**One-shot Inequality, Gini, and Redistribution via Microsoft Excel**

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**Abstract**

This paper explains how to use a macro-enabled Excel workbook, *Gini.xlsm*, to teach basic concepts about income inequality as a standalone, one-time class at the undergraduate level. The material unfolds in a series of steps that highlight the benefits of social cooperation and enable students to explore varying degrees of redistribution. The Gini Coefficient is explained with dynamic charts that update as the student makes changes. The Excel workbook contains 13 questions and this paper provides answers. This presentation of the material was inspired by Nozick’s *Anarchy, State, and Utopia* (relevant passages are included in the Excel workbook) and this paper contains suggestions for supplemental readings and additional ideas for class discussion. Download the freely-available Excel workbook at [tiny.cc/giniexcel](http://tiny.cc/giniexcel).

JEL Codes: A10, A20, D63, I3

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1.0 Introduction

This paper is taken from a book in progress that is a collection of short, single-use lessons. These one-shot, individual modules are delivered via Microsoft Excel workbooks, which helps students improve their spreadsheet skills while learning economics. Each Excel workbook is standalone and has everything the student needs. The teacher can distribute the Excel workbook before or during class and the work can be done as a homework assignment or in class.

The application here revolves around income inequality. It is designed to get at the core idea underlying discussions of inequality: social cooperation creates a surplus, which then requires mechanisms to distribute the output. It makes clear how the distribution of income is typically displayed and how the Gini coefficient is computed and interpreted.

As stated in the Excel workbook, Nozick (1974) was the inspiration for this application. The pedagogical strategy is to create a concrete, visual presentation of the abstract, theoretical description in Nozick’s text (described in more detail in Section 5.0). Crucially, the student is invited to click buttons, make changes to cells, and answer questions. This active engagement drives deep learning (Barreto, 2015).

2.0 Accessing the Excel Workbook and Brief Overview

Download the open-access, freely-available *Gini.xlsm* Excel workbook from [tiny.cc/giniexcel](http://tiny.cc/giniexcel) which is a URL shortcut to the file located at [academic.depauw.edu/~hbarreto/working](http://academic.depauw.edu/~hbarreto/working/index.html). Either link or the Excel workbook can be emailed, placed in a course management system, or otherwise distributed to students.

The open-access Creative Commons license CC BY SA ([creativecommons.org/licenses/by-sa/2.0/](https://creativecommons.org/licenses/by-sa/2.0/)) means you can remix, transform, and build upon the *Gini.xlsm* workbook as you wish. You can add sheets with other readings; copy the *SocialCooperation* sheet and set new tax/transfer rates; modify the text; and completely cut or replace questions you do not like. Keep the *Intro* sheet to fulfill the attribution requirement when you share the file.

Opening the file in Excel displays the *Intro* sheet. It explains that macros must be enabled and invites the user to proceed to the *NozickText* sheet. Along with an excerpt, this sheet provides highlights, additional information, and links. The third sheet in the Excel file, *SocialCooperation*, contains an implementation of Nozick’s model. The student is asked to interact with this sheet by entering formulas, changing cells, and writing responses in text boxes.

If used in class, consider the following:

1. The green progress bar in the first row is a convenient way to keep the class together. Tell students not to proceed (by clicking the *Next Screen* button) until given the go-ahead signal.
2. Announce the screen number (there are six) to make sure everyone is in the same place.
3. Give students time to play around and work with the material. Walk around to answer specific questions or help struggling students.
4. Vary the time allowed for each of the six screens: 1, 2, and 3 are much easier than 4, 5, and 6.
5. Give students a chance to get the answer to a question on their own, then invite or call on students to suggest an answer. Give the correct answer, provided below, before proceeding.

The *Next Screen* buttons are merely a navigational aid. You can scroll horizontally (and vertically) from beginning to end at any time.

