Sexual selection, conspicuous consumption, and economic growth

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http://paulfrijters.com/books/an-economic-theory-of-greed-love-groups-and-networks/

Harcourt

What's likeable about the paper

- Tries to ground behavioural traits in biological evolutionary arguments. Yes!

- Argues men seek higher incomes to impress girls. Surely true.

- Argues girls are impressed by higher incomes. Though they often deny it, again clearly true.

- Nice big model that uses funky labels (alleles, signaling, status as a handicap).

What is problematic about the paper

- The desire to link this to the industrial revolution.

- Indeed, a link to any change in the human condition that happened on a centuries-scale is exceedingly far-fetched (see later).

- So the paper needs a different motivating example.

- Also, it needs more than a single simulation.

Why cant this paper inform us about the industrial revolution?

1. The time-scale doesn't match up. The industrial revolution was, at best, 6 generations. Your model, at best, works in terms of dozens of generations. Humans don't procreate fast enough for sexual selection to explain anything occurring merely over centuries. Or do you want to argue that growth will increase the next 1500 years via this mechanism?

**Figure 7: Growth rate of technology and income**
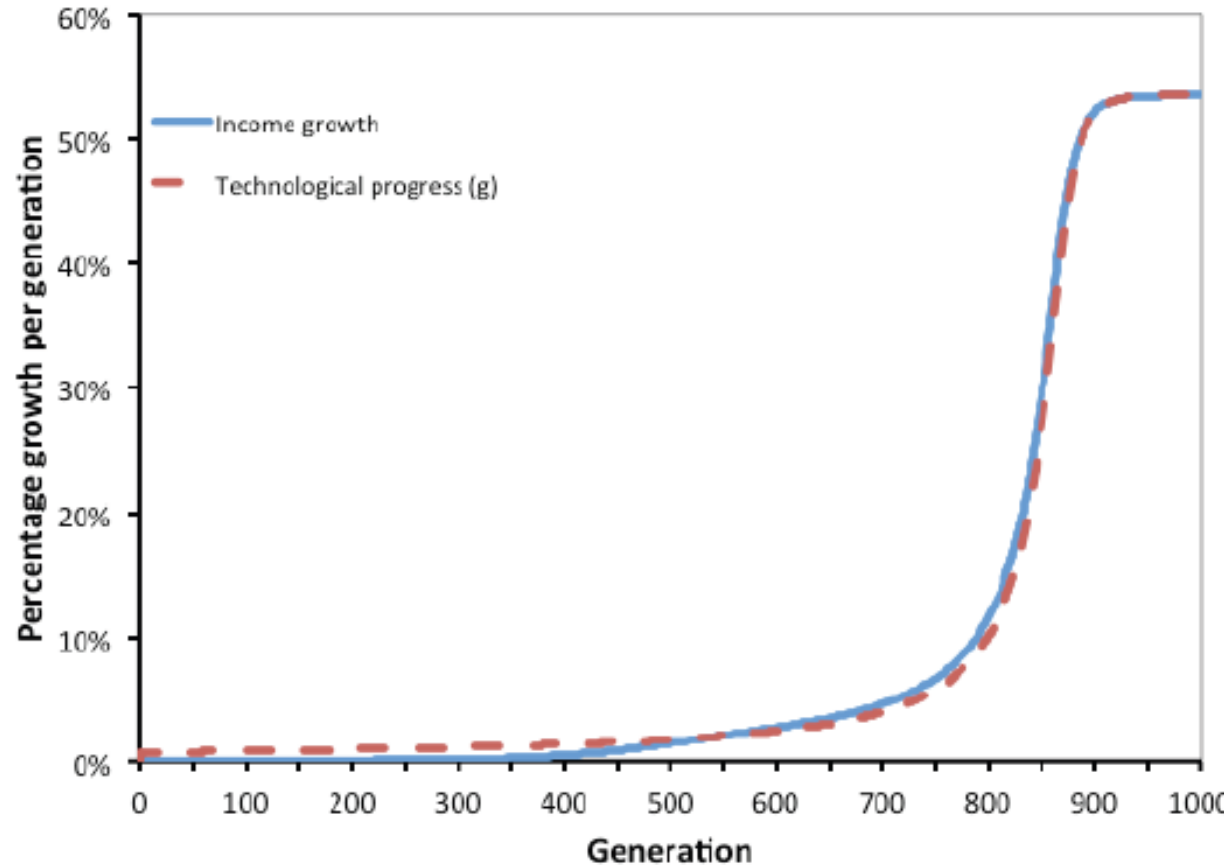
Why cant it fit, continued....

