The Nozick Game

Abstract:

In this article I introduce a simple classroom exercise intended to help students better understand Robert Nozick's famous Wilt Chamberlain thought experiment. I outline the set-up and rules of the Basic Version of the Game and explain its primary pedagogical benefits. I then offer several more sophisticated versions of the Game which can help to illustrate the difference between Nozick's libertarianism and luck egalitarianism.

In *Anarchy, State, and Utopia,* Robert Nozick employs his famous Wilt Chamberlain thought experiment to argue against what he calls "patterned" views of distributive justice.[1] The thought experiment is intended to demonstrate that liberty inevitably upsets patterns of distribution, such as equal incomes. Any theory which requires a re-set to the original pattern is committed, Nozick argues, to continual interference in people's lives.[2] I will discuss an in-class exercise which simulates the thought experiment for introductory students. The gist of the exercise is this: students start with the same collection of diverse goods and they're given time to trade with each other at any rate which they agree to. Students inevitably end the exercise with different collections of goods, thereby disrupting the original pattern of equality. The exercise helps students to understand Nozick's argument, as well as important lessons about luck and its connection to justice.

I. The Thought Experiment

Nozick offers several arguments in defense of his entitlement theory of distributive justice. But perhaps his most famous argument involves the following thought experiment. Suppose we live in a society where everyone has the same amount of money, no matter their intellectual or physical talents. Nozick describes a plausible scenario involving this society:

> Now suppose that Wilt Chamberlain is greatly in demand by basketball teams, being a great gate attraction. […] He signs the following sort of contract with a team: In each home game, twenty-five cents from the price of each ticket of admission goes to him. […] The season starts, and people cheerfully attend his team's games; they buy their tickets, each time dropping a separate twenty-five cents of their admission price into a special box with Chamberlain's name on it. They are excited about seeing him play; it is worth the total admission price to them. Let us suppose that in one season one

> million persons attend his home games, and Wilt Chamberlain winds up with $250,000, a much larger sum than the average income and larger even than anyone else has.[3]

So, the initial distribution—one in which everyone has the same amount of money—is upset by a series of free exchanges between the owners, the fans, and Chamberlain. The question now arises: does justice require a re-set to the initial distribution of equality? Nozick's answer is "no". A re-set to the original pattern would unjustly require that Chamberlain return the money back to those who paid to watch him play. He writes:

> Each of these persons *chose* to give twenty-five cents of their money to Chamberlain. They could have spent it on going to the movies, or on candy bars, or on copies of *Dissent* magazine, or of *Monthly Review*. But they all, at least one million of them, converged on giving it to Wilt Chamberlain in exchange for watching him play basketball. If D1 [the initial distribution] was a just distribution, and people voluntarily moved from it to D2 [the later distribution], transferring parts of their shares they were given under Dl (what was it for if not to do something with?), is not D2 also just? If the people were entitled to dispose of the resources to which they were entitled (under Dl), did not this include their being entitled to give it to, or exchange it with, Wilt Chamberlain? Can anyone else complain on grounds of justice? Each other person already has his legitimate share under Dl. Under Dl, there is nothing that anyone has that anyone else has a claim of justice against. After someone transfers something to Wilt Chamberlain, third parties *still* have their legitimate shares; *their* shares are not changed. By what process could such a transfer among two persons give rise to a legitimate claim of distributive justice on a portion of what was transferred, by a third party, who had no claim of justice on any holding of the others *before* the transfer?[4]

Nozick thinks that we should share his intuition that a redistribution would be unjust. After all, we are stipulating that D1 is a just distribution and, as is presumably the case, free exchange never renders a just distribution unjust. So, liberty inevitably upsets patterns of distribution but that's OK from the perspective of justice.

II. The Basic Version of the Game

In this section I will explain the set-up and rules of the Basic Version of the Game, as well as the philosophical lessons which it helps to illustrate. In the following section I will explain several more sophisticated versions of the Game.

