

Economists and Crises.

About

Rethinking Economics

Rethinking Economics was formed in the wake of the Global Financial Crisis, a crisis which showcased the centrality of economics to our societies while also exposing the many failures of conventional economic thinking.

We are an international network of students, academics and professionals who campaign for curriculum reform in Economics. Our vision is of a discipline that is pluralist, applied, critical and diverse.

Through a mixture of research, events and engaging projects, Rethinking Economics connects people globally to discuss and enact the change needed for the future of economics, and to propel the vital debate on what economics is today.

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Foreword

By Professor Jayati Gosh

This brief yet effective report is a searing indictment of the inability of the economics profession to address effectively the central economic questions of our times: the ongoing health and economic crisis; the economic strategies required to cope with climate change; rising inequality of wealth, incomes and opportunities. This is more than a collective failure of those engaged in the discipline; it also reflects power imbalances that have led to loss of diversity in theoretical frameworks, empirical approaches and more recognised practitioners. This in turn has impoverished both research and teaching in economics.

What is now seen as “mainstream economics” began as a branch of moral philosophy—but it has moved very far from that in orientation and methodology, becoming increasingly esoteric and yet more powerful in determining official policies through policy recommendations that use technocratic language to evade public interrogation. At the same time, it is less able or even willing to address contemporary economic challenges. Those who pointed to and criticised these trends were generally relegated to the sidelines of the discipline, marginalised as something of a lunatic fringe that could be conveniently ignored. Fortunately, there is now widespread pushback against this—and what is cause for the greatest hope is that this is increasingly led by the younger generation of economists across the world.

This report, based on a survey conducted among 920 economics students across the world, is a clear, coherent and incisive description of so much that is simply wrong in the way economics

is taught and represented in wider society. It is disturbing to realise that students seem to be more aware of the contradictions and failures of the discipline than their teachers. The report notes that “In the catastrophic global recession we now face it is economists who are called upon for solutions, therefore it is crucial economics courses cover the unorthodox policies that have proved to be vitally important during the pandemic.” Yet they are not being taught about alternatives to market mechanisms for the delivery of essential goods and services during a pandemic, or the role of labour market interventions like furlough schemes.

The students surveyed in the report are dominantly interested in crucial questions like do we determine value in society and particularly wages of different kinds of workers, and why the wages of “essential workers” do not reflect their value to society. They are concerned not only about the absence of such questions in the curriculum, but also that, when answers are provided, they can serve particular socio-economic and other interests, without making this explicit. The report notes that “mainstream economists’ papers and proposals are rarely, if ever, presented in a way that is open and transparent about their inherent biases.” And they are candid about the possible reasons for this, in ways that do not reflect so well on the gatekeepers of the discipline.

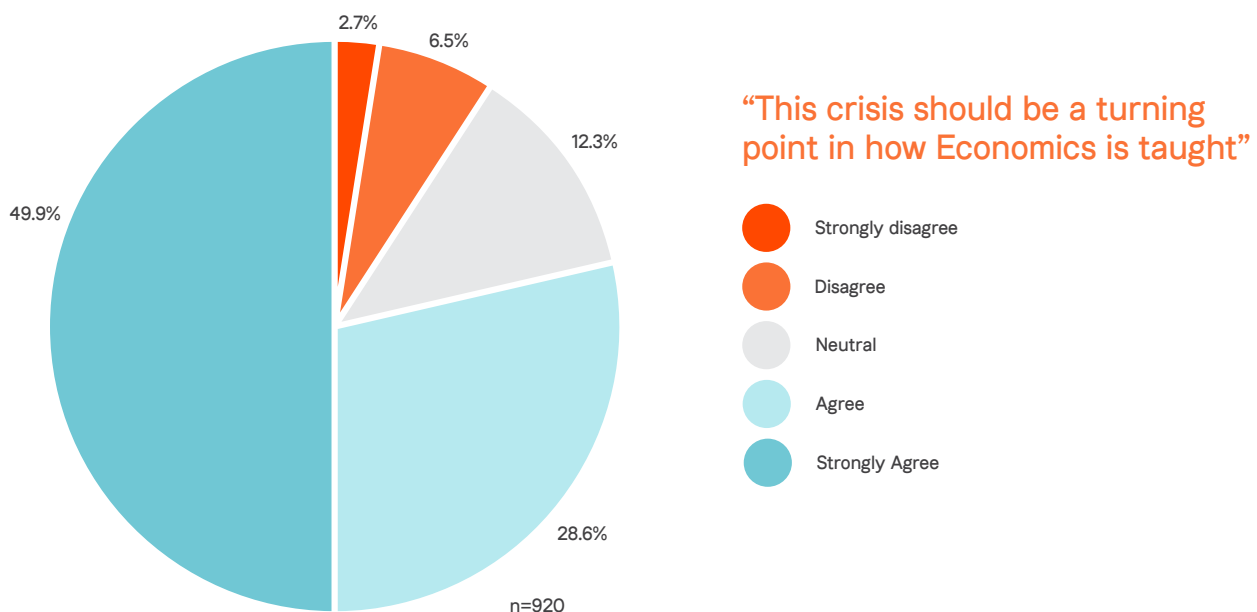
This report should really serve as a major wake up call, because it is a voice of reason at a time when such reason is urgently required. In the end, it seems, the students will save us. More power to them and to their sensible pluralist vision.

