SOCIAL CHOICE

444 Lecture 12

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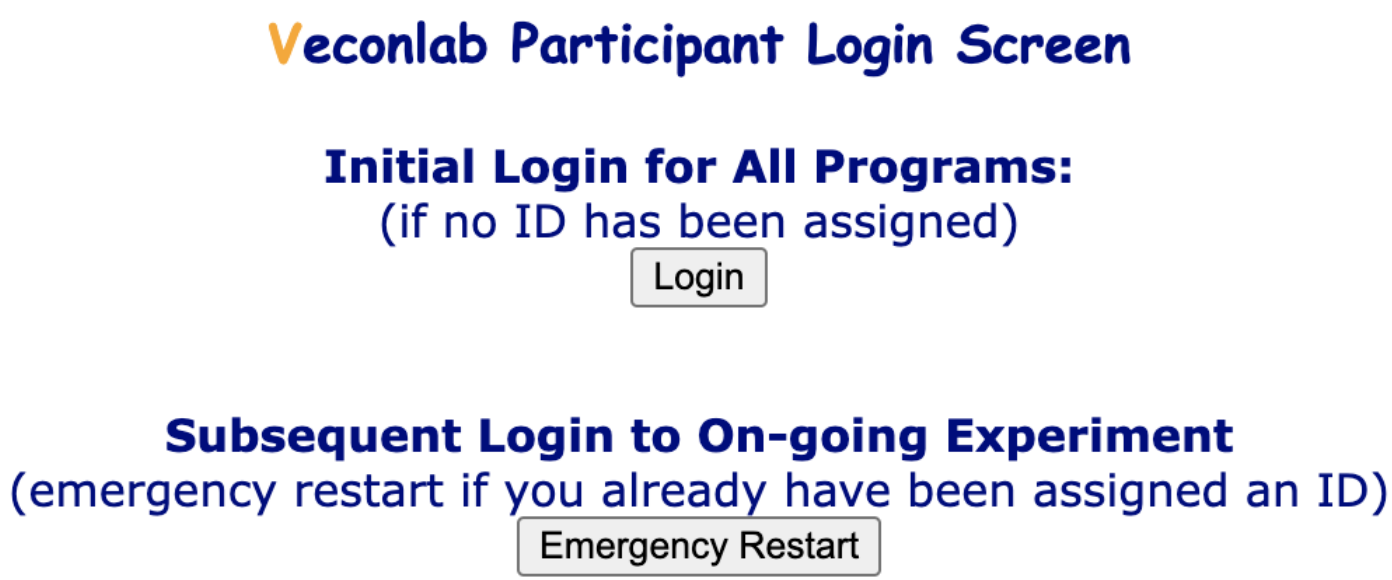
PLAN

1. Logistics for how we'll be doing game theory after break.
2. Using Sen's 1998 Nobel lecture as a basis for a quick summary of the last two weeks.