3.0 Questions in *Gini.xlsm* workbook and Suggested Answers

This section simply repeats each question (numbered in the *SocialCooperation* sheet) and provides a suggested answer. Comments below an answer provide teaching recommendations or additional detail. The questions are designed to maintain student engagement and are organized as steps in a logical argument. Further elaboration on content and ideas is provided in sections 4.0 and 5.0 below.

Getting the timing right is challenging. Do not go too slowly at first because the material and questions definitely increase in degree of difficulty and you need time at the end to emphasize lessons and takeaways.

*Screen 1 – A Model of Social Cooperation – two questions:*

Q1: Enter a formula in the cell below to determine how much the richest person of these 10 people made:

A1: Using Excel’s MAX function, the formula is: =MAX(B16:B25)

Q2: Press F9 a few times, if everyone's I = 10, then why does the amount and identity of the richest person change when you press F9?

A2: Excel’s RAND function is recalculating formulas in the spreadsheet each time F9 is pressed. This represents new individual productivity (by genetic lottery and resources available) and, therefore, each person’s output changes.

Comment: These first two questions are quite simple, but make sure everyone is comfortable with the Excel file and is on task before continuing.

*Screen 2 – The Effects of Social Cooperation – three questions:*

Q3: What letter did Nozick use to represent society’s output?

A3: T (presumably for Total, but it could also work for Together).

Comment: This is a reading comprehension question of the material in the *NozickText* sheet.

Q4: How much does productivity actually increase when humans cooperate and form societies?

A4: No one knows the answer to this question and it must vary across time and space, but social cooperation can be thought of as generating a multiple of individual output. It is undoubtedly much, much higher than 20 times individual productivity in rich countries today and explains agglomerations in cities.

Comment: This open-ended question should elicit discussion.

Q5: Why does social cooperation *create* the problem of distributive justice?

A5: Because, by definition, a set of truly isolated, independent individuals implies that there is no group (or society), so there are neither responsibilities to nor claims from the group. It is only when individuals interact with each other and form groups that we are faced with the question of “who gets what?”

Comment: Group formation is discussed in further detail in the following section.

*Screen 3 – Options for Distributing the Output – one question:*

Q6: Redistributing our way to the Egalitarian distribution might cause a problem. Describe the problem as specifically and concretely as you can.

A6: Individuals might reduce their work effort because there is no incentive to work harder than others. If you make the most output you only receive the average output and if you make the least you are guaranteed the average output so why spend any effort at all? Who would invest time and money, for example, in medical school if doctors make the same as everyone else?

Comment: It is unlikely that a student will notice or make the connection, but the problem here is the presence of an externality since individuals do not reap the full benefit of their activity. The result will be too little effort and output falls.

*Screen 4 – Modeling the Feedback Mechanism – two questions:*

Q7: Would you then expect a large or small decrease in effort from an increase in redistribution?

A7: A large decrease because people would resent giving to newly arrived immigrants who are perceived as “foreigners” and not as members of the group. We might also expect efforts to prevent newcomers from receiving transfers.

Comment: This question is a bit abrupt. It is designed to focus attention on group formation and social cohesion. It could be followed up with questions on who is counted as part of the group and connects with themes from Q5.

Notice that between Q7 and Q8 (see cell FH12) there is a nifty Excel trick to embed a formula into the displayed text via the concatenation operator, &. Pointing this out and showing students how it works provides a nice break from the material. To provide another example, invite students to enter this formula in a blank cell: =”This is a random number ”&RAND()&”.” Pressing F9 repeatedly shows how the random number is embedded in the sentence.

Q8: What controls the position and shape of the blue curve, called the Lorenz Curve?

A8: The ten random numbers that are displayed in cells FB16:FB25. Sometimes they are more equal, then the graph on the left has bars with more even heights so the blue curve is closer to the red diagonal and the Gini is closer to zero. Other times, the bars in the Initial Distribution graph are much more uneven, short on the left and tall on the right. Then the Lorenz Curve deviates far from the red diagonal and the Gini approaches 1.0.