Executive Summary

A Consensus for Change

In this report we present the results of our investigation into how well economics degrees have prepared students and graduates to understand the Covid-19 crisis, the environmental crisis and the crisis of systemic bias and social exclusion.

78.5% of the economics students and graduates we surveyed agreed or strongly agreed that this crisis should be a turning point in how Economics is taught; this consensus for change held across different levels of study and RE affiliation (Appendix 1).



We argue that the economists of the future should receive a training that is critical, pluralist, interdisciplinary and applicable to real world problems.

This report demonstrates how economics courses are currently falling short of this vision and failing to prepare economics graduates for the effects of a multitude of crises. From this point forward, it is vital that the discipline better applies itself to the “real-world”, is honest about bias and learns from other subjects and schools of thought to better equip its graduates for a world that is so reliant upon its economists.

Introduction

An overwhelming majority (78.5%) of economics students and graduates agree that the time for change is now. The following report explores the key results of this survey in the context of the three aforementioned crises: COVID19, Systemic Bias and Social Exclusion, and the Climate Emergency. Within each of these areas we highlight where economics students and graduates believe change is most necessary.

In this report we use the term ‘Mainstream Economics’ to signify the version of neoclassical economics that dominates textbooks and lecture halls across the world (Skidelsky 2020). Mainstream economics is one that defines the subject by a particular methodology rather than by the economy as a field of study.

The definition of neoclassical economics has changed over the last few decades but in this report we define it as a methodology that is based on three key assumptions; individualism, optimisation and equilibrium. Importantly, our argument is not specifically ‘anti-neoclassical’, but rather that its dominance crowds out other schools of thought and suppresses pluralism in our education.

This report also refers several times to ‘Economics Degrees’. We recognise that they are not all the same, with some containing critical, applied, heterodox and/or pluralist material. However, through a combination of curriculum research and self reporting by our 120 member groups across 6 continents, it is clear that a significant number of economics degrees worldwide teach primarily a neoclassical framework, with little to no requirement of critical engagement with other schools of thought and other disciplines (Earle, Moran and Ward-Perkins, 2017).

We use the data collected to demonstrate the need for curriculum reform and suggest different ways in which economics degrees could be improved. It is our hope that these findings will contribute to the development of a reformed economics education that lends itself to producing the economists we need in times of crisis.

²See Appendix 2 for a detailed description of these concepts. Figure from econocracy in appendices.

Methodology

Rethinking Economics (RE) designed and published a survey to investigate how well economics degrees are preparing students to understand the generation defining crises we face.

The survey questions asked the extent to which students and graduates (used interchangeably with 'students') felt neutral, agreed or disagreed with ten statements about economics. Through a vetting process, we were careful to ensure that these statements, see Appendix 2, offered respondents the chance to respond genuinely. From these we were able to view quantitatively the extent to which students felt satisfied or otherwise about aspects of their economics degrees. We mainly present these results as descriptive statistics to capture general trends but also run a basic logistic regression on the data to explore how certain characteristics correlate with a certain answer.

The survey also asked students open-ended questions about what they would like to see added to their course and their favourite economists. These questions enabled students to elaborate on their answers and offered insight into what students want to see added to their courses in the future.

We were proactive in circulating our survey so that it was seen and completed by a large, representative sample of economics students and graduates. Aside from promoting the survey on Rethinking Economics social media platforms, we asked University Economics

Departments to share the survey and paid for targeted adverts via Facebook and Twitter to ensure we reached far outside any potential RE echo chamber. This enabled us to receive 920 responses. Of the students and graduates who completed our survey, 71.9% were not, and had never been, associated with RE or any of our partner organisations. Therefore we are confident that our results are an accurate reflection of the overall economics student body.

Furthermore, by translating the survey into Portuguese, Spanish and Italian we were able to hear from students who did not speak English. Overall, students and graduates from 85 countries across all six continents completed the survey with British, American and Indian students and universities the most commonly represented.

A significant number of students and graduates from all levels of university study completed the survey. Overall 49.7% of respondents study or studied at the Bachelors level, 36.2% at Masters level and 14.1% at PHD level with over 80.0% having studied economics as their primary subject. Of those surveyed 36.3% identified as female, 61.9% as male with just under two percent identifying as neither or preferring not to say. This is reflective of the under representation of women in Economics - while there is no global data, the proportion of economic undergraduates that are female in the UK is just over a third with a similar picture in the US and Australia (Crawford, C. Davies, N.M. and Smith, S. 2018).

Out of those surveyed, 42.1% had graduated before 2020, 19.1% were graduating in 2020 with the rest (38.9%) expecting to study until at least next year. Respondents studied at a wide variety of Universities, including many of the top ranked economics departments such as Harvard, MIT, Stanford, LSE, Oxford and Cambridge. 12.7% of respondents study or have studied at the University of Warwick; this is somewhat of an outlier with the number of responses likely due to the department kindly sharing the survey multiple times, therefore to try and lessen the bias this has on results, a control dummy is included in regressions indicating whether an individual studied at Warwick.

Although we aimed our survey at economics students and graduates, we included an option for those who have never studied economics to fill out our survey. This also consisted of asking respondents whether they strongly agreed, agreed, felt neutral, disagreed or strongly disagreed with different statements about economics and the role of economists. 174 non economics students or graduates filled out the survey which offered an insight into the public's perceptions of the discipline. Due to the smaller sample size we don't discuss these results in detail in this report, however selected statements where the overwhelming majority agreed or disagreed with a statement are mentioned.

