USING DISCUSSION TO IMPROVE ECONOMIC KNOWLEDGE

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Abstract

This paper offers a response to a paradox in the literature on economics education. The paradox is that economic knowledge has been found to be sensitive to an individual's ethical, moral, and political convictions. I hypothesize that the source of this paradox is the divergence between the learning of economics and its application outside the classroom. Often the teaching and assessment of economic knowledge focuses on the technical dimensions of our discipline. This begins with introducing students to theory in principles courses and continues as the subject becomes more mathematically rigorous. Outside the classroom, the more subjective elements of economics matter tremendously. From the minimum wage to climate policy, the application of economic knowledge is steeped in normative considerations. In response to the divergence between the learning and application of economics, the normative and technical sides of economics ought to be taught in tandem. In this paper, ways to use discussion to bridge the gap between these two branches of economic knowledge is presented. The merits and limitations of this technique are considered. For the reader interested in trying this technique, a sample selection of prompts that have been used in principles courses is provided. Ultimately, the goal of teaching is to increase students' economic knowledge. The argument is made that open-ended discussion, coupled with lecture, is an effective way to achieve this end.

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Introduction

In determining the structure of a course, the professor of economics is faced with many decisions. What content should be covered? How will it be delivered? How will learning be assessed? The margins to consider are nearly endless. This paper explores a division at the heart of economics, the positive and normative aspects of commercial life, that has a profound impact on how economics is taught. Economists have long struggled with reconciling these two elements of our discipline. Adam Smith's work is a testament to this challenge. Smith's impartial spectator plays an important role in *The Theory of Moral Sentiments* but does not even make a cameo in *The Wealth of Nations*. Smith uses the impartial spectator to highlight the way morality and social norms may influence our economic decisions. Much like Smith in his two masterpieces, modern economists tend to treat the objective and subjective elements of economics as mutually exclusive domains, rather than complementary parts of a whole.

In our teaching, it is natural to emphasize the technical side of economics over the more subjective. Economic theory provides valuable insights into the world. From Gary Becker's analysis of criminal activity to Esther Duflo's work on poverty alleviation, theory helps us understand the world. Because many students struggle with theory's abstract nature, it is important to devote a large amount of time to teaching it. But in doing so we run the risk of alienating economics from the human condition. As Wilson and Dixon (2009) assert, "Economic

principles do not have to be unreal. But, starved of immanent narrative and relation to alternative perspectives, principles are made unreal" (p. 93). With respect to Becker and Duflo's work, there is an economic element to crime and poverty, but it is not the entire story. If we ignore the context in which economic issues play out, or the normative issues inherent to them, it is possible our discipline becomes "unreal" in the eyes of our students. Economics becomes an intellectual exercise of assumptions, graphs, and mathematics that has little bearing on the world outside the classroom. Sen (1988) asserts that to develop a deep understanding of economics, one must be willing to consider both the positive and normative sides of the discipline in tandem.

In introducing a special issue of the *International Review of Economics Education* on pluralism in economics education, Denis (2009) claims "The process of contention and discussion between differing standpoints is an essential component of progress towards an adequate understanding of the world" (p. 13). At its best, discussion exposes students to the plurality of views held within the classroom. Discussion can be the vehicle by which ethical and moral considerations are brought to the fore. Smith's impartial spectator provides a useful lens to interpret in-class discussions. As Mueller (2016) outlines, the impartial spectator represents our perception of others' morality. As students share their opinions on contentious economic issues, claims of "ought" and "should" become a tangible part of the course. In this way the classroom becomes a venue in which students are exposed to a diversity of standpoints.

Exposure to different opinions is an insufficient goal for the educational endeavor. We are striving for something more. It is not enough that students be aware of different economic priorities; they also ought to learn the technique and methods of economics. Spicker (2016) relates Aristotelian practical wisdom to the notion of applying economic principles in a way that is conscious of context. In order for our students to leave our classes with "practical wisdom," a learning environment which facilitates consideration of the positive and normative sides of economics, while appreciating the context in which economic life occurs, needs to be developed. In our teaching, there are many ways in which we may strive towards this goal. The remainder of the paper is devoted to substantiating a method by which discussion linked to lecture can be applied towards this end.

The paper proceeds as follows. The next section is a review of the literature on student learning in economics. In this section, a paradoxical finding in the literature, namely that economic knowledge is sometimes sensitive to political ideology and moral convictions will be discussed. The argument will be made that a more explicit consideration of normative issues in economics courses is one way to resolve the paradox. Next, a step-by-step guide for creating discussion prompts and integrating discussion into a lecture is outlined. Following this guide are three examples of prompts that have been used. These examples allow for each step of the process to be illustrated. The Appendix contains examples of more discussion prompts with students' and economic experts' responses to them. The reader interested in applying this method is directed towards these examples. Hopefully they are a helpful resource to begin incorporating discussion into one's courses. A few lessons learned are offered to warn the reader of potential pitfalls. The conclusion summarizes the paper's key themes.