Comment: This question merits emphasis and extra time. Depending on the class level, you may want to explain how the Lorenz Curve is created and how the Gini coefficient is computed. Connecting the left and right graphs to each other while stressing the difference in the axes is a good approach. Emphasizing that we are sorting and cumulating (using the middle graph) is also good practice. Repeatedly press F9 to recalculate the sheet. It is easy to see that more equal distributions produce bars with more equal heights and a Lorenz Curve closer to the red line. For another visually engaging tool, see [www.econgraphs.org/core-econ/1/gini](http://www.econgraphs.org/core-econ/1/gini).

*Screen 5 – Modeling Redistribution – three questions:*

The fifth screen is busy and the three questions are challenging so additional time is required. Depending on your audience and teaching goals, you may want to point out the use of Excel’s VLOOKUP function in cells HB16:HB25 to order income from the smallest (1) to largest (10) value.

Notice that the initial tax and transfer scheme is simplistic and unrealistic in that only the poor get transfers, however, the tax scheme is progressive. If the sum of the transfers in cell HG19 is greater than tax revenues in cell HE19, then the government would be running a deficit.

Q9: What do the blue and green Lorenz Curves represent?

A9: Blue is before and green is after tax and transfer, also known as redistribution.

Comment: This is an easy question, but take the time to repeat the lessons from Q8. There are strong visuals to convey how the more equal distribution (green) has more horizontally equal bars so the Lorenz Curve is closer to the red diagonal and the Gini is smaller.

Q10: The initial tax & transfer scheme (click Reset TT, if needed) is probably not going to be supported by the richest person. Why not?

A10: The 30% tax rate on the richest person is actually lowering their income by so much that they are often no longer richest and can actually fall quite far down in the ranking.

Comment: This is a difficult, subtle question. The student has to look quite carefully at the display and compare the ranks in column HJ to columns HA. Creating a test in a cell with the formula =IF(HJ18=10,1,0) can be used to see if the richest person maintains their position after taxes and transfers. Monte Carlo simulation (not included on the sheet) shows that roughly 75% of the time, the richest person loses their top ranking. Furthermore, others in the distribution can also see their rankings change after taxes and transfers.

If time permits (or perhaps for an extra-credit or homework question), ask students to implement an egalitarian distribution. In principle, we would tax everyone 100%, but the Excel sheet blows up because the RANK.AVG function in column HJ is 5.5 for everyone. The egalitarian distribution can be closely approximated by taxing everyone 99.99% (set cells HD9:HD18 to 99.99%), then giving everyone 10% (cells HF9:HF18) of the total output. Notice how the bars are almost exactly horizontal, the green Lorenz Curve is on top of the red diagonal, and the Gini in cell HK35 displays zero (although it is not exactly zero).

Be sure to click the *Reset TT* button when you finish exploring redistribution schemes.

Q11: We are not done with our model. Why not? What do we have to do next?

A11: We have to model how redistribution affects effort.

Comment: This is a repeat of Q6. Once again, we must confront the reaction to the tax and transfer scheme. The idea that the agents will not behave the same way when taxes and transfers are introduced (an application of the Lucas critique) is fundamental.

*Screen 6 – How Does Redistribution Affect Effort? – two questions:*

Q12: Why does the decrease in effort after taxes reduce the Gini coefficient?

A12: Because the top five workers reduce their effort and, therefore, income when taxes are applied; while the bottom five workers pay no tax so their income remains the same. This levels the income distribution, which is clearly visible in the heights of the blue and orange bars in the Initial & After E chart—the lower heights of the top five orange bars means the income distribution is more equal. Thus, the orange Lorenz Curve is closer to the red diagonal line and the Gini coefficient falls compared to the initial (blue) distribution.

Q13: So, what's the trade-off, according to this model? To get lower inequality, what do we have to give up? Why?

A13: If we use taxes and transfers to redistribute, those who are taxed will reduce their effort and output will fall. We give up output when we distribute it more equally. That is the heart of the debate in the economics of inequality—we want both equal *and* high incomes, but we are forced to choose between these two goals. A serious complication is that we do not know by how much effort and, thus, output fall in response to taxation.