“Of the students and graduates who completed our survey, 71.9% were not, and had never been, associated with RE or any of our partner organisations.”

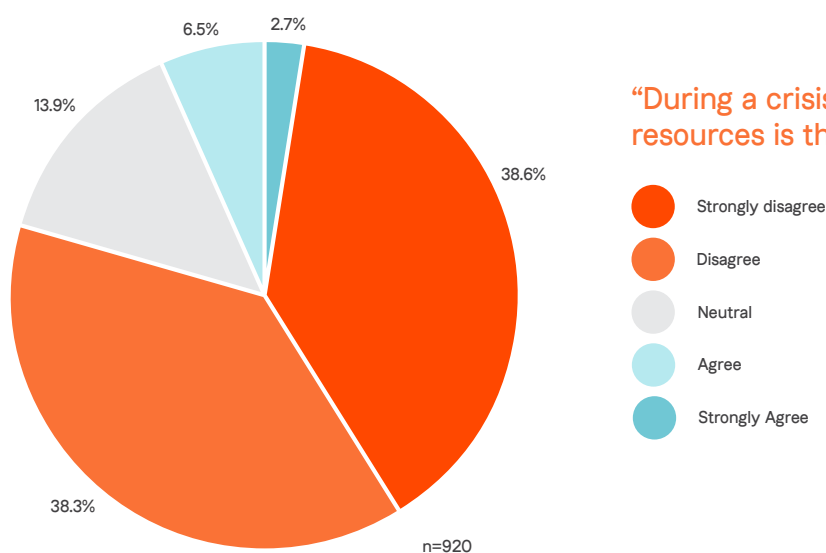
Economics and the COVID-19 Crisis:

The coronavirus pandemic has resulted in a radical shake up of our social and economic lives. Societies across the world have been forced to rapidly adapt to new ways of shopping, working and socialising.

Citizens in many countries have been faced with shortages of essential goods due to panic buying and the disruption of supply chains. In some countries the authorities have had to intervene to ensure their citizens had continued access to even basic food staples. As well as governments taking action, businesses and citizens have taken responsibility for the welfare of others; shops have implemented emergency measures to ensure those most in need were able to access stores, while mutual aid groups have been rapidly assembled with members

volunteering to support vulnerable members of their communities.

“Econ 101” teaches us that goods are allocated according to the price mechanism (Mankiw & Taylor, 2017: Chapter 3), when there are fewer packets of toilet roll, the price goes up until enough people stop ‘demanding’ it. Effectively, as scarcity increases, more and more people are priced out of the market until we reach equilibrium. When we are talking about basic needs such as toilet paper or soap, citizens being ‘priced out of the market’ is extremely problematic, especially in the midst of a global health crisis. The ramifications of rapidly rising prices are felt way beyond the confines of a supply and demand model - yet the ethics of this phenomenon are not debated in our classrooms.



“During a crisis, the best way of allocating resources is the price mechanism”



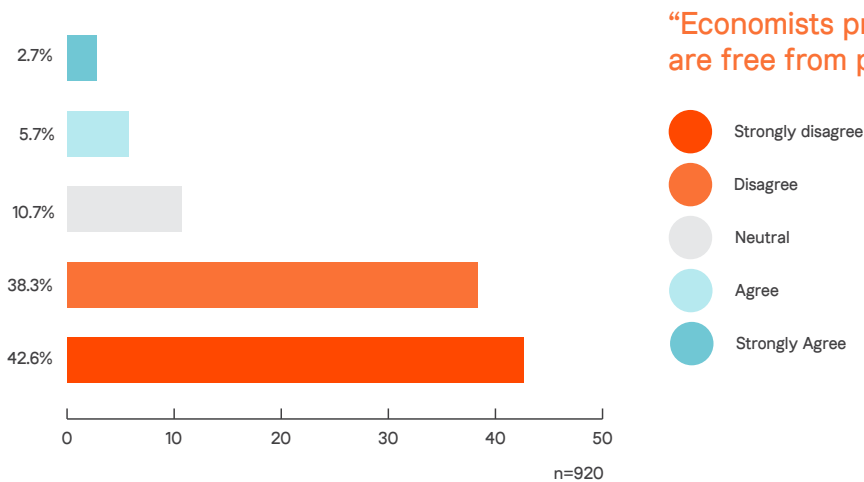
As the emergence of mutual aid and the interventions of businesses and governments have demonstrated, there are other ways in which resources could be allocated. 76.9% of survey respondents did not think that the price mechanism was the best way of allocating resources during a crisis, but as economists we are rarely taught about any alternatives. 42.5% did not agree that their degree had taught them about the policy measures introduced in the crisis. Radical policy interventions such as furlough schemes do not have a place in neoclassical textbooks, nor do mutual aid groups or the seemingly altruistic behaviours of big businesses who, for example, introduced rationing policies to ensure continued access to essential products. In the catastrophic global recession we now face it is economists who are called upon for solutions, therefore it is crucial economics courses cover the unorthodox policies that have proved to be vitally important during the pandemic.

Workers who were previously described as ‘low waged’ or ‘low skilled’ have been rebranded by the media as ‘essential’ or ‘key’ workers. The Competitive Labour Market model taught in mainstream economics (Mankiw & Taylor, 2017: Chapter 17) asserts that wages are determined by the supply and demand for labour and individual workers’ marginal productivity. As lectures are all too often based on theory and abstract problem sets, there is no space for discussion about how, in reality, wage levels can be affected by the power relations between workers and employers, or by the systemic oppression of certain groups. Examining the data and comparing how successfully theories and policies match up to real world phenomena is an activity we need to see more of in tutorials.