Literature Review

Many studies have found that individuals that pursue higher education, or take economics courses specifically, have higher levels of economic knowledge (Allgood, Walstad, & Seigfried, 2015; Blinder & Krueger, 2004; Caplan, 2007; Markow & Bagnaschi, 2005; Walstad & Rebeck, 2002). By all accounts, higher education successfully increases individual's understanding of

economics. In addition to this overarching literature, there is a complementary literature that analyzes the impact of various pedagogical innovations. These innovations run the gamut from in-class experiments to using pop songs to teach economic principles. Wooten et al. (2020) offer a survey of active teaching techniques that have been found to positively impact student learning.

To properly contextualize these literatures, it is helpful to consider ways in which economic knowledge is often evaluated. Most studies apply an instrument that emphasizes technical jargon and economic theory. The Council for Economic Education's (n.d.) *Test of Understanding of College Economics* (TUCE-4) is a useful example of such an instrument. This test includes questions on topics such as gross domestic product, opportunity cost, and elasticity. This approach to evaluating economic knowledge is reasonable and effective. If one does not know what a monopoly is, it is unlikely that they will understand ways in which monopolies exercise market power. As such, instruments such as TUCE-4 are best interpreted as measuring a baseline of economic understanding.

While not necessarily a critique of these literatures, there is a compelling set of studies that finds economic training *does not* improve economic knowledge. For example, Butorovic and Klein (2010 & 2011) find that political ideology is a more important determinant of a respondent's answer to questions than economic education. They find that economic training does not lead to a better understanding of the economy. In these two studies, Butorovic and Klein use politically charged language in their questions. By doing so, political sensibilities are provoked while the answers to the questions are objective in nature. As to why economic training would not increase economic knowledge, the authors conclude "We think that, for many respondents, economic understanding takes a vacation when economic enlightenment conflicts with establishment political sensibilities" (2010, p. 180).

Why would understanding take a vacation? Political sensibilities, or ideology, should not impact knowledge. The definition of unemployment is not conditional on whether the respondent is conservative or progressive. Caplan and Miller (2012) suggest a plausible answer to Butorovic and Klein's (2010 & 2011) perplexing finding. Caplan and Miller argue that while most economists believe positive beliefs inform normative ones, the causation may be reversed: "Education largely reflects positive-to-normative causation, while party and ideology largely reflect normative-to-positive causation" (p. 258). If Caplan and Miller are correct, there are profound crosscurrents in the classroom. Professors are approaching economic issues from the direction of positive-to-normative, while students vice versa. To the extent that Caplan and Miller's hypothesis is correct, we have one explanation for knowledge's vacation: when faced with questions of economic knowledge outside the classroom, a respondent's political ideology plays an important role in their perception of the world. But this explanation does not go far enough. Why would there be a vacation outside, but not inside, the classroom?

Gino, Norton, and Weber (2016) offer a compelling explanation for knowledge's manifestation in the classroom and vacation outside of it. Gino, Norton, and Weber survey studies in psychology and economics which conceptualize individuals as "motivated Bayesians." A motivated Bayesian is someone that wants to view themselves as moral and will take steps to protect this identity. Applying this insight to economics education, an individual may subconsciously suppress economic knowledge when a question, or scenario, affronts moral or political sensibilities. Thinking of individuals as motivated Bayesians is congruent with Akerlof and Kranton's (2000) insights regarding the value individuals place on group identity. We gain utility from group membership by aligning our decisions and ideas with those of the group. Deviation from group norms can thus lower our wellbeing.

Within the classroom, it is possible that Caplan and Miller's (2012) direction of causality and Gino, Norton, and Weber's (2016) motivated Bayesians are muted by grades. If a student disagrees with the premise or implications of a test question, to allow normative considerations to trump positive ones means that their grade may suffer. The benefit of adhering to moral convictions or political ideology is pitted against the cost of a lower grade. Additionally, when assessments do not use ethically charged language, the trade-off may not manifest itself. The problem is that outside of the classroom, grades do not carry weight and economic life is infused with political and moral considerations.