GAMES

REGISTRATION INSTRUCTIONS

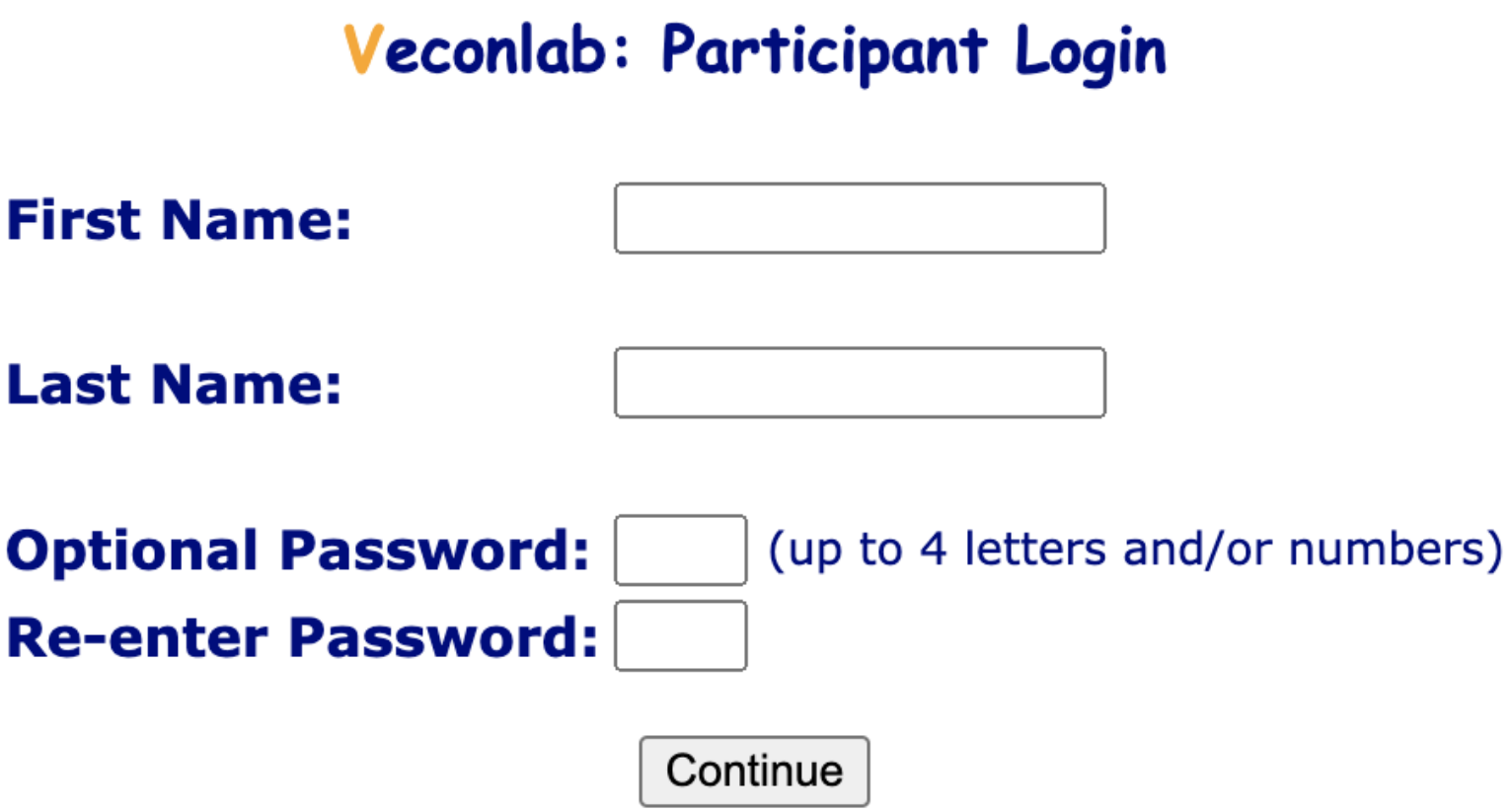


Go to https://veconlab.econ.virginia.edu/login.html

SESSION NAME - PBW7

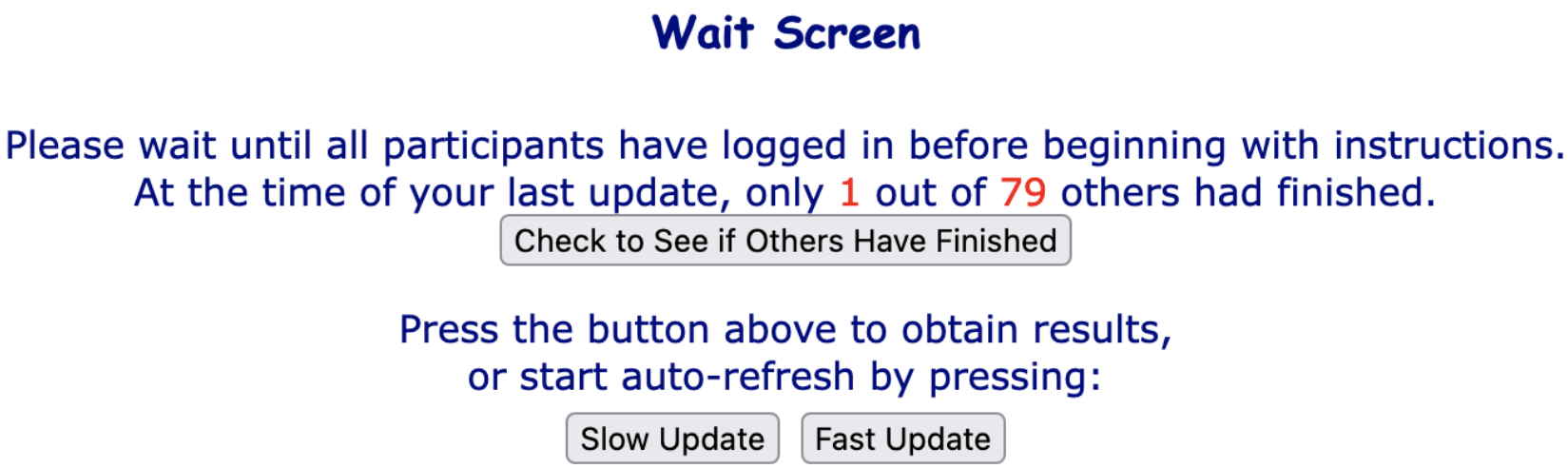
Enter the session name **pbw7**. (This will change day-by-day)