The presentation of economics as a value free science discourages students from interrogating the relationship between values and wages and asking important questions about how wages should be set, how we determine value in society and whether wages are at the levels we deserve. 44.0% of students and graduates surveyed, including 39.2% of those at the PHD level, did not agree that their courses had taught them the link between how society values workers and their wage. Meanwhile, of the non economics students surveyed, only 7% agreed that essential workers’ wages reflected their contribution to society. The lack of discussion of this position, in contrast to the mainstream theory of marginal productivity, leaves students with only a one dimensional understanding of the issue.

The education we campaign for is one in which the view that wages should reflect marginal productivity is openly questioned and debated, and the view that wages should reflect a contribution to society, or the skills of the individual workers, is given an equal opportunity for airing and scrutiny.

“ Only 8.5% of students surveyed agreed that Economists’ proposals are free from political bias ”



For this to become a reality, the discipline must recognise the role of political bias in economists’ policy proposals. Only 8.5% of students surveyed agreed that Economists’ proposals are free from political bias, yet mainstream economists’ papers and proposals are rarely, if ever, presented in a way that is open and transparent about their inherent biases.

Economists’ political bias is widely recognised by students and graduates and has now been demonstrated empirically (Javdani and Chang, 2019). An economist’s values and beliefs shape not only their goals, but the methods they use to achieve these, a fact that continues to be neglected in the teaching of the subject.

An example of this can be seen in the teaching of the Randomised Control Trial (RCT) method. RCTs have become drastically more commonplace in recent years and in 2019 its key proponents Esther Duflo, Abhijit Banerjee and Michael Kremer were endorsed by the Swedish Central Bank with a Nobel Prize for Economic Sciences. The method claims to find the true causal effect of different economic treatments (whether it is a vaccine, supply teacher or cash transfer) yet there is a growing body of research which suggests RCTs are no silver bullet and

actually have methodological, ethical and theoretical issues (Deaton and Cartwright, 2018).

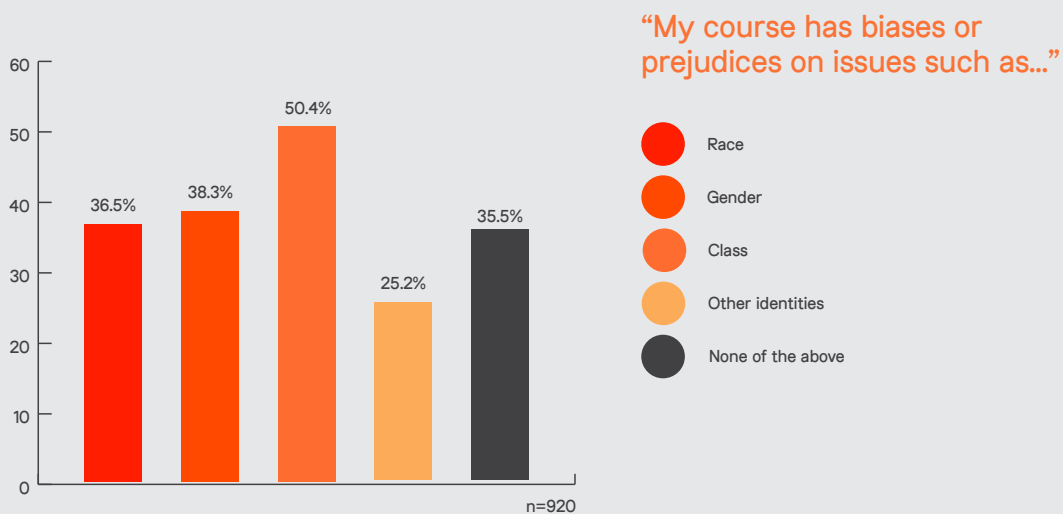
A recent, highly-controversial paper used RCTs to investigate the effect of disconnecting water supply on payment for water and sanitation services amongst poor neighbourhoods in Nairobi while monitoring the impact this had on political support for the government. Even if the authors, who included senior World Bank researchers, found unbiased results that enabled causal claims to be made the treatment itself, disconnecting disadvantaged communities from their water supply, raises huge ethical issues. The results aren’t value free or neutral as the very premise of the trials were based on an ethical judgement of what constitutes an acceptable intervention. Moving forward, this is what the teaching must reflect.

The failure of economic discourse to acknowledge the role of political bias in research and policy enables economists to block difficult questions surrounding ethics with the straw man of apolitical economics methods. Instead, economics courses must empower students to critically debate the underlying assumptions of theory which will only improve the quality of research and thus policy recommendations that economists generate.

The crisis of systemic bias and social exclusion

Economists have long been reluctant to examine the systemic bias within our own discipline, and its contribution to the oppression and marginalisation of particular groups within society. Of late, the Black Lives Matter movement in particular has led to a mass reckoning amongst economists and economic institutions about their roles in perpetuating bias against those racialised as black. The results from our survey attest to such a trend, and show that a majority of students believe their economics courses suffer from systemic bias.

Such a question is limited in its scope as it fails, inevitably, to fully identify the presence of unconscious bias that even respondents themselves may not be actively aware of. Notwithstanding, the fact that a vast 64.5% of students believe their courses are systematically biased is indicative of a very fundamental affliction.