As educators, we may unintentionally exacerbate the disconnect between the classroom and the world outside if we overemphasize theory and objective knowledge in our teaching. Many popular economics textbooks explicitly warn, or deter, their audience from wading into the difficult waters of normative issues. A passage from Krugman and Wells (2021) epitomizes this warning: "Exactly how far policy makers should go in promoting equity over efficiency is a difficult question that goes to the heart of the political process. As such, it is not a question that economists can answer" (p. 16). Abel, Bernanke, and Croushore (2020) introduce the disconnect when they define positive analysis as "the economic consequences of a policy" and normative analysis as "whether a certain policy *should* be used" (p. 15). Most textbooks then proceed by defining important terms and constructing models of analysis. Often the intersection of economic models with ethical or moral dilemmas is relegated to sidebars, a signal that such considerations are not integral to the application of economics. What is especially fascinating about these two examples is that both Krugman and Bernanke have not sequestered their careers to the positive realm (Krugman in his popular *New York Times* column and Bernanke through his work at the Federal Reserve and now with the Brookings Institution). Both are prominent public intellectuals making claims about how the economy ought to look.

In-class discussion is one method by which the positive and normative sides of economics may be integrated. Additionally, discussion provides a means by which some of the weaknesses of traditional "chalk and talk" may be mitigated. Wooten et al. (2020) outlines some of the strengths of active learning and the weaknesses of more passive approaches. Because discussion requires student engagement, it has many of the advantages inherent to active learning. Unfortunately, students may not be aware of these advantages. Deslauriers et al. (2019) find that students learn more in classes that apply active learning techniques, but students feel like they have learned less. This disconnect between actual and perceived learning could be caused by many things. One, a great discussion can feel disjointed as compared to a seamless lecture. Following a discussion requires the student to exercise a high degree of discernment as they separate the intellectual wheat from the chaff. Two, without anchoring the discussion in course content, it is easy for it to veer from the course's learning objectives. Deslauriers et al. recommend strategically intervening to highlight what has been learned through active learning. This intervention can occur in many ways. In the next section, a method is outlined by which a free-flowing and organic conversation which elicits students' opinion on contentious issues can be linked to lecture. By doing so, the educator can maximize the strengths of active and passive learning, while also minimizing their inherent weaknesses.

A Guide to Linking Discussion to Lecture

In the following section, a recipe for designing a discussion that will elicit students' opinions in a way that complements objective learning outcomes will be presented. While the discussion may be far-reaching, ultimately, the educator needs to direct it towards knowledge

formation. In *Step 1: Composing a Conversation*, ways to create a discussion prompt that allows for the expression of personal beliefs is presented. *Step 2: Facilitating Discussion* offers suggestions on ways to moderate an engaging conversation. *Step 3: Linking the Discussion to Lecture* is the final stage of the process. In it the normative and positive elements of the topic at hand are woven together.

Step 1: Composing a Conversation

As one crafts an outline for a class session, it is helpful to keep in mind the goal of integrating positive and normative considerations. What is the topic at hand? What do you hope for students to have learned by the end of your time together? Because of the profound influence of economic conditions on daily life, there are many topics that can be readily viewed through the lens of moral convictions. A productive discussion elicits honest opinions from students, allows them to share their interpretation of an issue and how they might respond to the issue. Because of the personal nature of morality, students need to be free to express their opinions without the pressure to provide the "right" answer. This is not to say that anything goes. The academic rigor of a discussion comes from the demands it places on logic, communication, and one's ability to think on their feet.

A well-crafted discussion topic can be an effective response to a charge economic educators have been called to for years, namely, to improve in our craft. Elzinga's (2001) "Fifteen Theses on Classroom Teaching" provides a useful guide. A well-crafted topic meets many of his recommendations, specifically, *Thesis 4: Revise*, *Thesis 7: Student Preferences*, *Thesis 8: Thinking & Vocab*, and *Thesis 13: Teaching is Hard!* Because each discussion will be unique, they are constantly being revised. While discussion requires critical thinking, it does not necessarily require students to use proper economic jargon. This issue, and other weaknesses of discussion, will be addressed shortly. Lecture can be used to mitigate many of discussion's weaknesses. Finally, discussion is challenging for both students and professors.

When thinking about possible discussion topics, illuminating trade-offs can be useful place to start. Trade-offs are the bread and butter of economists; they can be used to further students' understanding of deeply entrenched social problems. There are a few categories of trade-offs that are especially interesting to explore. Sometimes these categories are mutually exclusive, though often they are not. The first category is equity versus efficiency. There are many economic issues in which equity may be at odds with efficiency. For example, the debate over the minimum wage is often waged on equity versus efficiency grounds. The second category is equity versus equity. With many issues, there are different conceptions of what is fair. For example, debate over tax policy often highlights different notions of what a fair tax code would look like. By posing alternative outcomes that can be interpreted as fair, the door is opened for students to express their personal priorities. The third category is areas of disagreement among economists. While economists agree on a great number of things, there are fascinating disagreements that are not likely to be resolved any time soon. For this category, the IGM Forum is an excellent resource for writing questions. The IGM Forum frequently surveys economic experts and publishes the results. These results reveal both the areas of consensus and disagreement within the discipline. They are also an informative benchmark to compare the class's response to. Quite often students are not of the same mind as economic experts.