REGISTER REAL NAME



Enter your real name (for credit purposes)

WAIT



Wait for enough people to join

ICLICKER

Were you able to register:

a. Yes

b. No

OVER BREAK

The experiment listed under pbw7 is set up to run over break.

It's a multi move game, you'll be randomly paired with someone.

If the moves don't get completed by end of break, maybe we'll spend a few minutes in class to finish off the games.

But it's only 10 moves, so maybe they'll get done.

And if it's a tech fail, we'll learn that now rather than in class!

SOCIAL CHOICE

PLAN

I’m not going to talk about Sen explicitly for a bit.

Instead I’m going to set up the backstory, and see where Sen fits in.

Once you have the picture clearly in your head, his place in it becomes easier to see.

Some of this I’ve said before, but probably a bit quickly.

SIMPLE SOCIAL CHOICE

For each option-person pair, there is a numerical value $\mathbf{v}(o,p)$.

The best social choice maximises the sum of these values.

This is the broadly utilitarian picture.

PROBLEM 1

If there's one option for which **v**(o, Brian) is massive, it might be the best social choice even if **v**(o, you) is small for all of you.

That is, the simple theory doesn't care about **distribution**.

DISTRIBUTION

In practice this is less of a problem than in theory.

In practice our best estimates are that more equal distributions are better by the simple measure.

That's because the marginal utility of money (how much each dollar is worth to you) is decreasing.

In the 19th century, many leading economists supported some or other form of socialism largely because of this consideration.

PROBLEM 2

As Sen notes, that wasn't why the simple theory got rejected by 19th/20th century economists.

Instead they rejected it because they thought that **v** didn't exist.

And they thought that because they thought it couldn't be given a behaviorist (positivist) interpretation.

TWO QUESTIONS

Let o1 and o2 be options, and Travis and Taylor be people.

Question 1 - Absolute Comparisons

Does **v**(o1, Travis) > **v**(o1, Taylor) make sense?

Question 2 - Marginal Comparisons

Does it make sense to ask which is bigger?

- **v**(o1, Travis) - **v**(o2, Travis); or
- **v**(o2, Taylor) - **v**(o1, Taylor)

ABSOLUTE COMPARISONS

Question 1 - Absolute Comparisons

Does $\mathbf{v}(o1, \text{Travis}) > \mathbf{v}(o1, \text{Taylor})$ make sense?

In words, does it make sense to say that if we take option o1, Travis will be better off than Taylor?

MARGINAL COMPARISONS

Question 2 - Marginal Comparisons

Does it make sense to ask which is bigger?

- **v**(o1, Travis) - **v**(o2, Travis); or
- **v**(o2, Taylor) - **v**(o1, Taylor)

Assume both are positive, so Travis is better off in o1, and Taylor is better off in o2.

Then the question is, does the difference between the two options matter more to Travis, or to Taylor?

IIUC

That's **I**mpossibility of **I**nterpersonal **U**tility **C**omparisons.

And it says the answer to both questions is **No**.