In order to use the Game during lecture, you will need to devote some time to preparing the materials for the Game. Preparation for a class of 30 students takes about an hour. I recommend that you prepare at least one day ahead of time. You will need the following materials:

- Envelopes
- Paper slips or index cards
- Prizes (don't bring them to class on the day of the Game)

Each student will receive one envelope. All the envelopes must contain the same number of starting cards. On each card is the name of a prize. For example, in the original version of the Game I included the following five prizes: Snickers, Tootsie Pop, 0.25% exam extra credit, pen, and random (to be explained below). The number of cards per envelope corresponds to the number of *kinds* of prizes. I use five kinds of prizes and therefore I put five total cards in each envelope (one of each kind of prize). If you are pressed for time, the Game would work with as few as three cards. However, the more cards you are able to use, the more easily and vividly the Game illustrates Nozick's lesson. It is important that the prizes vary in their desirability, or at least that it's reasonable to expect that different students will value them to different degrees. If the prizes are too homogenous or not at all desirable, students will be unmotivated to trade their cards. The easiest way to make the cards is to print an Excel spreadsheet with all the prizes and then use a paper-cutter to cut the sheet into separate cards. You won't need to provide any prizes on the day of the Game because you won't know until the end of the Game which prizes you will need to distribute to students. Not all instructors are in a position to purchase prizes for students. Depending on the prizes involved, an instructor might spend between $10 and $20 USD for a class of 30 students. However, for instructors who cannot or do not want to purchase prizes, there are other options. For example, the prize options might include extra credit, a free absence, an opportunity for a make-up assignment, and so on. It's also possible to make the prizes merely hypothetical. In this case, the instructor can make the prizes more creative. But there is the risk that students will not be motivated to trade cards that will not become real prizes for them (though I

imagine a particularly engaged class will not care that much). Which prizes to use is best determined on a case-by-case basis, depending on the instructor's knowledge of, and rapport with, his or her students.

On the day of the Game you will need to distribute one envelope to every student in the room. It's okay for students to look in their envelopes when they receive them. It's important to tell them that everyone has the same contents in their envelopes. You then inform the students of the following rules. First, they will have a set period of time—say, 10 minutes—to trade cards with whomever they want. The only goods that can be traded are the cards in the envelopes. (So, students are barred from exchanging a card for, say, cash.) Cards may be exchanged at any rate that students agree to in a given exchange. For example, a student can give all her cards away at random or she can trade on a strictly one-for-one basis. The exchange rates will likely differ from student to student and from exchange to exchange. Second, at the end of the Game there will be two drawings. The first drawing determines which prize card the "random" card becomes. (You can ignore this if you don't use a random card.) For example, if Snickers is drawn, then the random card now represents a Snickers bar. The second drawing determines which card can be turned in for an actual prize. For example, if Snickers is drawn, then everyone with a Snickers card or a random card will receive a Snickers bar. Third, if a student ends up with six cards at the end of the Game, then the value of the cards which match the *prize card* doubles. For example, if someone has six Snickers cards and Snickers is drawn as the prize card, then those six cards are worth 12 Snickers bars. The random card is worth nothing if it is not also the prize card. If a student ends the trading period with seven or more cards, then the value of any prize cards triples. For example, seven Snickers cards becomes 21 Snickers bars. It is important to note, and to make sure students understand, that having six or more cards of any combination can also multiply the value of prize cards. For example, if a student has six total cards but only one Snickers card, then s/he will receive two Snickers bars as prizes. The five other cards act as a boost to the one prize card.

This feature of scoring incentivizes students to get a lot of cards, even if they have no interest in some of them. It therefore acts as a further way to motivate trading.

The scoring rules can be summed up as follows. If a student has one or more of the cards matching the prize card (including randoms, if the random card matches the prize card), then the cards' value is determined by the total number of cards the student has: *n* prize cards with five or fewer total cards equal *n* prizes; *n* prize cards with six total cards equal 2*n* prizes; and *n* prize cards with seven or more total cards equal 3*n* prizes. At the end of the class period, ask students to write their names on their envelopes and return them to you with their cards inside. This will allow you to keep track of who receives prizes when it comes time to distribute them during a future class period. After the class period, take note of which students earned prizes. If applicable, buy the necessary amount of the winning prize. During the next class period, distribute the correct amount of prizes to each student. If extra credit was the prize card, it is good to create a column in the online grade book so that students know that they received what was promised.