In contrast to a traditional survey question, discussion prompts are meant to initiate considering the topic, rather than being the final word. A great discussion prompt is likely to be a bad survey question. A creative dose of ambiguity can facilitate more of a discussion than

precise language. You can explore why a prompt was interpretated one way versus another. This articulation is helpful as it pulls out some of the issue's nuance. When determining potential answers, it can be helpful to only allow a few. By forcing responses into pre-defined categories, you can put guardrails on the conversation, allowing for a more focused conversation. When it is appropriate, the use of an "Other" or "Uncertain" category can be helpful. Students will often come up with solutions or perspectives you have not considered.

The final piece to think about in composing a discussion topic is how it will be tied to lecture. Lecture can then be used to bring cohesion to a far-reaching conversation and direct students towards a deeper understanding of the topic. In many instances, lecture is an effective way to teach objective or technical content. Whether it is defining gross domestic product or the theory of the firm, students benefit from being introduced to the concept through a well-articulated and sequential presentation of the material. Lecture can be linked to normative issues such that in each step of the learning process students are integrating the positive and normative sides of economics.

Step 2: Facilitating Discussion

To initiate discussions, I often pose a question or statement before class begins. Students enter the classroom and are immediately prepped to think about an economic issue. I have found the software Poll Everywhere to be an excellent tool. Students can use their cell phone, or a laptop, to vote for their answer. The software then tallies and displays their responses in real time. There are many ways to tally responses, from anonymous to open-ended word clouds. One benefit of anonymous answers is that they mitigate a student's desire to be correct. The hope is that honesty is prioritized over being "right." By seeing the votes of other students, the extent of consensus or disagreement becomes apparent in real time. The classroom organically begins to reflect the pluralistic world outside of it. Peterson and McGoldrick (2009) argue that exposure to different opinions provides an effective means to nudge the learning of economics closer to its practice.

By the time class begins, there are enough responses to begin the discussion. There are many tactics that can be used to start the conversation. The popcorn method, which involves calling on students randomly, can be very effective. Many students would like to offer their answers but may be hesitant to do so in a large group. This method also negates the propensity of a few students dominating the conversation. It also holds all students accountable. Everyone has a chance to be called upon. Through randomly calling on students the hope is that the conversation exposes a wide swath of opinions.

Think-pair-share is another effective strategy. With think-pair-share, students discuss their answers in groups of two or three. Advantages of this technique is that everyone's voice is heard and some of the stress of speaking in a large group is mitigated. Helping students develop confidence is an intended byproduct of these small group discussions. Early in the semester, I often use think-pair-share to build report among students. By discussing ice breaker-type questions, such as your favorite movie, students become more comfortable with their peers and more willing to engage in more rigorous academic discussions as the semester proceeds. Regardless of where their educational journey takes them, students will benefit tremendously from being able to articulate their thoughts on complicated issues.

The discussion begins with students articulating their response to the prompt. Initially, this involves describing why one answer was chosen instead of another. By doing so they are better able to articulate their position. In speaking out loud students utilize the "production

effect," the memory advantage of speaking over other forms of interpreting information (Forrin & MacLeod, 2018). When students struggle to articulate their rationale, it can be helpful to identify what they understand, or are confident in. Offering your interpretation of their answer is another productive technique in this regard. Answers can be refined and then used as a segue to the next student. Typically, I try to have students speak for each of the responses offered. After a few students have spoken the conversation usually becomes self-sustaining. Students that have already spoken will want to offer rebuttals or clarifying points; students that have not spoken will want to get their position on the floor.

As you are facilitating the discussion it is important to have in mind the day's content. *Step 3: Linking the Discussion to Lecture* provides means to pursue this transition. Discussion and lecture ought to reinforce one another. By having an anchor point, even if it is not explicitly stated, the conversation can be organic and dynamic. As the professor, you can allow the conversation to flow freely while directing it towards its ultimate destination. In this way, economic knowledge can be integrated with other concerns of commercial life.