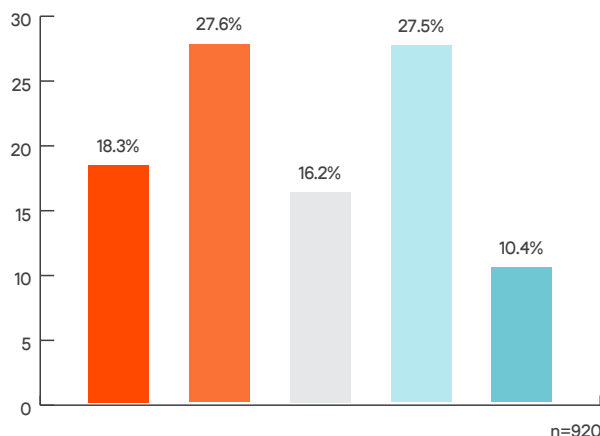
Such a response is no doubt due, in part, to the lack of attention paid to the marginalisation of different groups throughout the discipline.

Only 7 pages of Mankiw’s bestselling textbook (Mankiw, 2008), a cornerstone of most “Econ 101” courses (Earle, Cahal Moran and Zach Ward-Perkins, 2017), are dedicated to discrimination whilst in the top five economics journals between 1990 and 2018, only 49 out of 7567 papers (0.65%) explicitly addressed discrimination (Bohren et. al, 2020). Perhaps more staggeringly, a recent survey of 500 academic economists showed only 38% of those in mainstream economics departments claim to teach courses that allow for an understanding of racialized inequalities and/or the role of European colonialism in shaping economic outcomes. Meanwhile, 87% of economists in pluralist or heterodox departments, and 84% of economists in other departments (“other” includes development studies, political economy, politics, and interdisciplinary departments) claimed to allow for this understanding of racialized inequalities and colonialism (Kvangraven and Kesar, 2020).

The exclusion of discrimination by economics courses is underpinned by a persistent underrepresentation of the marginalised groups in question. 45.9% of respondents

disagreed that they regularly hear from male and female economists from different ethnic and geographic backgrounds whilst only 39.9% agreed.

This underrepresentation is no secret. Despite women constituting 30% of first-year PhD students at more than 40 economics programs in the US, only 17% of the papers published in the top five academic journals have female authors, as economist Caroline Krafft’s research lucidly highlights. The economics profession also includes disproportionately few members of historically underrepresented racial and ethnic minority groups, not only relative to the overall population, but also to other academic disciplines (Bayer and Rouse, 2016). Almost as if said exclusion was not enough, the disdainful treatment of those students and graduates who do surmount the odds – and make it into the upper echelons of the subject – led former Fed economist Claudia Sahm to brand economics as a disgrace. In this toxic culture, in which harassment is rampant and goes unpunished, it should be no surprise that Harvard PHD economists were significantly more likely to be depressed or anxious than other students; or that an American Economic Association survey found only 31% of economists under the age of 44 felt valued within the discipline.



“I regularly hear from both male and female economists from different ethnic geographic backgrounds”

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Underrepresentation and marginalisation within the discipline matter. Survey respondents who identified as female were 83.9%*** more likely to find their course to be biased along gender lines (see Appendix 3 for the specification of this Logistic Regression). It is no surprise that wealthy, white men are much less likely to recognise inherent biases in economic thinking and policy, as it is their experience that is taken as standard and woven into their theories and models. By the same token, it is more likely that women, afflicted as they are by the gender pay gap, identify the inherent biases in a theory that says workers' wages are a reflection of their productivity and not their bargaining power, employers' prejudice or lack of available maternity support.

Currently, taste-based discrimination (Becker, 2010) and statistical discrimination (Arrow, 1998) are the two dominant perspectives on discrimination in mainstream economics, with both focusing heavily on deliberate decisions by individuals. However, as Harvard Professor of Sociology Mario Small notes, this leaves little room for courses to discuss implicit bias and institutional discrimination, undoubtedly two crucial parts of the overall picture. If mainstream economists broadened their framework to include the insights gleaned by other social sciences, they would be better equipped to acknowledge discrimination on racial, gender or class grounds as a fundamental part of how our economies and institutions function, as opposed to a result of imperfect decision making by single market actors. A recent open letter by William Spriggs - former Chair of the Department of Economics at Howard University - implores economics to stop trying to solve systemic issues with marginal analysis and

policies, and urges the discipline to join other social sciences and recognise race as a social construct.

Rather than unwaveringly asserting that "markets contain a natural remedy for discrimination" (Mankiw, 2008: 409), economics degrees should draw on literature from different schools of thought, such as stratification and feminist economics, to formulate a more complete, interdisciplinary understanding of how and why discrimination persists. Indeed, results from our survey show that there would be overwhelming support from students for this type of comprehensive approach.