Comment: See the discussion below on Gini and the level of income for more on this question.

4.0 Content Issues and Ideas

This section presents two topics that deserve explicit mention and consideration in teaching this material: the importance of group formation and the fact that the level of income does not affect the Gini statistic.

*4.1 Group Formation*

Economists are not sociologists so perhaps it is natural that economists largely take for granted the concept of society. However, Nozick’s thought experiment of ten Robinson Crusoes on ten separate islands forces us to deal with the issues created when groups of people bond and form a society.

Milton Friedman’s original Crusoe example, cited by Nozick, focuses on whether the rich should share or be forced to share:

Suppose there are four Robinson Crusoes, independently marooned on four islands in the same neighborhood. One happened to land on a large and fruitful island which enables him to live easily and well. The others happened to land on tiny and rather barren islands from which they can barely scratch a living. One day, they discover the existence of one another. Of course, it would be generous of the Crusoe on the large island if he invited the others to join him and share its wealth. But suppose he does not. Would the other three be justified in joining forces and compelling him to share his wealth with them? Many a reader will be tempted to say yes. But before yielding to this temptation, consider precisely the same situation in different guise. Suppose you and three friends are walking along the street and you happen to spy and retrieve a $20 bill on the pavement. It would be generous of you, of course, if you were to divide it equally with them, or at least blow them to a drink. But suppose you do not. Would the other three be justified in joining forces and compelling you to share the $20 equally with them? I suspect most readers will be tempted to say no. And on further reflection, they may even conclude that the generous course of action is not itself clearly the "right" one. Are we prepared to urge on ourselves or our fellows that any person whose wealth exceeds the average of all persons in the world should immediately dispose of the excess by distributing it equally to all the rest of the world's inhabitants? We may admire and praise such action when undertaken by a few. But a universal "potlatch" would make a civilized world impossible. Friedman (1962, p. 165).

While Friedman completely ignores whether the Crusoes are members of the same group, Nozick’s version highlights that it matters if the Crusoes are independent or part of a collective. Our moral intuition on sharing depends on the degree of affiliation among people and leads us down a complicated path with deep philosophical and emotional issues at play.

Henri Tajfel and his collaborators in the 1970s developed what we now call “minimal-group studies.” In an attempt strip away all causes of intergroup conflict (e.g., stereotypes, resource differences), they discovered that *social identity* was fundamental. They arbitrarily assigned people to the most trivial of groups (Klee versus Kandinsky fans or even just A and B groups) and this immediately produced different treatment of in- versus out-group members. “The mere fact of being categorized as part of one group rather than another was enough to link that group membership to a person’s sense of self.” (Bavel and Packer 2021, pp. 17-18).

Thus, if the islands are part of the same country, that will influence our view of the need to share. Making students aware of the role of social identity and how it influences our view of inequality will help them think more critically and deeply. Questions 5 and 7 would be a natural place to introduce the issue of group formation and social identity.

For a spine-tingling demonstration of the powerful effects of social identity, see PBS Frontline’s *A Class Divided*, freely available at [www.pbs.org/wgbh/frontline/film/class-divided](http://www.pbs.org/wgbh/frontline/film/class-divided). To pique your (and a student’s) curiosity, an Iowa schoolteacher performed a remarkable classroom experiment in the wake of the murder of Martin Luther King, Jr. This video could be assigned before class and used to discuss social identity. You can count on students who watch it wanting to talk about it.

*4.2 Gini and the Level of Income*

Economists are familiar with the Gini coefficient and its deficiencies. Some reject its use (e.g., Piketty, 2014, p. 265 and Kindle location 4531, “Problems of Synthetic Indices”) and there are many alternatives. But the Gini remains the most common measure of inequality. Beyond the usual problems bedeviling any attempt at using a single, summary statistic to convey facts about an entire distribution, there is one especially important point to keep in mind about the Gini coefficient: it does not factor in the level of income. This is worth explaining and emphasizing.

