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# Aspire

## An unequal distribution of wealth is a good thing

*Bart Taub, Professor of Finance, shares an important lesson learned from a babysitting co-operative.*

Jean Jacques Rousseau, well before Marx, advocated a society in which each individual contributes according to his ability and receives according to his need. I had a chance to observe an implementation of this idea first hand: we were in a babysitting co-operative.

Soon after receiving my PhD, I landed my first academic job. I got married and we were soon expecting our first child. We moved into a modest townhouse in a neighbourhood of other couples who were just starting out, like us.

Our baby was born. But after a few weeks she had grown tired of us. She decided to send us out on a date again, without her. But how to get a babysitter? The grandparents had come to visit when she was born, but then they left, leaving her stuck with only our own company. And because our neighbourhood was populated with people who were just starting out, like us, there were no teenagers to hire.



The first residents of the neighbourhood had devised a solution: form a co-operative in which the parents provided the babysitting for each other. The basic idea was that each would contribute equally to providing as well as receiving babysitting. We joined. Now we could take in dinner and a movie, like normal people!

But how do you implement an idea like this? The early adopters had a system: when you joined you spent a small sum on some tickets: blue index cards stamped with the name of the coop, “Bye-Bye Mom”. You could then spend the tickets by exchanging each for a half hour of babysitting provided by a fellow co-op member couple. The babysitting couple had to agree to babysit.

You only had to take one vow when you joined the co-op: you couldn’t pay each other for babysitting with real money; you had to use the tickets. This ensured that the tickets retained their value for babysitting. There was a second vow, which was to refrain from borrowing and lending the tickets, but this was obeyed more in the breach - more about that later.

It had an important practical consequence. Not only could you go out for dinner and a movie, the mom could go shopping or go see her doctor or play tennis with a friend.

This system worked well. If you had lots of tickets, it was because you had provided excess babysitting. This made you feel rich, and you became a babysitting profligate spender, going out on the town, playing tennis every day, until you ran low. This was the “to each according to his need” part, because as the tickets started to run low, you would start limiting your profligate spending. If you were low on tickets, you would call around to see if anyone needed some babysitting. You provided the “from each” part.

### **Babysitting recession**

This system was doubly interesting to me because the tickets looked and acted like money, and I was a monetary economist. In fact, I couldn’t resist temptation. I took some tickets that were lying around and I put them on top of the refrigerator. Because my wife can’t see the top of the refrigerator, they were soon forgotten. I did this a few more times. Pretty soon, people were complaining that there weren’t enough tickets; illicit ticket borrowing mushroomed; moms were calling each other, asking if they needed babysitting. There was speculation that someone was hoarding tickets. Not enough babysitting was happening, because there weren’t enough tickets to go around. The parents were miserable.

I was overjoyed: I had caused a babysitting recession! This was exactly what should have happened. I revealed the stash to my wife and things immediately

improved.

I could amplify on why the ticket shortage led to a recession, but I'll leave that to another article. The thing I want to focus on here is the Rousseauian aspect of the co-op. Is there a way to assess this in a more clinical way? It turns out that there is, and this clinical assessment has implications that go far beyond the functioning of the co-op. The implications are about economic equality.

### **Introducing a dictator**

There are two wrinkles that I need to add to the discussion. The first wrinkle is natural if you suppose that instead of thirty or so families in the coop, there are 300. And the second wrinkle is a dictator. Instead of tickets, the dictator decides who gets babysitting, who provides it, and when.

By having a dictator we can remove all obstacles to designing a system that is fair and just in babysitting decisions. But with 300 people in the co-op, how can the dictator make decisions? We need to give the dictator a "book" in which to record who babysits for whom, and keep these records for later reference. Each couple would have two columns in the Book: hours of babysitting provided and hours used, and a net balance.

I later found out that in another academic community, an Ivy League campus, there was a babysitting co-op like "Bye- Bye Mom", but they used a dictator. Each family got a turn as the dictator. The dictator of the month just needed to look at and maintain the Book.

Thus, Mrs Tammy Jones could call the dictator and say that she would like to get another family to babysit her child David so she can go to the doctor. Mrs Hickenlooper, the dictator of the month, would look at the Book and see that Tammy Jones had provided more hours than she had used on net, and would find that Mrs Jane Smith, who had a deficit of three hours, could be called upon to provide the babysitting. After two hours of babysitting, Jane Smith's deficit would fall to one hour, and Tammy Jones's surplus would fall to three hours.

You can see that there is an elementary accounting detail: for the co-op to physically work, if you add up all the surpluses and deficits across all the families in the Book, they have to add up to zero.