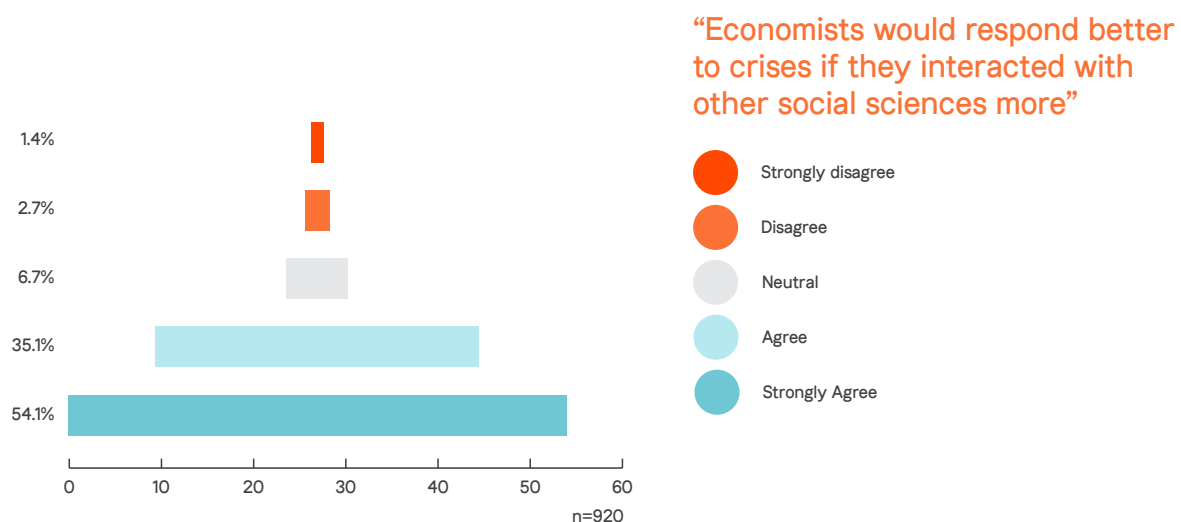
“Survey respondents who identified as female were 83.9% more likely to find their course to be biased along gender lines”

³ The Taste based discrimination explanation is that individuals discriminate to the extent they are willing to pay a price to avoid associating with people of a particular race, religion or sexuality (Becker, 2010).

⁴ The Statistical discrimination approach theorizes that economics agents, e.g. employers, make inferences about an individual based on the average characteristics of a group to which they belong, whether its' ethnicity or religion, when they have insufficient information (Arrow, 1998).

89.2% of students and graduates surveyed either agreed or strongly agreed that economists would respond better to crises if they interacted with other social sciences more. Sociology, anthropology, psychology, politics and history, to name but a few, have long traditions of examining discrimination and systemic oppression by utilising a plurality of methods and tools. As alluded to, this starkly contrasts with economists' traditional explanations that seek to apply 'universal laws' irrespective of social context. To legitimise the universality of these laws, mainstream economists have reduced individuals to "homo-economicus" - an atomistic individual with an infinite ability to make rational decisions, whose sole concern is maximising utility. This model of humanity contradicts all evidence from other social

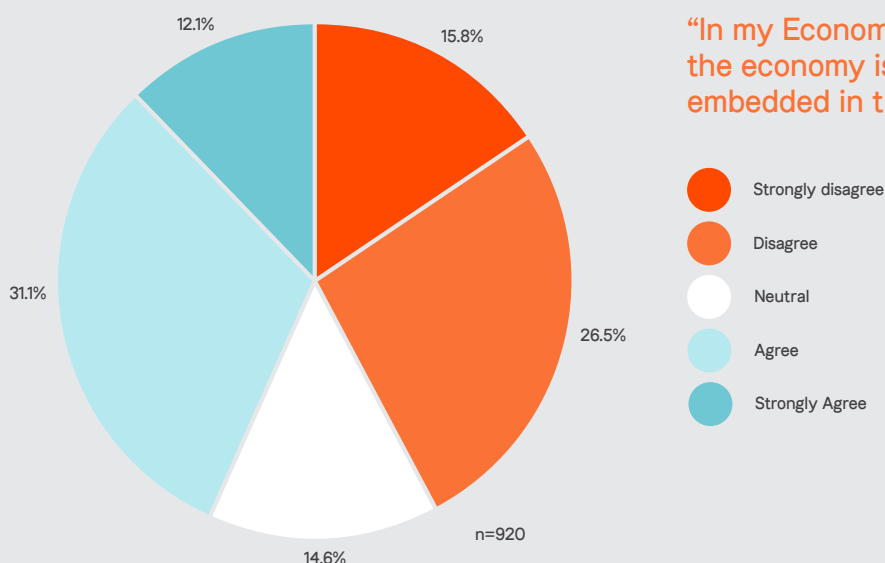
sciences, yet it remains the foundation of mainstream economic theory taught by universities across the world. Economists must develop a more holistic picture of the individual, rather than relying on a completely debunked simplification (Henrich, J et al. 2001) for the sake of convenience, if they are to develop a truer understanding of what it is to be human. This is not just the more faithful depiction, but such a tendency would, in turn, improve both the disciplines understanding of discrimination and the usability of its analysis.



Economics and the Environmental Crisis

It's been just over a year, albeit a very long one, since a week of climate strikes across the world saw over 7.6 million people take to the streets to protest continued environmental destruction. In the past 12 months, unprecedented fires have swept Brazil, Australia and the West Coast of the United States; record breaking floods left a third of Bangladesh underwater and Greenland's ice sheet melted past a point of no return (King, Howat, Candela, Noh et. al 2020). Nine of the ten warmest years on record have occurred since 2005 (NOAA, 2020) and a recent WWF report shows how devastating human caused environmental destruction has been for the planet's wildlife populations which have plummeted 68% since 1970 (WWF, 2020).

The situation is becoming both progressively more deadly, and, to the effect of burdening those least responsible, more disproportionate in its effect (Oxfam, 2020). As economies seek to transform their infrastructure to reduce and eventually undo the effects of global warming, economists have taken a central role in steering this transformation. Despite this ever increasing urgency results from our survey suggest that the teaching of economics fails to fully equip graduates to understand the impacts of climate change.