Consider Figure 1, a screenshot of the spreadsheet with top-left cell JD94. The bars in the leftmost chart are more level after redistribution, but they are also much lower for the highest income earners (After TET is income after redistribution). This translates to a less-curved, but also lowered, cumulative income graph (in the middle of Figure 1). The Lorenz Curve and Gini do not incorporate this decrease in total output because they are based on the cumulative percentage share of income, not the level of income.

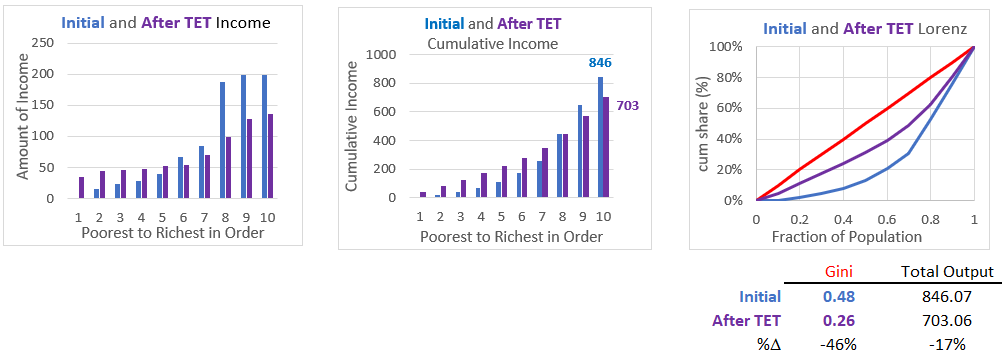


Figure 1: Comparing Initial and After Redistribution Income

Source: *Gini.xlsm*: *Social Cooperation*: Top-left cell JD94

This simple spreadsheet can be used, therefore, to convey that the Lorenz Curve and Gini coefficient ignore the level of income. Students can easily see that redistribution can lessen inequality as measured by the Lorenz Curve and Gini coefficient, but the cost of redistribution in terms of lower output is not captured by the rightmost graph and its associated Gini coefficient.

One striking way to show this is by increasing the individual or social productivity parameters. Change cell B7 to 1000 or more. Scroll to any of the charts to see that the *y* axes of the income and cumulative incomes graphs change, but absolutely nothing happens to the Lorenz Curve and Gini coefficient. This is because they are based on the cumulative share (%) of income so the level does not matter at all.

Unlike the earlier improvement in the Gini (Screen 5), where total output was held constant because effort was unaffected by taxes, the lower inequality in Figure 1 is difficult to evaluate. We have no way of balancing inequality gains and output losses. Those of a certain age will recall a thin paperback that dealt with this exact issue: *Equality and Efficiency: The Big Trade-off* by Arthur Okun. It has been reissued as a Brookings Classic with a forward by Larry Summers (Okun, 2015).

5.0 Extensions and Supplementary Readings

This section is geared for someone who might want to jump into this topic but who does not have much background to draw on. Below are resources, context, and teaching ideas to give a running start on teaching inequality with the *Gini.xlsm* workbook in a meaningful way. This section may also be helpful if you are teaching a course on inequality and wish to extend coverage over several class periods or perhaps for further reading for particularly interested students. I have had success assigning and discussing excerpts from the classic texts by Nozick and his intellectual sparring partner, John Rawls.

First published in 1974, Nozick’s *Anarchy, State, and Utopia* was an immediate commercial and intellectual triumph. It became the opposing force to the dominant ideas of Rawls’ famous *A Theory of Justice*, which gained wide acclaim when it debuted in 1971 and quickly became the standard, progressive case for redistribution.

While Rawls relied on justice as fairness, the veil of ignorance, and the difference principle to argue for government intervention to address unequal distribution of income, wealth, and opportunity, Nozick pushed back with a free-market, libertarian vision.