- 2. All the key micro-predictions are wrong.

- What do I mean?
  - Higher productive people have more kids.
  - That men have only started showing off to women since the Industrial revolution. Before that, everyone was too busy surviving (the Malthusian assumption).
  - That rich show-offs are more likely to die before they mate (the model needs this to allow for the Malthusian world). If only that were true!

What does the reality say?

- Rich people have less kids throughout this time period.
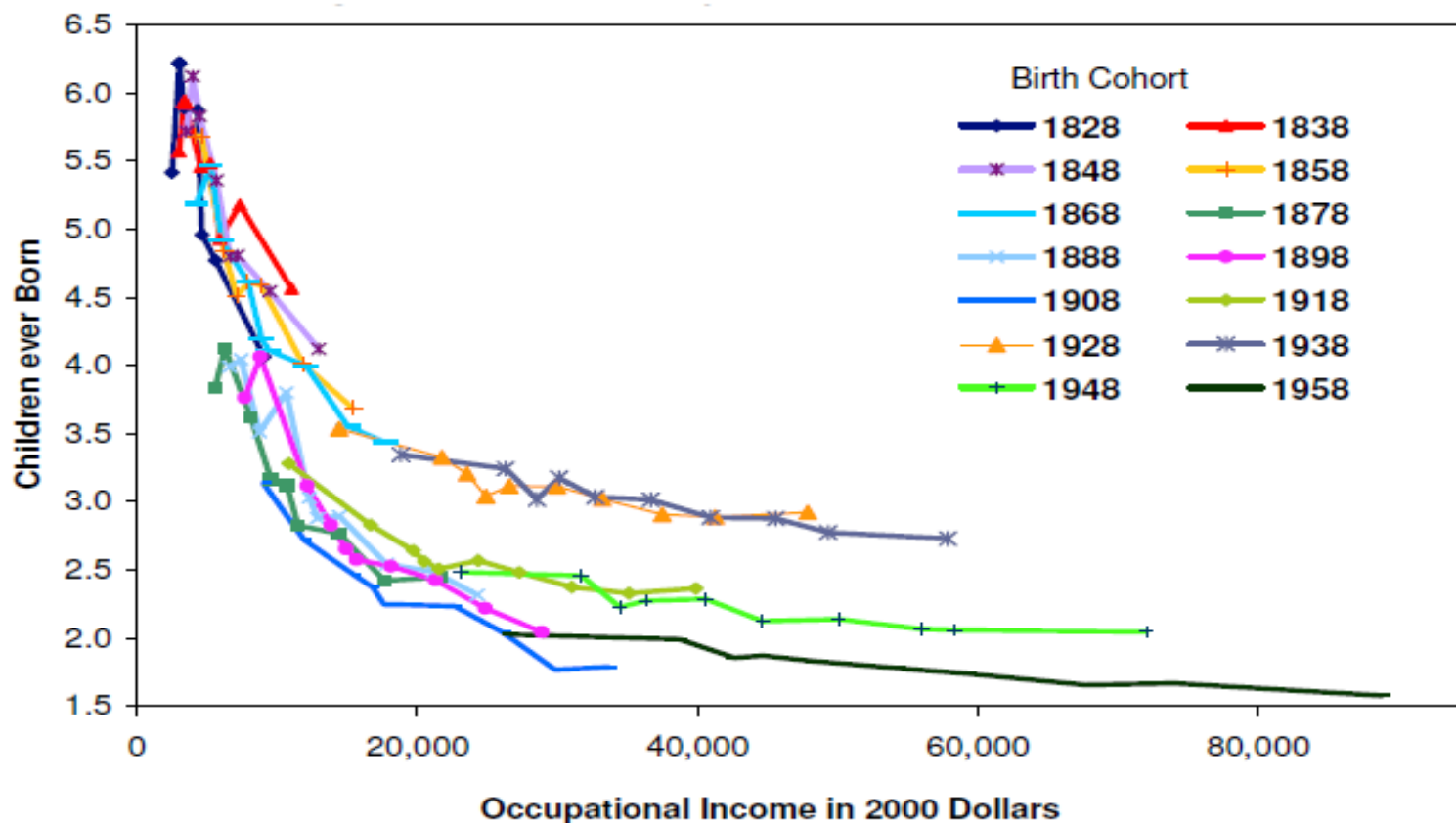
Source: Justin Wolfers 2011

As to the Malthusian assumption

- In our hunter-gatherer period, leisure time was in fact probably very high: the population numbers in hunter-gatherer times were determined by the worst years, meaning that in normal years life was pretty easy. Plenty of time for males to impress girls. Plenty of generations also to ensure no males survived the modern era who did not spend time to impress girls. Indeed, plenty of generations to ensure only the high types remained to start out with!