“In my Economics Course I am taught how the economy is connected to and/or embedded in the environment ”



“42.3% of economics students and graduates disagreed with the statement ‘In my Economics Course I am taught how the economy is connected to and/or embedded in the environment’”

This result held for all levels of study with 42.2% of Bachelors, 43.0% of Masters and 40.8% of PHD students not feeling their economics courses have included the links between economies and the environment. How can economics students hope to grapple with crucial issues like marine biodiversity loss or reduced agricultural yields, due to changes in water cycles, if the models and theory on their courses dictate that economies are separable and removed from the environment?

The vast gap between some of the most decorated economists’ theoretical models and reality has become increasingly evident. For example, William Nordhaus, winner of the 2018 Nobel Memorial Prize for Economic Sciences, used his mathematical “DICE model”, which balances the present costs of reducing global warming with the long term costs of a warmer planet, to calculate a path to 4 degrees of global warming as optimal.

4 degrees. A temperature increase which scientists say would lead to the collapse of civilisations (Moses, 2020). The widespread acceptance of Nordhaus’s, seemingly absurd, “optimised” policy recommendation has been fostered by the disciplines’ failure to properly incorporate the environment into it’s teachings about the economy. It is crucial that economics courses recognise that economies and environments are inextricably linked and interdependent so that graduates can begin to learn from the mistakes of economists like Nordhaus and make more sensible predictions and recommendations.

Furthermore, climate change is another area in which other disciplines have indispensable expertise and knowledge which economists can’t afford to ignore if we are to transform our economies and achieve our climate targets. One of the major mistakes of Nordhaus was overly relying on economists’ predictions about the potential costs of a temperature increase which were far more conservative than those of the environmental scientists (Keen, 2020). Economics must seek to build coalitions with scientific experts to help in the pursuit of solutions to the climate crisis. Atop this, when students were asked what topics, themes or methodologies they would like to see added to their course in the future, increased environmental and ecological content was one of the most common requests.

The onus is on Economics departments to meet their students’ and graduates’ demands to develop courses which recognize the centrality of the environment to all economic activity. To achieve this, it is vital that economics degrees incorporate knowledge from different schools of thought and disciplines so students receive the holistic economics education they need to help tackle the climate crisis.

Conclusion

For many of those studying now Economics, the Global Financial Crisis was their first 'once in a lifetime' crisis. We are currently in the midst of a second 'once in a lifetime' crisis while simultaneously we continue on a path of unsustainable, irreversible environmental degradation in persistently unequal societies.

Our results clearly demonstrate that, according to the students, these crises are not appropriately taught or understood in the context of their degrees. The slow, albeit welcome, curriculum change that was catalysed by the GFC must continue at a much faster pace if tomorrow's economists are to be well-prepared to deal with the crises societies face.

This will require the discipline to better apply itself to the real world, be honest about bias, and learn from other subjects and schools of thought to better equip its graduates for a world that is so reliant upon its economists.

JOIN US TO CAMPAIGN FOR A BETTER ECONOMICS:

Become a member of the thriving Rethinking Economics network to discover useful resources, participate in interactive events and help campaign for a pluralist, realist and decolonized economics.

- The Diversify and Decolonize action circle campaigns for an economics discipline which more accurately depicts the enduring impacts of colonialism and which recognises and platforms a more diverse, representative plethora of voices.
- The Curriculum Research action circle specifically examines and investigates economics curricula at various universities across the world to offer actionable insights on how they can be improved.
- Economists for Future campaign for an economics that takes climate science seriously, they have recently released a report and launched an open letter urging for reform.

Whether you are a student, practitioner or teacher we want to hear from you.

Please contact info@rethinkeconomics.org for more information on how you can get involved.

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Appendices:

Appendix 1

This crisis should be a turning point in how economics is taught

	All	Level Of Study			Re Affiliation	
		<i>Bachelors</i>	<i>Masters</i>	<i>PHD</i>	<i>None</i>	<i>Affiliated</i>
Strongly Disagree	2.72%	0.88%	3.00%	8.46%	3.15%	2.12%
Disagree	6.52%	7.22%	3.60%	11.54%	7.46%	1.27%
Neutral	12.28%	12.91%	10.51%	14.62%	14.26%	5.93%
Agree	28.59%	31.07%	27.33%	23.08%	28.03%	27.12%
Strongly Agree	49.89%	47.92%	55.56%	42.31%	47.10%	63.56%
<i>Sample size</i>	920	457	333	130	603	236

Appendix 2

<i>Please indicate to what extent you agree or disagree with the following statements</i>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
“This crisis should be a turning point in how Economics is taught”	2.72%	6.52%	12.28%	28.59%	49.89%
“My economics education has helped me understand the way that people and communities have responded to this crisis”	6.74%	17.39%	14.89%	42.61%	18.37%
“I understand how a human life is valued in Economics”	10.54%	17.93%	15.00%	41.30%	15.22%
“Economists’ proposals are free from political bias”	42.61%	38.26%	10.65%	5.65%	2.83%
“In my Economics Course I am taught how the economy is connected to and/or embedded in the environment”	15.76%	26.52%	14.57%	31.09%	12.07%
“My Economics Course has taught me about the economic policy measures we have seen introduced during the crisis”	8.04%	18.91%	15.43%	43.70%	13.91%
“My economics education has taught me the link between how society values workers and their wage”	10.43%	20.87%	12.72%	39.67%	16.30%
“During a crisis, the best way of allocating resources is the price mechanism”	38.59%	38.26%	13.91%	6.52%	2.72%
“Economists would respond better to crises if they interacted with other social sciences more”	1.30%	2.72%	6.74%	35.11%	54.13%
“I regularly hear from both male and female economists from different ethnic and geographic backgrounds”	18.26%	27.61%	16.20%	27.50%	10.43%

Appendix 3

The data we collected allowed us to specify a basic logit regression to see the correlation between a respondents gender and whether they identified gender bias on their course.