But something else could happen here. With 300 couples in the co-op, it's possible that Mrs Hickenlooper, the dictator of the month, might not know Mrs Jones very well or at all. And Mrs Jones might have a six-hour deficit instead of a five-hour surplus going in. And Mrs Jones might just be sneaking off to play tennis instead of going to the doctor. And Mrs Jones might have been running that deficit for many months, and never quite putting in enough babysitting time to move from deficit to surplus. How should Mrs Hickenlooper handle this possibility?

It might just be possible to design a system to prevent the Tammy Smiths of the co-op from ruining it. The idea would be something like this: anyone with a

long history of a deficit would be refused more than a minimal amount of babysitting time until they worked their hours into surplus. The fear of being refused will somehow induce the Tammy Smiths to behave better.

### **The Hickenlooper conundrum**

But there is a problem. Suppose Tammy Smith has been in deficit because she really does have a medical condition that is ongoing and not her fault, and her latest request is just the most recent bout with the condition? Mrs Hickenlooper would be as much in the dark about this as about the other possibility. And the dictator system would need to recognise this - it would be far more important for the co-op to provide a babysitter for a truly ill Mrs Smith than for a more ordinary dinner date request.

This conundrum can be formulated mathematically. Mrs Hickenlooper's inability to assess Mrs Smith's true state of need (doctor visit or tennis game) can be expressed as knowledge that Mrs Smith has but Mrs Hickenlooper does not. And you can see that the dictator needs to get Mrs Smith to state the truth about why she wants the babysitting time. If Mrs Hickenlooper fails at this, too many of the Mrs Smiths will use but not provide babysitting, and the Book's surpluses and deficits will add up to a negative number.

I've already hinted at the way to solve the problem: people who run persistent deficits get less babysitting. Specifically, each family gets an additional account in addition to recording their actual hours. You can think of this account as a sort of babysitting bank account, filling when they provide babysitting, and draining when they use it. And it can get empty. If it gets empty, they can't get any more babysitting.

This works, because families fear having a zero-balance account when they really are sick and need a babysitter. To prevent a zero-balance, they will provide babysitting rather than play tennis. By providing babysitting - a sacrifice of their time - they get rewarded with a bigger babysitting bank account to spend when the need truly arises. The Book's surpluses and deficits are then guaranteed to add to zero. This is what the Princeton co-op did.

### **Bye-Bye Rousseau**

There are two questions remaining. First of all, is the Rousseauian character of the co-op preserved by the babysitting bank account? Surprisingly, the Rousseauian character of the co-op utterly falls apart with the dictator and babysitting bank account system. By sheer luck, some families are going to grow big babysitting bank accounts because they never need to go to the doctor. They provide babysitting, and keep accumulating hours in their account. And some families, again by sheer luck, get sick and need doctor time and are constantly blowing their accounts down to zero. If you think of the sizes of the accounts as wealth, then wealth gets very uneven. And the people who are harmed - and there is harm here - are the ones most in need, namely families who really do get sick repeatedly.

This is the price paid for making sure that Tammy Smith tells the truth. To get the co-op to work, you have to get people to tell the truth about how much they need a babysitter, and for that you have to have this bank account system, but that system leads to an uneven distribution of wealth and it fails to work for people who have repeated bouts of bad luck. Very non-Rousseauian. But there is no alternative – we already saw that otherwise the co-op’s net surplus will be negative.

Let me be clear that this non-Rousseauian outcome holds because of the necessity of getting people to tell the truth. If the dictator knew all the families well enough to know their true need at every moment, then she could simply assign all the negatives to the positives every day, and everything would balance. Anyone with repeated bad luck would be taken care of by the rest of the co-op, because their bad luck would be known by Mrs Hickenlooper to be true bad luck. Now for the second question: Is the “Bye-Bye Mom” ticket system worse or better than the dictator and Book system?

It can’t be better, because the dictator would adopt it. To see whether it is worse, we now know that we should ask: Do the tickets get Mrs Smith to tell the truth about the tennis game? Yes! If Tammy Smith spends her tickets on babysitting for tennis games, she might run out just when she gets truly sick, and wouldn’t have enough tickets to pay for babysitting. Her fear of this situation leads her to slow down her spending on babysitting when the tickets are low and she just wants to play tennis.

Now this is interesting. The tickets look like money. Now the uneven distribution of wealth is going to look like an uneven distribution of money. Again, very non-Rousseauian. And yet we know that this is a good thing, in that at least some babysitting is provided.

In the real world, we see all these attributes: unevenness in the distribution of wealth, private knowledge, and the failure to fully help those who are truly down on their luck. Could it be that these attributes are necessary? This is not the end of the story: see the references for more information. The babysitting story is explicitly treated (and extended) in the “Currency and Credit” paper.

## References

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