It makes sense to read Rawls first, since Nozick explicitly presents counterarguments to the Rawlsian worldview. Rawls lays out the basic framework in his first chapter, and the first four sections can be covered in one class. Sections 11, 12, and 13 in Chapter 2, followed by Section 26 in Chapter 3 capture the heart of the difference principle and could be assigned for a second day on Rawls.

In a nutshell, Rawls argues that if we were behind a veil of ignorance and had no idea if we would be born to a rich or poor family, born a particular race or ethnic group or sexual orientation anywhere in the world, or any other of a myriad of characteristics that influence our life’s path, we would find setting a floor below which no one could fall especially attractive—this would protect us from a disastrous existence. Rawls uses a simple matrix (reproduced as Table 1) to convey the idea.

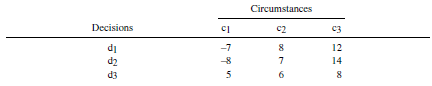


Table 1: Gain-and-loss possibilities

Source: Rawls (1971, p. 133)

The numbers represent monetary amounts. If you chose d2 and happened to be lucky enough to be in circumstance c3, you would enjoy the maximum possible outcome. However, you would be terribly unhappy if your circumstance was c1. You do not know the probabilities of each circumstance and the negative numbers represent a life that could be truly devastating for you and your descendants. My students immediately offer slavery as an example. Rawls says the best choice in the original position (behind the veil of ignorance) is to maximize the worst possible outcome (d3 in Table 1). In other words, before you know if you are rich or smart or attractive, you would support rules that protect those who are not gifted just in case you end up at the bottom. Hence, redistribution is an optimizing strategy. Furthermore, viewing society from the original position leads to the difference principle—social and economic inequality is justified only if it helps the least-advantaged.

An excellent source for background and further reading on these arguments can be found in the Stanford Encyclopedia of Philosophy’s (SEP) entry on Rawls, [plato.stanford.edu/entries/rawls](https://plato.stanford.edu/entries/rawls/). The *Gini.xlsm* workbook includes a link (at the bottom of the *NozickText* sheet) for Nozick’s entry in the SEP that is also quite useful as a secondary source. Perhaps the most esteemed encyclopedia in Western philosophy, the SEP also has excellent material on Smith, Marx, and many others.

Having read Rawls, Nozick’s direct confrontation (in Section 2, Rawls’ Theory, in Chapter 7, Distributive Justice) makes much more sense. Today’s students might be surprised to learn that they were actually friends and Nozick (1974, p. 183) praised *A Theory of Justice* as “a powerful, deep, subtle, wide-ranging, systematic work in political and moral philosophy which has not seen its like since the writings of John Stuart Mill, if then.”

But then the gloves come off and Nozick attacks Rawls on a variety of fronts. His most fundamental critique is that we cannot examine a distribution of income (or any other variable) at a point in time and declare it just or unjust. Nozick says we have to know how we got there. His famous Wilt Chamberlain example argues that if we start from a perfect (whatever that means) distribution of income and then individuals decide they want to pay Wilt a quarter to see him play,[[1]](#footnote-1) the resulting inequality is acceptable because it was produced by voluntary exchange. In addition, Nozick says, the state must repeatedly intervene to cancel out deviations in the perfect distribution caused by many such utility-maximizing exchanges.

Nozick’s argument in essence boils down to the claim that a progressive’s social justice requires too great an infringement on an individual’s freedom and liberty. This is used to argue for a minimalist state and it is not surprising that Nozick cites Milton Friedman, Friedrich Hayek, and others in the free-market pantheon. Libertarians will be surprised to learn, however, that Nozick (1974, p. 162) supports a principle of rectification.