Step 3: Linking the Discussion to Lecture

The final step in the process is to link the discussion to the formation of economic concepts and principles. Sharing attitudes and opinions is important, and a vital step towards gaining true knowledge, but it needs to be linked to more objective learning outcomes to complete the process. This linkage can occur in a variety of ways. For example, Stowe (2010) finds that the use of one-minute papers can raise test scores. Stowe is just one example of studies that have found improved student knowledge from active learning. For the purposes of this paper, lecture will be used to facilitate students making the desired learning connections. Following the discussion of ways to link discussion to lecture are three examples of this process. The examples highlight the way in which subjective opinions can be merged with objective concepts and principles to facilitate deeper student knowledge.

Before the lecture begins, the conversation must come to an end. Ultimately, determining the appropriate amount of time to devote to any discussion topic is up to the instructor. To end a discussion quickly or abruptly may subvert the learning process. A dynamic learning environment ought to be treated as precious. Ending a conversation prematurely may unintentionally signal that students' opinions do not matter or that the topic does not merit more attention. Another challenge to consider is the conversation that never gets going. There will be times when you are not able to overcome intellectual inertia. In general, I plan on 10 to 15 minutes of discussion. This window of time mitigates the pressure to guide the conversation to its intended goal too quickly. Often the tangents that come up lead to very interesting places. It also sets parameters on the lecture. The structure and content of the lecture can reflect the time devoted to it.

When thinking about how a given discussion topic can be linked to a lecture, Clements's (2019) interpretation of economics' scientific elements is beneficial. By "scientific," Clements is referring to facets of economics such as testing hypotheses, gathering data, and its objective elements. In transitioning toward lecture, be mindful of times during the discussion when definitions, principles, or theory were referenced. During lecture you can identify when these elements were applied correctly or incorrectly.

The subjective, or normative, aspects of the discussion will be more challenging, but just as important to link to lecture. Clements (2019) argues that science drifts towards the subjective when it attempts to persuade. When a prompt elicits opinions of what ought to be, it has done

just that. In your lecture, you can cite conflicting priorities expressed during the discussion. If these disagreements fall into the category of equity versus efficiency, you can highlight the economic consequences of various suggestions. For equity versus equity, outlining the potential impacts of various suggestions helps students evaluate alternative outcomes. Finally, disagreement among economists is often a function of the complexity of what we study. Reasonable minds can apply similar methodologies to an issue and arrive at different conclusions. Subtle variations in assumptions, data considered, and context can make a large difference in one's conclusions. By highlighting such factors in your lecture, students get a glimpse into the practice of economics.

Three Examples of Linking Discussion to Lecture

The complicated relationship between economics, politics, and morality allows for a myriad of compelling topics to discuss. Whether it is a current event or an age-old debate, there is no shortage of compelling issues to bring into the classroom. In this section, three examples are provided. Within the Appendix, a list of more prompts, as well as students' and economic experts' opinions on them, is provided. Table 1 contains original prompts; Table 2 contains prompts adapted from the IGM Forum. Unfortunately, during the writing of this paper, access to all student responses was lost, and a more nuanced presentation of the data is not possible. The reader is advised to interpret the reported responses as an indicator of divergent opinions, rather than a precise estimate of undergraduates' beliefs. The prompts presented are from Principles of Microeconomics and Macroeconomics that typically have an enrollment of 30 to 40 students. Some of the questions have been used many times, others only once.

Example 1: Cryptocurrency and Money

The first prompt to consider, "Bitcoin (or cryptocurrency in general) is money" elicits a stark contrast between students' opinions on what constitutes money with economists' formal definition of the term. "Bitcoin" is used as a point of reference since it is the most well-known cryptocurrency. It is common for other cryptocurrencies to be referenced during the discussion. Discussing the nature of money before students have been introduced to its formal definition allows for several of its important properties to be discovered organically. This prompt was used during the spring and fall of 2022. It is interesting to see how sentiments have changed over the course of a few months. In the spring of 2022, 70% of students agreed and 30% disagreed with the prompt. In the fall, those numbers had nearly flipped: 23% agreed,a and 77% disagreed. It is worth noting that the discussion in the fall of 2022 occurred before the bankruptcy of FTX. Regardless of which semester is considered, there is a sharp divide between the opinion of students and what economists consider to be money. The goal of the lecture which follows the discussion is to outline economists' definition of money while highlighting ways in which cryptocurrencies do, and do not, meet this definition.