Students pick up the rules very quickly. At first, many will be hesitant to engage in trading—whether due to shyness or a general "too cool for games" attitude. But some initial encouragement goes a long way. I often say something to the effect of "I know it's a silly game, but you're here so you might as well do it anyway" or "show me how skilled you are at negotiation". Once a few students begin trading, the rest tend to follow. It is important to give students sufficient time to trade, for two reasons. First, the initial hesitancy delays the start of trading, especially strategic trading. Second, the longer that trading goes, the more likely it is to disrupt the original pattern in significant ways. So, in order to illustrate Nozick's main point, it's important that students have a chance to trade with each other for a while.

The Basic Version of the Game is easy to administer and useful for illustrating some of the key lessons of Nozick's thought experiment. I will discuss two of these lessons. First, the Game allows

students to understand *how* liberty upsets patterns. In the Basic Version of the Game, everyone has the same cards and so the pattern is one of strict equality.[5] But students usually want to trade for different cards because they tend to have different aims. Some students just want candy and will give up any non-candy card for a chance at candy; others want to improve their grade; others just want to create havoc, and so on. Also, students—even those with the same aim—inevitably make their exchanges at different rates. For instance, some students really want the extra credit and will trade at almost any rate to have a chance at getting it; others want the extra credit, but don't want to feel like they had to sell the farm to get it. Interestingly, there are often a few students who attempt to corner certain markets. For example, a recent student in an Introduction to Ethics class realized that nobody cared about pens and so he was willing to give up anything but his random card in order to get lots of pens. He had no special interest in pens but he realized he could get them at a low price and he knew that the pen cards would boost the value of his random card in the event that the random card was the prize card. He ended up with nine cards—eight pens and a random. If the random card were identical to the prize card, then he would have then received three prizes. For example, if the random card became extra credit, then he will have secured the equivalent of three extra-credit cards. Securing three extra-credit cards would have been near impossible on a more direct strategy. If the prize card became a pen card, then he would have received 24 pens (eight prize cards at triple their normal value). As long as trading goes on for 10 or so minutes, significant disruption of the equality pattern is all but guaranteed. Students get to see that this disruption is due to nothing but free exchange (driven by different desires and different means of satisfying those desires).

Second, the Game allows students to share Nozick's intuition that it's *unjust* to re-set the pattern and interfere in people's lives.[6] After announcing the prize card, students discover whether their strategies paid off or not. At this point I pretend that the trading had no effect and that everyone will get one of the drawn prize, as would be consistent with a re-set to the original pattern of equal

incomes. Many students tend to protest, especially those who won many prizes and those who won as of the result of creative bargaining (though some students are happy with the re-set). This individualistic attitude is in direct contrast to the attitude of students when I teach Rawls. I usually open the unit on Rawls by using an exercise which simulates the original position.[7] In the exercise I use, I put students in groups and without knowing their identities they must decide as a group upon an economic structure to their society, as well as a pattern of opportunities. They are given five options for their economic structure, each of which offers only one guarantee. The available guarantees that they can choose from are: (i) that the overall distribution will be as large as possible; (ii) that everyone will have the same share; (iii) that inequality benefits the worst off; (iv) that government interference will be minimal; and that (v) there will be a threshold below which no individual will fall. Students must then decide as a group which pattern of opportunities they want for their society: (i) formal equality of opportunity; (ii) formal equality of opportunity for public positions only; or (iii) real equality of opportunity. During the exercise, students tend to express more egalitarian attitudes. For example, usually more than half of groups prefer distribution (iii) or (v) during the first stage of the simulation. When asked for a justification, they tend to cite the fact that they could end up as anyone in a society. However, this egalitarian spirit is replaced in the Basic Version of the Nozick Game with a staunch individualism. Some students are willing to give their friends some good cards in order to help them, but for the most part students act with only their own interest in mind. The Game therefore allows students to embody the stereotypical attitudes of egalitarianism and libertarianism. As I will explain below, the initial intuition can be weakened with more sophisticated versions of the Game.

