flaherty, *Evidence of 'Liberal Academe,'* INSIDE HIGHER ED (Oct. 3, 2016), <https://www.insidehighered.com/news/2016/10/03/voter-registration-data-show-democrats-outnumber-republicans-among-social-scientists> (reporting an average university ratio of 11.5:1 for liberal to conservative professors and a ratio of only 8.6:1 for the subject of law specifically).

⁵ Scott Jaschik, *Liberal Indoctrination? Not So Much,* INSIDE HIGHER ED (Feb. 5, 2018), <https://www.insidehighered.com/news/2018/02/05/research-suggests-colleges-broaden-students-political-views>.

⁶ Joseph P. Mazar, *Teachers, Students, and Ideological Bias in the College Classroom,* 67 COMM'N EDUC. 245, 245–47 (2018).

⁷ Alan Greenblatt, *Political Segregation Is Growing and 'We're Living with the Consequences,'* GOVERNING (Nov. 18, 2016), <https://www.governing.com/topics/politics/gov-bill-bishop-interview.html>.

⁸ See, e.g., Mack D. Mariani & Gordon J. Hewitt, *Indoctrination U.? Faculty Ideology and Changes in Student Political Orientation,* 41 POL. SCI. & POL. 773, 779 (2008) (concluding that, although students' ideologies do shift to the left through their time at college, upon graduation students' ideologies are "not significantly different from the population at large [of a similar age].").

⁹ Corbett Baxter, Brian Forester & Rachel Milstein Sondheimer, *The Effects of Faculty Ideology on Changes in Student Ideology* (2016) (Master Teacher Program paper, United States Military Academy), https://www.westpoint.edu/sites/default/files/inline-images/centers_research/center_for_teching_excellence/PDFs/mtp_project_papers/Baxter-Forester-Sondheimer_16.pdf.

¹⁰ *Id.* at 1–2.

¹¹ *Id.* at 2.

¹² Neal Gross, *The Indoctrination Myth,* N.Y. TIMES: GRAY MATTER (Mar. 3, 2012), <https://www.nytimes.com/2012/03/04/opinion/sunday/college-doesnt-make-you-liberal.html> (pointing out that then presidential candidate Rick Santorum called colleges and universities "indoctrination mills" for liberal thought).

¹³ David Horowitz, *Why an Academic Bill of Rights Is Necessary to Ensure That Students Get a Quality Education,* in THE ACADEMIC BILL OF RIGHTS DEBATE: A HANDBOOK 187, 188 (Stephen H. Aby ed., 2007).

¹⁴ Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics & Biases,* 185 SCIENCE 1124 (1974).

¹⁵ Tversky & Kahneman, *supra* note 14, at 1128.

¹⁶ *Id.*

¹⁷ Allan Raitz, Edith Greene, Jane Goodman & Elizabeth F. Loftus, *Determining Damages: The Influence of Expert Testimony on Jurors' Decision Making*, 14 L. & HUM. BEHAV. 385, 387 (1990) (citing J.J. Zuehl, *The Ad Damnum, Jury Instructions, and Personal Injury Damage Awards* (1982) (unpublished manuscript)).

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ Gretchen B. Chapman & Brian H. Bornstein, *The More You Ask for, the More You Get: Anchoring in Personal Injury Verdicts*, 10 APPLIED COGNITIVE PSYCH. 519, 526 (1996).

²¹ *Id.* at 521.

²² Birte English & Thomas Mussweiler, *Sentencing Under Uncertainty: Anchoring Effects in the Courtroom*, 31 J. APPLIED SOC. PSYCH. 1535, 1538–40 (2001).

²³ Michael Conklin, *Combating Arbitrary Jurisprudence by Addressing Anchoring Bias*, 97 WASH. U. L. REV. ONLINE 1 (2019).

