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Space for the students' passions: The CORE course confronts themes of the present in light of theory since Samuelson

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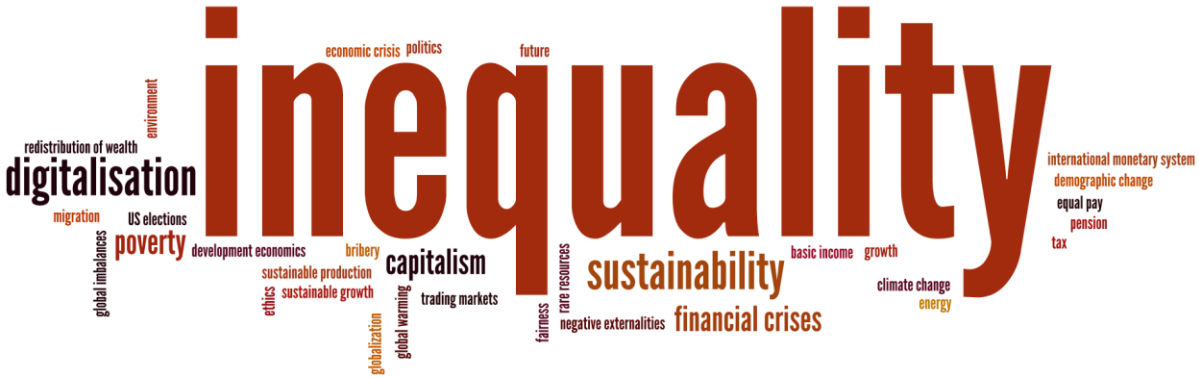
Missing from our introductory courses in economics is any sustained engagement with the problems facing the world today – instability, environmental sustainability, inequality, the future of work – and on which economics has important insights for public policy. A new free online interactive text – used for the introductory course at University College London, Humboldt University Berlin, the University of Siena, and the Toulouse School of Economics – helps to fill this gap. This is CORE's *The Economy* available free online at www.core-econ.org.

What are the problems that animate our students? To find out, during the past four years we have asked, in classrooms around the world: "what is the most pressing problem that economists should address?" The word cloud below shows what students at the Humboldt University in Berlin told us. The size of each word or phrase is proportional to the number of students who brought it up.



Word clouds from students in Sydney, London and Bogota are barely distinguishable from Berlin (you can see them at www.core-econ.org/blog). Even more remarkable, in 2016 we asked the same question to new recruits – mostly economics graduates – at the Bank of England. They responded with a very similar pattern of concerns. Word clouds from France give greater prominence to unemployment. All of them highlight climate change and environmental problems, automation, and financial instability.

It was the gap between the major economic problems that bring students to our classrooms and the topics we teach that was one motivation for an international team of researchers to come together in the CORE project to create a new way of teaching economics.

The other motivation was to bring into the introductory courses what we now know in economics. The typical principles of economics courses fail to reflect the dramatic advances in economics since Samuelson's paradigm-setting 1948 textbook. And it is these advances discussed by Samuel Bowles – bringing the insights of Nash and Hayek together with those of Marshall and Keynes – that define a new paradigm in economics.

The table contrasts the foundational tenets of the standard paradigm, as represented by Samuelson, with that represented by CORE. By the 'benchmark model' we mean the standard case presented to students, from which 'deviations' are sometimes studied. Students are taught that the decisions firms make when they maximize profits lead to 'socially optimal' outcomes. Problems such as global climate change are treated if at all as exceptions found at the end of the book, signalling to students their marginal importance.

Samuelsonian and CORE paradigms

Topic	**Samuelsonian benchmark as taught in introductory courses**	**Contemporary economics and CORE's benchmark**
People	are far-sighted and self-interested	are also cognitively limited and have motives other than self-interest, such as social norms of fairness and reciprocity
Interactions	are among price takers in competitive markets	include price-makers and interest rate and wage setters, strategic interactions and non-market interactions
Information	is complete	is usually incomplete, asymmetric, and non-verifiable
Contracts	are complete and enforceable at zero cost	are incomplete for effort and diligence in labour and credit markets, and for other external effects such as traffic congestion or knowledge
Institutions	include markets, private property, and government	also include informal rules (norms), firms, unions, and banks
History	is largely ignored	provides data about alternative rules of the game and the process of change
Differences among people	are confined to preference and budget constraint differences among buyers and sellers	also include asymmetric positions, for example as employers or employees, and as lenders or borrowers
Power	market power, political power	includes also a principal's power over an agent in labour, credit, and other markets
Economic rents	create inefficiencies through 'rent-seeking'	are also endemic in a well-functioning private economy, creating the incentive to innovate, or to work hard
Stability and instability	The economy is self-stabilizing	Stability and instability are both characteristics of the economy
Evaluation	is confined to the presence of unexploited mutual gains (Pareto-inefficiency)	also includes fairness

The emerging paradigm in the right-hand column of Table 1 provides a very different vision of the economy. One that accords much more closely with the questions raised by students centred on the problems societies face.

To take one example – the standard paradigm ignores the concept of power. This arises because it assumes complete information, and its corollary, complete contracts. An important mid-20th-century economist, Abba Lerner, attributed the success of the standard paradigm to this assumption:

> "An economic transaction is a solved political problem ... Economics has gained the title Queen of the Social Sciences by choosing solved political problems as its domain." (Lerner 1972)

Lerner went on to argue that the conflict of interests that exists in every transaction is fully resolved in a contract that will be enforced by the courts, *not* by the parties to the transaction. If we insist on employing only the standard competitive model, based on complete contracts, there is no room for politics. If the worker did not work as hard as she agreed to, then she simply would not be paid. The employer would have no need to exercise any power over the employee – for example through the threat of dismissal – because the contract was sufficient in itself to guarantee the outcome needed for the firm to make profits.

If we assume a complete employment contract, this also means that the employer would have no need to be concerned about the prospective employee's preferences, for example, the employee's work ethic, or the worker's desire to spend the day messaging friends. A result of these and other assumptions of the old benchmark model was that economists could assume that "the Queen of the Social Sciences", could reign alone, ignoring the insights of history and the other social sciences.

Using the input of dozens of economists around the world, the new curriculum motivates teaching the tools of economics by complex problems. Addressing student concerns and transforming the introductory course to reflect what economists now know and do are strongly complementary objectives.

It works.

Does the one year CORE introductory course prepare students for further study in economics?

It is taught at UCL by Antonio Cabrales and me, at Sciences Po by Yann Algan and at the Toulouse School of Economics by Christian Gollier. At UCL, we compared the exam results for the unchanged standard second year courses of cohorts that had taken the CORE course and that had not. In their intermediate micro and macro sequence, CORE students did markedly better than previous cohorts. This is far from the only way to evaluate the new curriculum; but it is encouraging. Our interpretation is that the CORE cohort was more engaged with economics and excited about going on.