It is important that you allow some time after the Game for students to discover on their own how the Nozick Game is an analogy for society. For example, do not simply *tell* them that the analogue to card redistribution is taxation. Rather, it is better to let them connect the dots themselves. Similarly, give them some time to figure out who the Game's winners and losers might be analogous to in real

life. For example, creative traders might be savvy businesspeople; people with lots of non-prize cards might be unlucky entrepreneurs; those with no change from their initial cards might be lazy workers, etc. Once students arrive at a rough sense of the analogy, it is much easier to have a more traditional lecture or discussion about Nozick's entitlement theory.

III. Four Alternative Versions

There are at least four alternative, more sophisticated versions of the Nozick Game. I call these the Second, Third, Fourth, and Fifth Versions of the Game. The more sophisticated versions can be played on their own or following the Basic Version. The Second and Third Versions illustrate the ways in which Nozick's libertarianism conflicts with luck egalitarianism. The Fourth Version illustrates the Chamberlain thought experiment while at the same time incorporating Nozick's Lockean Proviso. The Fifth Version attempts to illustrate the potentially question-begging nature of the thought experiment. It is possible to merely raise the alternative versions in discussion, without actually playing them. But this option requires that students actually have played the Basic Version earlier. If you are teaching Nozick over a period of multiple days, I recommend playing a more sophisticated version of the Game on the second day. If you devote only one day to Nozick, I would either not play a second version or merely explain one of the other versions during discussion.

i. Second and Third Versions

Luck egalitarianism is the view that one of the main roles of the state is to cancel the effects that bad luck has on its citizens. Rawls, for instance, is often taught as a luck egalitarian.[8] The Second Version of the Game is intended to highlight the effects of *unearned advantages* in a society. It is played in the exact same manner as the Basic Version, but with one difference: some students receive more goods in their initial envelope than others receive. The extra cards gives those students at least two advantages. First, they give the students a higher initial expected prize value. So, even if they do not trade at all, they begin the game with a higher probability of winning a prize. Second, the better

envelope provides the students with more leverage in trading. For instance, a student who starts out with more cards can afford to exchange at a worse rate than a normal student. After the Game the class can discuss whether it is just for some students to start out with more even if they did nothing to merit it. The cards represent economic goods and so the difference in starting cards can be used to represent a student being born into a wealthier family or with greater intellectual talents.

The Third Version of the Game is intended to illustrate the effects of *unearned disadvantages,* i.e., disadvantages that some members of a society might have through no fault of their own. This version can be coupled with either the Basic Version or the Second Version. In the Third Version you will need to give some students a red card in their envelope. Students with a red card must wait five minutes to enter into any trading with other students. During the waiting period, students are allowed to give people their cards, but they cannot take any in return. You can also disadvantage students in other ways in the Third Version. For instance, you can include a blue card, which limits the holder to two total exchanges. After the Game, you should discuss with students what the red or blue cards represent. In other words, you should discuss how these trading disadvantages might be analogous to certain natural or social disadvantages. For example, a student who cannot trade for five minutes might be analogous to a person with a learning disability who cannot enter the workforce as quickly as others. The red card might also be used to represent the fact that someone must help a family member before entering college or that they must take a break from a career in order to fight cancer.

ii. Fourth Version

In the Fourth Version of the Game, which can be coupled with any previous version, I have a collection of extra cards which I dump on the ground at some point during trading. I tell students that they can pick some of the cards up to keep for themselves so long as they leave "as much and as good" for others. Inevitably the students closest to the pile pick up a few cards up without having to count whether enough cards remain. Students further away, however, either must consider what

"enough and as good" means before they collect cards or they do not even get a chance to collect from the pile. The Fourth Version is intended to illustrate the Lockean Proviso which Nozick attaches to his Principle of Just Acquisition. This version therefore attempts to simultaneously illustrate two of Nozick's three principles of justice in holdings. Because of this complexity, it should be used only if the Basic Version of the Game, as well as the discussion that followed, was a clear success.