²⁴ *Id.* at 4. The case summary was constructed so that the differences in apprehension time were irrelevant. *Id.*

²⁵ The high group average sentence was 9.7 months, while the low group average was 7.4 months. *Id.*

²⁶ Margaret Shig, Todd L. Pittinsky & Nalini Ambady, *Stereotype Susceptibility: Identity Salience and Shifts in Quantitative Performance*, 10 PSYCH. SCI. 80, 80 (1999).

²⁷ *Id.* at 81.

²⁸ *Id.*

²⁹ *Id.* 82–83.

³⁰ Ljijana Lazarevic & Iris Zezelj, *Individual Differences in Anchoring Effect: Evidence for the Role of Insufficient Adjustment*, 15 EUROPE'S J. PSYCH. 8, 8 (2019).

³¹ Mark J. Brandt, Anthony M. Evans & Jarret T. Crawford, *The Unthinking or Confident Extremist? Political Extremists Are More Likely Than Moderates to Reject Experimenter-Generated Anchors*, 26 PSYCH. SCI. 189, 189–90 (2015).

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*

³⁶ Galit Nahari & Gershon Ben-Shakhar, *Primacy Effect in Credibility Judgments: The Vulnerability of Verbal Cues to Biased Interpretations*, 27 APPLIED COGNITIVE PSYCH. 247, 247 (2013).

³⁷ Tversky & Kahneman, *supra* 14, at 1128.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ Nahari & Ben-Shakhar, *supra* note 36.

⁴¹ *Id.* at 250.

⁴² Daniel M. Cable & Tom Gilovich, *Looked Over or Overlooked? Prescreening Decisions and Postinterview Evaluations*, 83 J. APPLIED PSYCH. 501 (1998).

⁴³ Birte English, Thomas Mussweiler & Fritz Strack, *The Last Word in Court—A Hidden Disadvantage for the Defense*, 29 LAW & HUM. BEHAV. 705 (2005).

⁴⁴ Patrick F.A. van Erkel & Peter Thijssen, *The First One Wins: Distilling the Primary Effect*, 44 ELECTORAL STUD. 245, 250 (2016).

⁴⁵ Jose H. Kerstholt & Janet L. Jackson, *Judicial Decision Making: Order of Evidence Presentation and Availability of Background Information*, 12 APPLIED COGNITIVE PSYCH. 445 (1999).

⁴⁶ Gretchen B. Chapman, George R. Bergus & Arthur S. Elstein, *Order of Information Affects Clinical Judgment*, 9 J. BEHAV. DECISION MAKING 201, 201 (1996). This recency effect remained constant in both experienced and less experienced physicians. *Id.*

⁴⁷ For examples of traditional cognitive anchoring mitigation see *infra* notes 62–69 and accompanying text.

⁴⁸ Vernon A. Stone, *A Primacy Effect in Decision-Making by Jurors*, 19 J. COMMC'N 239, 239 (1969).

⁴⁹ *Id.*

⁵⁰ While there was no subjectivity in the grading—any student who answered all the questions received full credit—the survey was not anonymous.

⁵¹ See, e.g., Brandt, Evans & Crawford, *supra* note 31.

⁵² Shig, Pittinsky & Ambady, *supra* note 26.

⁵³ Note that this does not *per se* mean that any of these pre-conceived notions are false. Rather, it just means that professors should be aware of what biases their students possess.

⁵⁴ See, e.g., Thomas Mussweiler, *The Malleability of Anchoring Effects*, 49 EXPERIMENTAL PSYCH. 67, 71 (2002) (“[The anchoring effect] has proved to be almost impossible to reduce.”).

⁵⁵ Carmen Zita Lamagna & Sheikh Tareq Selim, *Heterogeneous Students, Impartial Teaching and Optimal Allocation of Teaching Methods*, (University Library of Munich, Germany, General Economics and Teaching Working Paper No. 0503011), <https://ideas.repec.org/p/wpa/wuwpgt/0503011.html>.