The discussion illuminates, in an informal manner, money's ability to act as a unit of account, medium of exchange, and store of value. While students will not be introduced to these terms until the lecture, they have an innate sense of them. Most students recognize cryptocurrency as a store of value. They are well aware of the fantastic appreciation this class of assets has experienced over recent years. Most have not considered it as a unit of account or medium of exchange. To highlight these roles of money, I ask whether an individual would agree to be paid in a cryptocurrency. As one might imagine, the response often reflects whether the individual believes cryptocurrencies will appreciate or depreciate in the future. Being paid in an

appreciating asset is attractive, while a depreciating one is not. The issue of receiving payment naturally complements considering cryptocurrencies as a medium of exchange. Recognizing that cryptocurrencies are not widely accepted is an important step in acknowledging that they are not money. Even if one agrees to be paid in a cryptocurrency, the issue of paying for goods and services remains. Finally, there is usually a group of students that offer arguments about how cryptocurrency ought to be considered money and how it will be in the future.

Lecture can be used to highlight ways in which students' opinions on cryptocurrency agree with, and are at odds with, the economic definition of money. After the discussion, the formal definition of money can be presented. In doing so, one can highlight the functions of money that students identified during discussion. For example, few students will say that a cryptocurrency can act as a "store of value" even though they recognized this property. The divide between cryptocurrency and money is largest when unit of account and medium of exchange are considered. Once introduced to the formal definition of unit of account, students begin to appreciate this important function of money and the challenges of using a volatile asset to perform it. The price volatility of cryptocurrencies would make comparisons across goods difficult and tenuous. With medium of exchange, the lack of widespread acceptance of cryptocurrency for payments negates its ability to serve this function. By using a provocative topic like cryptocurrency to introduce money, students develop a better understanding of what money is and its functions. This approach meets Denis's (2019) recommendation to use controversy in our teaching to make our courses more applicable.

The final piece of the process is to consider the prompt's more subjective elements. By this point in the lecture, there is consensus around cryptocurrencies not currently fulfilling the functions of money. But something interesting happens along the way: students start to understand money as a social construct. They understand that a cryptocurrency could become money, even if it is not in the moment. At this point in the lecture, I often re-open the discussion for thoughts on the pros and cons of decentralized finance. Should cryptocurrencies become money? Because students now understand the functions of money, they can articulate a more nuanced and informed opinion on the potential advantages and disadvantages of cryptocurrencies and decentralized finance in general.

Example 2: Economic Progress

The second example is based on the prompt, "The U.S. economy is better off today than it was in 2020." Over the two semesters this prompt has been used, on average 66% agree and 34% disagree. This prompt is discussed during the first weeks of the semester. Prior to the discussion, students have been introduced to the basics of gross domestic product: what it is, how is it measured, and so on. They have also been tasked with gathering data on U.S. GDP and total employment. While I find it useful to reference data during the discussion, this step is not necessary to achieve the discussion's learning objectives. There has not been an in-class consideration of the merits and limitations of GDP-based measures as a proxy for economic well-being. Part of the discussion's goal is for students to discover these in an organic manner.

During the discussion, many interesting interpretations of "better off" are offered. Those that agree with the prompt often refer to the increase in GDP and total employment since 2020. Both are laudable macroeconomic trends. As 2020 is the point of comparison, having escaped the peak of the COVID-19 pandemic is also mentioned. In subsequent years, the year of reference will change, and this will hopefully not be a meaningful factor to consider. The disagree camp has plenty of unfavorable macroeconomic trends to substantiate their side.

Inflation is typically one of the first negative trends mentioned. As students, they are especially attuned to increases in the price of necessities like food, gas, and rent. Distribution concerns and economic inequality are also mentioned. Students recognize that some people may be doing much better, and others might be worse off. This is often highlighted through personal anecdotes. It is not uncommon for a student, or someone they know, to have fallen on hard times.

Each of these responses, and others, can be leveraged to help students develop a deeper understanding of GDP as a measure of economic well-being. As the discussion ends and the lecture begins, you can reiterate what GDP measures. By doing so, a case can be made that the economy is better off. Increasing GDP represents things like going out to eat, buying a new car, or any number of other things that make our lives a little bit more fulfilling, even more so when total employment has increased. The claims of the disagree camp can be used to motivate the many ways GDP is manipulated to become a more accurate representation of economic performance. For example, since the students have not been formally introduced to inflation, this concern can be used to teach the concept of real GDP. This lecture is more effective because the discussion has primed students to consider ways inflation can distort GDP. Distributional concerns can start to be addressed with outlining GDP per capita. I usually note that creating an average is only the first step in understanding the distribution of income. Personal experiences can be used to highlight a fundamental challenge of studying macroeconomics. When a nation's economy grows, it does not mean that everyone, nor every industry, is doing better. It simply means that the size of the economy has increased. There is quite a distance between our lived experience and macroeconomic conditions.