iii. Fifth Version

After the Basic Version of the Game, many students tend to share Nozick's intuition, at least initially. Their agreement is most vivid when I pretend to redistribute the cards to their original state of equality. In subsequent versions of the Game, this intuition is diminished, though it remains for a significant portion of the students. As such, the Game is fairly ecumenical: it can be used in such a way as to illustrate Nozick's thought experiment and some of the consequences of his theory, but without necessarily favoring it or luck egalitarianism. The final version of the Game is slightly different. Whereas the Second and Third Versions illustrate how issues of luck might lead one to doubt Nozick's theory, the Fifth Version functions to challenge the very basis of the thought experiment. Some instructors might prefer this version of the Game because there is a worry that the thought experiment begs the question in favor of the entitlement theory. Kymlicka raises this worry clearly. He distinguishes between three elements of a theory of distributive justice:

> (P) Moral principles (e.g. Nozick's principle of 'self-ownership', or Rawls's principle of the 'moral arbitrariness' of natural talents);
>
> (R) Rules of justice that govern the basic structure of society (e.g. Nozick's three rules of justice in appropriation, transfer, and rectification, or Rawls's 'difference principle');
>
> (D) A particular distribution of holdings in a given time and place (e.g. which particular people are currently entitled to which particular resources).[9]

Moral principles act to define and generate rules of justice, which in turn can be used to evaluate a given distribution as just or unjust. Kymlicka uses the distinction to argue that Nozick's thought experiment begs the question in favor of entitlement theory. The thought experiment is basic in form:

take any distribution you think is just, add a little free exchange, and the resulting distribution will remain just. Kymlicka's point is that Nozick is not entitled to interpreting "free exchange" as "free exchange in accordance with absolute property rights". That is, when Nozick lets his opponents pick the initial distribution according to their favorite theory, he is in fact letting them specify D, but not P and R as well. For, if he did allow them to specific P and R, they would be allowed to limit property rights and to tax those whose natural talents created greater wealth. To put the point more bluntly: Nozick begs the question by assuming absolute property rights as part of the initial distribution. As Kymlicka says, "the legitimacy of such rights is precisely what is in question".[10]

The Fifth Version of the Game creates an opportunity to discuss this criticism. It is best coupled with the Basic Version. It can, in theory, be combined with other versions, but I think that doing so would make the Game too complicated. In the Fifth Version, before trading begins you ask students to vote on whether to include the following rule in the Game: if any student earns three or more prizes, he or she must transfer one of the prizes to a student who received no prizes. (If transferred prizes cannot be distributed equally to students, distribute them randomly.) This rule functions as a tax on prizes. After the completion of the Game, discuss with students the merits of the prize tax (whether or not the class voted to include it). Some students will likely think that the tax constitutes an egalitarian appendage forced onto a philosophically neutral starting point. This will give the instructor an opportunity to discuss whether Nozick's assumption of absolute property rights is really as philosophically neutral as he suggests that it is.

IV. Conclusion

I have used versions of the Nozick Game in six classes so far. There is still room for improvement. For example, in smaller classrooms with cramped spacing it is difficult for students to get up and trade with anyone they want to. But on the whole I have found it to be a very useful exercise. First, in my experience, introductory students get confused by Nozick's definitions of

"patterned" and "end-state" distributions, at least initially. The Game offers them a way to understand the gist of the Wilt Chamberlain thought experiment without first needing to understand those definitions. Second, the Game provides a helpful reference point once the class discussion reaches a higher level of sophistication. Finally, Nozick is often taught near the end of a term and the Game is an easy way to keep otherwise tired students engaged.

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[1] 1974: 160-164

[2] Since Nozick thinks the only non-patterned view is his own historical entitlement theory (1974: 156), the thought experiment functions as an argument from elimination in favor of his own theory.

[3] 1974: 161

[4] 1974: 161-2

[5] In theory you can start with a more complicated pattern, such as a Rawlsian pattern. But I recommend using equality in your first attempt at the Game.

[6] 1974: 163

[7] See Green (1988), Lubritz (1999), and Neral (2011) for examples of similar exercises.

[8] This reading is, of course, controversial. See Anderson (1999), Scheffler (2003), and Freeman (2007) for some opposition to this reading.

[9] 1990: 101

[10] 1990: 103