We used the specification seen below where “Zi” represents the control variables we were able to include. These controls were: a dummy for whether the respondent was currently a student; a categorical variable for the respondents age; a dummy variable for whether they are or had been affiliated with Rethinking Economics; dummy’s for those who highest level of study was Masters or PHD; a dummy for whether the respondent studies/studied at Warwick and finally a categorical variable for the country in which the respondent lives.

$$Genderbias_i = \beta_0 + \beta_1 Female_i + \beta Z_i + \epsilon_i \quad [2]$$

Running this logit regression found that respondents who identified as female were 83.9%*** more likely to identify gender bias on their course compared to those who identified as men, other or who preferred not to say - a correlation that was statistically significant at the 1% significance level. This can be seen in the Table 1 below, where coefficients are reported as marginal effects, along with the results from a base regression with no controls.

Table 1: Gender and Identifying Gender Bias

Variables	[1] Gender bias	[2] Gender bias
Female	0.596*** (0.140)	0.839*** (0.178)
Current Student Dummy		-0.363* (0.216)
RE Affiliation		0.619*** (0.200)
Masters		-0.0555 (0.209)
PHD		0.219 (0.288)
Constant	-0.703*** (0.0878)	-0.00362 (0.804)
Observations	920	839
Age	NO	YES
Country	NO	YES
Warwick Dummy	NO	YES
Standard errors in parentheses ***p<0.01, **p<0.05, p<0.1		

Please note the reduced sample size is due the question about RE affiliation only being completed by 839 of the respondents.

Appendix 4

The three prongs of Neoclassical Economics, as taken from *The Econocracy: The Perils of Leaving Economics to the Experts* - Joe Earle, Cahal Moran and Zach Ward-Perkins.

Box 1: The Three Prongs Of Neoclassical Economics

Individualism: Neoclassical theory focuses on the behavior of individual agents, an 'agent' being defined as some sort of economic decision-maker. These include agents such as consumers, who must decide what to buy, but also entails modelling the production decisions of firms or even the political decisions of governments as individual decisions. Neoclassical economics therefore has an 'atomistic view of the world, and tries to build an understanding of the economy as a whole from the decisions of individuals.

Optimisation: These agents seek to optimise explicit goals in their behaviour. The definition of 'optimise' is to "make the best or most effective use of a situation of resource." A consumer might want to use the money they have to buy the commodities they want the most; a firm might want to get the highest profit given the materials available and their technological prowess. The aims of agents can be wide ranging and they may even suffer from faulty decision making, but in neoclassical economics agents almost always optimise some goal.

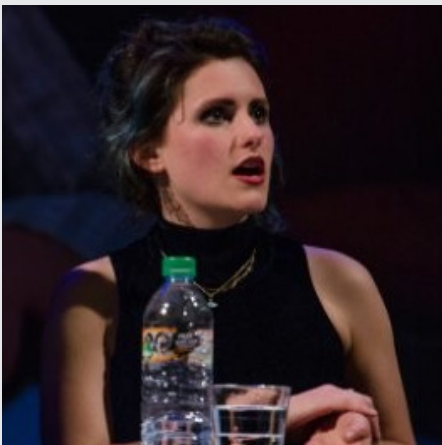
Equilibrium: The decisions of individual agents must balance, a situation which is called an equilibrium. Agents make decisions about what to produce, buy and sell, and invest in, and if these decisions are correct then no agent will have an incentive to change their behaviour. Agents adjust their behaviour until they have, based on their individual judgement, achieved the outcome which is best for them, and there is no reason for anyone to alter their behaviour. The result is a stable equilibrium.

About the Authors



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Oliver Hanney is a final year economics undergraduate at the University of Warwick. He has worked as a Research Assistant at the Economics Department of the Universitat Pompeu Fabra while also being heavily involved with the Rethinking Economics organisation, both as a part of the research team and helping to organise a new RE webinar series.



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Catriona Watson is the Co-Director of Rethinking Economics. A founding member of the Post-Crash Economics Society at the University of Manchester she has been involved in the movement for pluralism in economics since its inception. She edited 'Rethinking Economics: An Introduction to Pluralism' and now works to grow the student movement and support campaigns to reform economics education all over the world.



Bandile Ngidi

Bandile Ngidi is the Project Co-ordinator for the Rethinking Economics project at the IEJ. Bandile has previously worked at the National Minimum Wage Research Initiative and Oxfam South Africa. He holds a Masters in Development Theory and Policy from Wits University. He joined the IEJ in August 2018. As part of the IEJ's Rethinking Economics projects, Bandile supports the Rethinking Economics for Africa movement (of students, academics and broader civil society). The movement promotes economic pluralism, and alternative economic discourse and economic policy. The project also does economic literacy work amongst labour and civil society in South Africa.

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