How far back must one go in wiping clean the historical slate of injustices? What may victims of injustice permissibly do in order to rectify the injustices being done to them, including the many injustices done by persons acting through their government? I do not know of a thorough or theoretically sophisticated treatment of such issues.2

2 See, however, the useful book by Boris Bitcker, *The Case for Black Reparations* (New York: Random House, 1973).

And the surprises keep coming: Rawls was not a socialist and Nozick had an uneasy relationship with libertarianism. In *The Examined Life*, we read, “The libertarian position I once propounded now seems to me seriously inadequate, in part because it did not fully knit the humane considerations and joint cooperative activities it left room for more closely into its fabric.” (Nozick, 1989, pp. 286-287). In other words, social cohesion matters—repeated application of voluntary exchange and inheritance in the absence of any taxes and transfers produces extreme inequality and revolution. In his later years, Nozick returned to the fold, but he never made the case for individual liberty and freedom as aggressively as he did in *Anarchy, State, and Utopia*.

While *Gini.xlsm* can be used standalone to provide a framework for how economists understand the distribution of income and measures of inequality such as the Gini coefficient, adding the ideas of Rawls and Nozick provides spice and elicits student response. These are really big ideas and grappling with them enlivens the classroom.

Two other, more technical, extensions that can be implemented are adding another feedback mechanism and making the income data-generating process more realistic. On the former, an advanced student could work on making effort depend on transfers. This could be modeled after the tax feedback mechanism or done in a completely different way.

The second technical extension improves the random income values. Instead of RAND() which is a uniform distribution and not at all how income is distributed, we could use a log normal distribution. This approach is much more realistic and often produces one or two very high earners. To see how this would work, unhide the *SocialCooperationLOGNORM* sheet, which is a hidden sheet in the *Gini.xlsm* workbook. This sheet has a textbox (which can be deleted if needed) which explains how Excel’s LOGNORMAL function works. Not surprisingly, log normal income produces much higher Gini coefficients.

6. Conclusion

There is, of course, a wide spectrum of opinion and reaction regarding income and wealth inequality. A few believe that inequality is not nearly as serious a problem as portrayed once redistribution is properly accounted for (Early, 2018), but there is a general consensus that economic inequality has increased markedly in rich countries in the last half century and the United States has done especially poorly in preventing income and wealth inequality from escalating.

Instead of diving into facts and empirical analysis, the *Gini.xlsm* workbook attempts to provide a theoretical foundation for the study of inequality. For beginning students, laying out the issues and understanding the Gini coefficient before being presented with alternative arguments and points of view seems a reasonable pedagogical approach. The *Gini.xlsm* workbook provides this framework and presents the fundamental tension between equality and efficiency in an engaging, visually stimulating way.

We can all agree that social cooperation provides levels of output and income that far exceed what individuals living in isolation would generate. Likewise, it is true that we can modify the distribution of income via taxes and transfers, but here is where it gets complicated. It is unknown exactly how redistribution will affect productivity and economic growth. The workbook is agnostic on this key issue and is explicit that we do not know the magnitude of the response to taxes: “it is unclear how strong this effect is in the real world” (step 4 in the *SocialCooperation* sheet in *Gini.xslm*). Especially at the introductory level, it is best to be clear about what we know and do not know, what is fact and what is opinion.

While the workbook provides structure, a classroom discussion can go in many different directions. One common reaction revolves around exactly how we are taxed and how transfers are implemented. For example, a student might point out that transfers for education will generate productivity gains in the future. This might lead to another student realizing that the process at work is actually dynamic and we need to consider the effects of redistribution over time, not just in one period. Managing the conversation is an important aspect of using this workbook in class.

Finally, the workbook also allows for discussion of issues not typically considered by economics professors when teaching inequality. In particular, the choice of identity – who we are, who we want to be, who is in and out of our group – “may be the most important economic decision a person ever makes.” (Akerlof and Kranton, 2010, p. 15). Social connectedness is critical to our own well-being: amazingly, belonging to no groups does equivalent damage as smoking, obesity, and other biomedical risk factors (Putnam, 2000, p, 327). Group identity is also fundamental to how we and our students respond to social issues such as inequality in the distribution of income. Bringing this to everyone’s attention improves our teaching and student learning.

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1. For those unfamiliar with Chamberlain: [www.youtube.com/watch?v=V8fn1IaTMQM](http://www.youtube.com/watch?v=V8fn1IaTMQM). [↑](#footnote-ref-1)