The value of students taking the lead in motivating the importance of economic statistics such as real GDP and GDP per capita is immense. As Elzinga (2001) and many others have argued, empowering students to direct the course has tangible benefits. It democratizes the classroom in a way that empowers students. And, as this is through an active learning process, students are more likely to remember what they have learned. As the lecture on how GDP can be modified to consider the concerns raised by students winds to an end, a deep question remains: do GDP-based measures represent well-being? There are many ways to respond to this question. Many educators turn to measures such as the UN's *Human Development Index* to show how economic considerations can be complemented with other dimensions of well-being. Personally, I highlight the elements of GDP that most would consider raising well-being, a meal with friends, a new house, or a life-saving medical procedure. I then highlight elements of GDP that have a more contentious relationship with well-being, from spending on frivolous goods to things that are personally destructive. Ultimately, both in class and in life, students must determine for themselves the relative importance of material well-being in their lives.

Example 3: The Minimum Wage

For the purposes of integrating positive and normative concerns, the minimum wage provides an excellent context. The prompt applied to begin the discussion is, "Raising the minimum wage in state X (the university's location) would make it noticeably harder for low-skill workers to find employment." The prompt is based upon the IGM Forum's, (2013) "Raising the federal minimum wage to $9 per hour would make it noticeably harder for low-skilled workers to find employment." The IGM Forum's survey of expert economists finds 34% agree, 24% are uncertain, and 32% disagree with the statement. Over the four years the prompt has been used in the author's courses, the average responses are 71% agree, 16% uncertain, and 15% disagree.

The discussion occurs after students have been introduced to the standard economic argument that raising the minimum wage leads to unemployment. This argument hinges on the trade-off firms face between wages and the number of employees they can hire. Among students that agree with the prompt, this trade-off is often mentioned. Within the uncertain category, students acknowledge the complexity of the economy. Sometimes it is hard to predict the specific outcome of a policy intervention. Another facet of the prompt that is highlighted is the extent to which the minimum wage would increase. Acute students recognize the prompt is silent on this important detail. The amount of the increase matters, a small increase may not have an impact while a larger one would. Within the disagree camp, students often struggle to articulate their rationale. Many sidestep the prompt and argue that paying a "fair" or "living wage" is something firms ought to do. While this is a valid sentiment, it does not directly speak to the minimum wage's impact on employment. As such, I often refer to it after a lecture on why economists disagree on the impact of the minimum wage.

After the discussion has run its course, I share economic experts' opinions on the prompt. In doing so, lecture can highlight interesting aspects of the debate over the minimum wage. First, I note that economic experts were asked about the federal minimum wage while students were asked about a particular state. This is an opportunity to discuss the fact that states may or may not follow the federal minimum wage. Once the policy landscape has been explored, the question remains: why is there such disagreement between economic experts and students? At this point in lecture, I introduce what I refer to as "complicating factors." The first is that firms may respond to higher wages in many ways. Firms' profits may decrease, they may try to pass on higher costs to consumers or may seek to replace labor with capital. The extent to which any of these occurs has implications for the impact of the minimum wage on employment. A second complicating factor is that by raising the minimum wage some workers are better off. As a result of higher wages, these workers are likely to increase their spending in the economy. As such, it is possible that the adverse employment impacts initiated by a higher minimum wage are offset, to some degree, by increased spending in some sectors of the economy. The disagreement between economists is a function of how these, and other, complicating factors play out in local and national labor markets.

After the lecture touches on these points of contention among economists, students are better able to understand the role of positive and normative considerations in the debate over the minimum wage. This understanding also extends to the role of labor markets in a market-based economy. Understanding the mechanics by which the minimum wage may impact a labor market does not necessarily alter the moral dimensions of the debate. Rather, it provides pragmatic nuance to them. The educator may wish to return to these considerations after the lecture. Paying workers a "fair" or "living wage" poses a quintessential trade-off between equity and efficiency. The debate over the minimum wage also exposes a trade-off between equity and equity. Opponents of raising the minimum wage often argue that to limit the number of jobs is unfair to those seeking employment. Policies that lead to unemployment are unfair, just as it is reasonable to argue it is unjust that those that work live in poverty. As with the other examples, by explicating the positive alongside the normative, students are able to develop a deeper understanding of labor markets.

Lessons Learned

Over the years of applying these techniques I have learned many things. The first is related to the extent to which agreement or disagreement is emphasized. In general, I try to

highlight areas of agreement. Disagreement is important, and at the heart of the exercise, but over emphasizing points of contention runs the risk of putting students on the defensive and closing them off to the opinion of others. McRaney (2022) explores how a defensive posture can minimize a person's openness to new ideas. Nothing derails a conversation faster than frustration and anger.