⁵⁶ *Id.* at 2.

⁵⁷ Baxter, Forester & Sondheimer, *supra* note 9, at 1.

⁵⁸ Through personal experience, this author has found that sincerely emphasizing the importance of dissenting opinions on the first day of class has a positive effect throughout the semester. For example:

Dissenting opinions are the most important to share. If two students have voiced their support for a given position, we really don't need a third person to echo the sentiments already expressed.

We need someone to share an alternative view so that the class can hear both sides. Providing alternative views to the topics we will discuss keeps the class interesting. And the more unique the opinion, the more we benefit from hearing it.

⁵⁹ In order to gain the reputation of a professor who excitedly encourages dissenting views instead of one who attacks and dismisses them, it is sometimes necessary to help out students who present dissenting views by slightly altering their comment into the strongest version possible. For example, after presenting a strong case for originalism, if a student provides the rudimentary critique, "Why should we care so much what people from the 1700s thought?" the professor could respond, "That's an excellent point. Many leading scholars on the subject present a similar objection to originalism. What did the Founding Fathers know about GPS tracking, greenhouse gas pollution, and the internet?" Depending on the quality of the dissent a student provides, it can be challenging to develop the dissent into a quality objection, but the more effort that is put into the practice, the better a professor will become.

⁶⁰ See, *supra* notes 45–45 and accompanying text.

⁶¹ Mussweiler, *supra* note 54, at 71.

⁶² *Id.* at 69–70.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ Thomas Mussweiler, Fritz Strack & Tim Pfeiffer, *Overcoming the Inevitable Anchoring Effect: Considering the Opposite Compensates for Selective Accessibility*, 26 PERSONALITY & SOC. PSYCH. BULL. 1142 (2000).

⁶⁸ Lloyd (Chad) Jones, *Patterns of Error Perceptual and Cognitive Bias in Intelligence Analysis and Decision-Making 5* (Dec. 2005) (M.S. thesis, Naval Postgraduate School), <https://apps.dtic.mil/dtic/tr/fulltext/u2/a443214.pdf>.

⁶⁹ *Id.*

⁷⁰ Baxter, Forester & Sondheimer, *supra* note 9.

⁷¹ *Id.*

⁷² April Kelly-Woessner & Matthew C. Woessner, *My Professor Is a Partisan Hack: How Perceptions of a Professor's Political Views Affect Student Course Evaluations*, 39 POL. SCI. & POL. 495 (2006).

⁷³ *Grutter v. Bollinger*, 539 U.S. 306, 331 (2003).

⁷⁴ Kenneth L. Marcus, *Academic Freedom and Political Indoctrination*, 39 J. COLL. & U.L. 725, 740 (2013).

⁷⁵ STANLEY FISH, *SAVE THE WORLD ON YOUR OWN TIME* 81 (2008).

⁷⁶ See *supra* note 67 and accompanying text.

⁷⁷ This is the same experiment conducted on the audience in the author's TED Talk. See *supra* note *.

⁷⁸ Even in classes of fewer than twenty, there is a greater than 50% probability that the results will be consistent with the anchoring effect. But the more participants involved, the more likely this result will occur. This author has personally performed this exact class activity about fifteen times. Every time, the students who received the questionnaire with the first question that anchors them to a high number return higher estimates on average than the students who received the questionnaire that anchors them to the low number.

⁷⁹ While students will inevitably inquire, it is ultimately irrelevant that the actual population of France is around 68 million. *France*, CENT. INTEL. AGENCY: WORLD FACTBOOK (last updated Apr. 2020), <https://www.cia.gov/library/publications/the-world-factbook/attachments/summaries/FR-summary.pdf>.

⁸⁰ Flaherty, *supra* note 4. If there were more ideological diversity in academia, the consequences of professors presenting information in a biased manner would be less severe, because a student could be exposed to both sides of controversial issues from different professors.

⁸¹ See *supra* note 12.