These questions don't even make sense.

IIUC

The only things that make sense are comparisons within one person.

It makes sense to ask whether **v**(o1, Travis) > **v**(o2, Travis).

It even makes sense to ask which of these is bigger:

- **v**(o1, Travis) - **v**(o2, Travis); or
- **v**(o2, Travis) - **v**(o3, Travis)

But it does not make sense to do any comparisons where two different people are in the second argument place.

EPISTEMOLOGICAL ARGUMENT

1. We can only tell what people choose, not absolute questions about how absolutely well off they are, or how their situation compares with others.
2. What's scientifically true is just what we can tell is true.
3. So there are no facts about how absolutely well off people are, or how their situation compares with others.

EPISTEMOLOGICAL ARGUMENT

2. What's scientifically true is just what we can tell is true.

Premise 2 here is a fairly crude kind of positivism, and not really plausible.

METAPHYSICAL ARGUMENT

1. How well off someone is just is a matter of what preferences they have satisfied.
2. But preferences are always *comparative* and *intra-personal*.
3. So there is no fact of the matter about someone's *absolute* welfare, because preferences are comparative, or *inter-personal* comparative welfare, because choices are intra-personal.

Premise 1 is a preference-satisfaction theory of welfare.

THIRD ARGUMENT

1. How well off someone is just is a matter of how they feel.
2. There is no way to compare feelings across people, or to measure absolutely how someone feels.
3. So there is no absolute or inter-personal, measure of how well off people are.

Premise 1 is a hedonistic theory of welfare.

Both premises are pretty implausible.

TWO CLAIMS

The IIUC as I've described it has two parts.

1. There are no facts of the matter about how well off anyone is on any kind of absolute scale.
2. There are no facts about how one person's improvement in welfare between two states compares to someone else's improvement in welfare.

By breaking these up, we can get some interesting theories.

WANTS AND NEEDS

Very toy welfare theory.

1. Assume everyone has the same needs.
2. Say the welfare for a person is a pair (n, w), where n is a number between 0 and 1 saying what proportion of their needs are satisfied, and w is a number reflecting how well their wants are satisfied.
3. If one person has a higher n-value than another, they are better off.
4. If they have the same n-value, then there is no fact of the matter about who is better off.

WANTS AND NEEDS

This strictly speaking rejects the IIUC, since it says comparisons are possible if one person has all their needs satisfied and another does not.

But it would mean the IIUC is true in practice in rich places where everyone has all their needs satisfied.

More generally, and this is something Sen has stressed a lot, the simple formalism of value functions tends to suppress the want/need distinction, and that might be bad.

ARROW AND IIUC

Here's an argument for scepticism about social welfare.

1. IIUP is true, so any social welfare function can only use intra-personal comparisons (i.e., preference orderings.)
2. There is no good way to combine intra-personal comparisons into a social ordering (thanks to Arrow's theorem).
3. So there is no such thing as social welfare.

ARROW AND WELFARE

Looked at this way, Arrow's result is not just an annoyance for people designing voting systems.

It's a challenge for anyone who wants to say anything systematic about social welfare in general.

Sen's work has involved pushing back on this scepticism on basically every possible front.

WEAKENING THE CONSTRAINTS

Sen argues that the impossibility theorem isn't as much a dead end as we thought.

Ideally, we'd have some plausible constraints, and there would be exactly one method for combining preferences that satisfied them. Then we could conclude that method is correct.

Arrow shows that for some plausible looking set of constraints, there are exactly zero methods that satisfy them.

WEAKENING THE CONSTRAINTS

That's not great, but one is really close to zero. Maybe we're close!

So Sen thinks that looking at rules that satisfy four of the constraints is a really valuable activity.

Maybe a very slight weakening of the Arrow conditions can get us from zero back to one.

To be fair, while this is a good idea in theory, it hasn't really worked in practice.

ADAPTIVE PREFERENCES

The best argument for the IIUC starts with the idea that how well off you are is a function of how many of your preferences are satisfied.

This is called the preference-satisfaction theory of welfare.

And it has a problem with a phenomena Sen played a role in identifying: **adaptive preferences**.