As the moderator there will be times when it falls upon you to represent counter opinions. This may be due to students being unfamiliar with all aspects of the issue or those with unpopular opinions being hesitant to share them. The latter is especially true with more contentious issues. Because of the professor's unique position in the course, it is their responsibility to illuminate all reasonable sides of the issue. By doing so, you can ensure that students are not learning economics in an intellectual echo chamber.

Passive students and students that simply offer "I don't know" pose a significant challenge. My goal is to overcome passivity with great discussion prompts, issues that cannot help but draw people in. That being said, students may not engage in the conversation for a number of reasons, from personal issues outside the classroom to genuine apathy over the content. I try to walk a fine line with passive students. Early in the semester I try to playfully coax them into conversations. A little bit of humor, playing the devil's advocate, etc. are great tactics to overcome a hesitant person. It is important that you help students build confidence. For many, discussing economic concepts in front of others does not come naturally. When soft tactics are not effective, I do not press students too much. If a student refuses to participate throughout the semester, their participation grade will reflect this. If the situation is a one off, I do not put too much weight on the encounter. Everyone has an off day now and again.

Finally, as you write your questions to discuss, and guide the class through them, tread lightly over personal matters. I have been surprised by how much students are willing to share about their lives. On one hand this is great; it is encouraging that students can connect class concepts to their life. Conversely, economic scarcity and insecurity can be painful and traumatic. It is not appropriate to put a student on display that has struggled through economic adversity.

Conclusion

In this paper, a way to use discussion to integrate questions of virtue and ought with the technical side of economics has been presented. While this approach is valuable, it is not without its weaknesses. It is not a one size fits all approach. An instructor's personality, pedagogical preferences, and number of students in a class directly bear on its effectiveness. The reader is advised to consider each of these prior to experimenting with the method.

Before offering final thoughts, the reader is reminded that the method has not been rigorously evaluated. While a robust literature testifies to its effectiveness, a more precise understanding of its impact on student learning is an obvious next step. Anecdotally, it appears that minority students and females tend to benefit the most from this exercise. Over the course of the semester, many students become more confident in articulating their thoughts on complex economic matters. In subsequent work, evaluating the technique's impact on learning, both across the entire class and for different types of students will be pursued.

Giving students the space to consider questions of virtue, politics, and morality in economics classes is a worthwhile endeavor. Discourse and debate that highlights the ethical, moral, and political side of economics is an important complement to economics' technical side. It allows students to develop a fuller conception of the discipline. Economics touches on the full scope of commercial life, and students ought to be given the opportunity to do so in their classes.

Asking students to ignore their moral compass when considering economic issues is a disservice. At the same time, one of the greatest insights economic thinking provides is the ability to recognize trade-offs and posit unintended consequences. To equip students with this skill, economic jargon, principles, and theory must also be taught. They allow us to understand the complexity of the world. Teaching the ethical and technical in an integrated manner is a step towards putting students on the path to true economic knowledge.

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Appendix

Table 1: Original Discussion Prompts

Prompt	Number of Semesters	Student Response
Maximizing profit is a company's top priority.	Six	55% Agree 45% Disagree
International trade is a threat to the U.S. economy.	Six	15% Agree 85% Disagree
Different unemployment rates are an indication of discrimination in labor markets.	Two	55% Agree 45% Disagree
Bitcoin (or cryptocurrency in general) is money.*	Spring 2022	70% Agree 30% Disagree
Bitcoin (or cryptocurrency in general) money.*	Fall 2022	23% Agree 77% Disagree
The U.S. economy is better off today than it was in 2020.	Two	66% Agree 34% Disagree
Housing has become too expensive in the United States, it cannot stay this expensive. We are in the midst of a housing bubble.	Two	76% Agree 24% Disagree

Note: Responses are an average across the semesters the prompt has been utilized. * The cryptocurrency prompt is presented twice to illustrate the dramatic change in students' responses.

Table 2: Prompts from IGM Forum

Prompt	Number of Semesters	Student Response	Economic Experts
Raising the minimum wage in state X (the university's location) would make it noticeably harder for low-skill workers to find employment (IGM Forum, 2013).	Eight	71% Agree 16% Uncertain 15% Disagree	34% Agree 24% Uncertain 32% Disagree
A tax on soda would be an effective way to combat obesity (IGM Forum, 2012).	Four	44% Agree 56% Disagree	45% Agree 21% Uncertain 34% Disagree

Note: Each prompt is based upon the referenced IGM Forum survey question. Students' responses are an average across the years the prompt has been utilized.