1) Piketty Social Mobility

On page 560 of his Social Mobility and Redistributive Politics paper, Piketty writes that the voters seem to display a Rawls-type social objective, attempting “to maximize the expected welfare of lower-class children by redistributing income from \( y_1 \) to \( y_0 \).”

A) Notice that the paper constrains the least well off person to have the same steady state beliefs as the average in the society. There is no reason to believe this to be the case. Rewrite the equation describing how agents determine their estimate of the optimal tax rate (p563) taking into account that the least well off person in society is not likely to have the same \( \theta_{WO} \) as the society’s average \( \theta_i \). Describe the meaning of each part of the new equation.

B) How do we expect \( \theta_{WO} \) to compare to the society’s average \( \theta_i \) in steady state? How does this affect the steady state optimal tax rate?

2) Benabou and Ok Social Mobility

Suppose there is a society of individuals with incomes distributed uniformly on the unit interval. The government has a single policy instrument, a tax on incomes at rate \( \tau \) with collected revenue redistributed in a lump-sum manner. Because of institutional stickiness, tax rates enacted in period \( t \) do not take effect till period \( t+1 \). Let the motive behind agents’ voting behavior be the well-being of their offspring, who will be subject to the tax policy generated in the current period. The economy evolves such that the child of an agent with income of \( y \) is expected to earn \( \sqrt{y} \).

A) Given the above economy, what level of tax rate \( \tau \) will be implemented by direct democracy? Which individuals will vote for a tax rate of \( \tau=0 \)? Who will vote for \( \tau=1 \)?

B) Suppose institutional stickiness worsens and tax rates enacted in period \( t \) do not take effect until period \( t+2 \). Now which individuals will vote for a tax rate of \( \tau=0 \)? Who will vote for \( \tau=1 \)? If tax rates enacted in period \( t \) do not take effect till period \( t+n \), define the relationship between the indifferent voter and the stickiness of the tax code (where \( n \) is taken as the stickiness of the tax code).

C) How does increased dispersion in this period’s income affect the tax rate and indifferent voter? To formalize this, instead of income being distributed uniformly \([0,1]\), let income be distributed such that its pdf is

\[
f_y(y) = \frac{1}{2} + (y - \frac{1}{2})^2, \quad 0 \leq y \leq 1.
\]

How does this change your answers in part i)? Why?

3) Citizen Candidate Model

Use the Citizen Candidate Model Set up. Assume that AIV and non-clumping assumptions are both satisfied.

A) Assume that there is a benefit \( b \) to hold office, and that voting is sincere. Show that there can be two types of 3-candidate equilibria.

i) 2 candidates are tying, and one is loosing for sure
ii) 3 candidates are equally likely of winning
What prevents this equilibria in the Besley-Coate set-up? Which of the new assumptions ensure the existence of each of these equilibria?

B) Assume that there is no benefit b to hold office, and that voting is strategic (Besley and Coate set up). Construct an equilibrium with 4 candidates.

4) Help Little Esther Revise Her Paper
Little Esther received her referee report and letter from the editor from Econometrica. After much anguish and procrastination, she decides to get going and revise her paper. You can help her!

1 Model
Clearly, the referees want a model. We are not going to re-invent the wheel, but we want a model that will help us think about why there should be reservation in the first place. So we will modify the Besley-Coate set up a bit.

Everyone is eligible to vote and to stand as a candidate. The village elects an individual who will implement a policy, chosen in the interval [0, 1]. Each citizen has a preferred policy option \( \omega_i \), and women and men have different policy preferences. Specifically, we assume that women’s preferences are distributed over the interval [0, \( W \)], and men’s preferences are distributed over the interval [\( M, 1 \)] (\( M \) can be greater or smaller than \( W \)).

The political game has three stages. Citizens first decide whether or not to run. The cost of running for women, \( \delta_w \), is greater than the cost of running for men, \( \delta_m \). Citizens then elect a candidate (voting is strategic), and finally the policy is implemented.

Where our model departs from the basic models by Besley and Coate and Osborne and Slivinski is in the assumption that the policy that is finally implemented is a mixture of the preferred policy option of the elected candidate, and a policy option \( \mu' \), preferred by the local elite (as against just what the candidate wants). This can reflect the “capture” of decentralized government by the local elite model for example. Formally our assumption is that the candidates’ preferences are given a weight \( \alpha \), so the policy finally implemented by the elected citizen \( j \) is \( x_j = \alpha \omega_j + (1-\alpha) \mu' \). This formalization gives us an intuitive choice for the default decision, implemented if no one decides to run. In this case the decision is \( \mu' \). Initially, we will assume that \( \alpha \) is constant across elected candidates. We will also assume that \( \mu' > m \), the median voter’s preferred outcome.

We restrict the analysis to cases with 1 or 2 candidates.
A) Under what conditions is there no equilibrium where a woman runs in the absence of reservations (hint: consider first the conditions under which no woman runs unopposed, and then under which no woman runs opposed)?
B) Under what conditions is there no equilibrium where a woman runs with reservation?
C) Under what conditions does reservation unambiguously decrease the utility of the median voter and that of the median female voter?
D) Under what condition does reservation unambiguously increase the utility of the median female voter?
E) Under what condition does reservation unambiguously increase the utility of the median voter?
F) How does this vary with the strength of the lobbies?
G) What did the model teach you?

II Revisions

Relative to the first version, we now also have the results from Rajasthan, that were not available before. In Rajasthan:

- Men have a relative preference for roads
- Women have a relative preference for drinking water
- There is more investment in drinking water in places reserved for women
- There is less investment in roads in places reserved for men.
- There is no effect on schools, and the other public goods are not very relevant in that context.

With that in mind, read the referee and the letter to the editor carefully, and think about:

A) What additional regressions do you want to run?
B) What regressions do you want to get rid of? (remember the paper has to be cut substantially).
C) How are you going to link the model and the rest of the paper?
D) What else you need to do to revise the paper?
E) Which suggestions you will have to ignore because they are wrong?

III Letters

The model is written, the paper is now revised, all little Esther needs your help with now is the letter to the editor and the referees. She needs to write a letter to each referee responding to each of their concerns (with reference to what you did in the paper), and a letter to the editor with a summary of how your paper improved, and how you addressed his concerns and that of the referees. She needs to be tactful when explaining to a referee why you could not do what he suggests (if there are such occurrence).

Write the letter to the editor, and the reply to each referee.