ADAPTIVE PREFERNCES

People adjust their aims to what is available.

This might be good for their mental health, but it makes using preference satisfaction a measure of welfare problematic.

People who have low expectations because of oppressive situations aren’t super well off when those low expectations are met.

MEASURING WELFARE

If we had a simple way to measure how well off people are, we could bring back the simple rule.

And Sen thinks economists in the 20th century were too quick to close off that option.

MEASURING WELFARE

I noted one toy version of this earlier: measuring what proportion of a person's needs are met.

This is rough - presumably if it is less than 1 they will die soon or something.

But it doesn't seem too far-fetched.

MEASURING WELFARE

Sen thinks we can do better than this because he thinks welfare is a matter of what **capacities** you have.

Most fundamentally, someone who has their needs met has the capacity to stay alive.

But other capacities might increase our welfare beyond that.

CAPACITIES

The capacities approach is controversial.

Imagine that I have the capacity to wiggle my ears. But I don't like wiggling my ears, so I never do this.

Then one day, as a side-effect of a virus, I lose this capacity.

Does this really make my welfare go down? It isn't obvious that it does.

WELFARE

The big picture point he wants to make is that questions about **social** welfare are not distinct from questions about **individual** welfare.

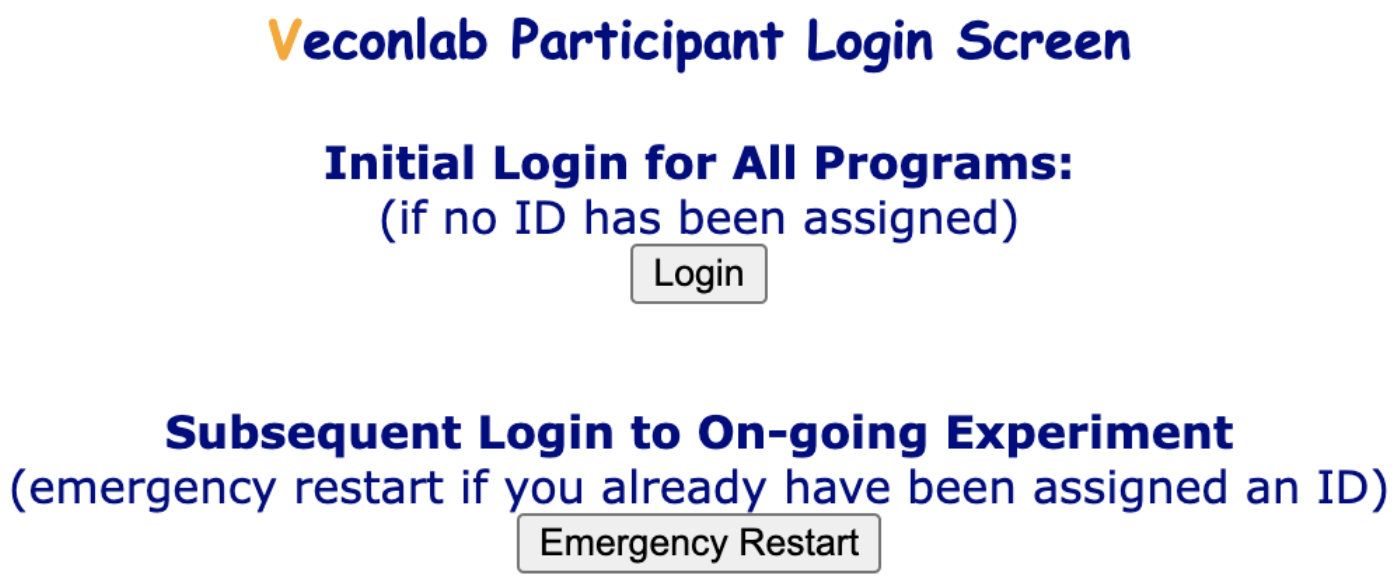
Even once we have said something about individual welfare, there are still further interesting social questions.

For example, we might still worry about the lack of distributional considerations in the simple rule. (Sen does worry about this.)

But the two are going to be tied together.

FOR NEXT TIME

HAVE A GOOD BREAK



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