Why cant it fit?

- ## 3. The key trade-off in the model is empirically implausible for this time:

  - The model assumes that men first work and then compete for girls. The investment in conspicuous consumption comes with a survival cost, which in the model is crucial to ensure there is a Malthusian trap.

  - Yet it needs the assumption that in stead of girls judging on total male output, girls can only see the bit that is bad for male survival, not the bit that helps the male survive. Very implausible that girls wouldn't be able to tell who is well-fed and who isn't. Indeed, the whole literature on tall being popular goes against this.

  - Certainly doesn't fit the industrial revolution. More likely fits nomadic society where men take risks to capture a woman.

So.....

- Please please please abandon the whole 'explaining the Industrial revolution by evolutionary arguments' agenda. It makes no sense whatsoever.

- But you dont need it! 90% of the paper is useful without it.

- You simply need another motivating example

Bad suggestion 1....

- Option 1. Turn it around and use your model to further dispel the myth that the industrial revolution had anything to do with evolutionary selection.
  - Argue instead that the time-scale is wrong and that your model shows that if it were just about status seeking versus something else, we humans should have been on the high technological growth path for 10,000 years already.
  - Argue hence instead that the status motivation was there and is important in sustaining growth, but no acceleration type arguments.

Bad suggestion 2....

- Option 2. Switch from economics to something biological, such as why some animal species dont signal status and others do: link it to the degree to which normal behaviour leaves leisure time in different animals (eg, ants dont signal status because they are as a group too busy surviving against other groups).

Best suggestion I have for you….

- Option 3. Talk not of changes within a few hundred years, but instead about human sub-populations: from a common parent population, the model gives a mechanism for a differential speed of sexual selection of high-types depending on deep economic characteristics.

- This is far more promising: Malthusian female rice farmers too busy to notice their poor choice of husbands versus leisurely rainfall farmers. China versus Europe.

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- In your simulations you then probably want to start out with a far lower percentage of high-types: you would effectively want to argue that particular new circumstances create a 'high-type' who is adapted to the new circumstances.

- You will thus end up with predictions about how many group-wide genetic improvements a particular human group will have had depending on economic conditions.

- All you then need for a good story is to argue for basic differences in economic circumstances across mayor regions of human civilisation.
  - The rainfall agriculture versus irrigation agriculture comes to mind: with irrigation (China) you get stable production and thus near-Malthusian conditions most of the time. With rainfall (Europe) you get wilder fluctuations meaning that mostly you would be in less pressed conditions.....
  - Other politically incorrect possibilities also come to mind.

Small stuff important for journals

- Dont buy into the myth that growth only started in 1800. Plenty of historians argue it started with the Italian city-states of the 15th century, or that in fact there were slow increases in per capita GDP well over a 1000 years (see the Angus Maddison data).

- The simulations look ad hoc and highly parameter-value specific. Normally, one wants to see hundreds of simulations based on a grid-search of parameter values to get an idea as to the general behaviour of the model. What you normally do is calculate some final statistic of a simulation (such as the number of generations to go from 10 percent growth to 50% growth) and give that statistic for different parameter values.

- You need to make a stronger argument for why you need a simulation model and not adopt a much simpler parsimonious analytical model with the same basic points. The great advantage of trying to argue cross-cultural is that you will by design want a realistic evolutionary model which allows you to insist on something complicated enough so you cant solve it analytically.

- There is a burgeoning mainstream literature on evolutionary arguments behind behavioural traits (see the works of eg. Matthew Rablen and co-authors; or Luis Rayo and co-authors). Mainstream journals will expect you to know this.

- Weird formatting stuff: did you use a different processing package for the pages with pictures? Looks like it.

Conclusion

- Ok model. Technically competent and plausible assumptions on human nature. Odd assumptions on signalling and survival.

- The model really needs a different application that fits its assumptions on signalling and survival. Cross-cultural differences in the speed of genetic change is a more promising application of this model than explaining the industrial revolution.

As an aside

- The paper is quite humorous if you look closely. For instance, in the model:
  - Its the high-type men who breed twice. Women are forever faithful. Sure…
  - In the second-round mating market (period C), there is full market clearing. No-one is picky.
  - Girls who mate early will more likely end up with the high-quality men because some of them can reject the low-quality men.
  - Males who spend time on signalling are more likely to die before they get onto the mating market. If only!