Incorporating Research Findings in the Economics Syllabus: Evidence on Genuine Sociality from Italy and the UK

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Abstract

Economics education is proving slow in incorporating into the syllabus the genuine advances made in economics research in the last few decades. As economics education relies primarily on the single approach of neoclassical economics, whilst recent advances in research have been marked by a wide variety of approaches, many of which are interdisciplinary, the methodological divide between education and research is growing wider. We attempt to measure how keen students are to incorporate research findings in the syllabus by developing a questionnaire which introduces undergraduate students in Italy and the UK to key findings in the research literature on genuine sociality, an area in which the methodological divide is very noticeable. Students display moderate support for being taught the material on genuine sociality. Students who wish to incorporate genuine sociality in the syllabus tend to be older, value virtue and have a religion.

KEYWORDS

Keywords: social economics, economics research, economics education, genuine sociality, pluralism

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[Authors' affiliations omitted]

1. INTRODUCTION

If we compare methodological approaches in economics research with those in economics education, a important difference can be observed: in economics research, we find a pluralism of approaches, whereas in economics education, we find the clear dominance of the neoclassical approach[1]. In other words, economics research is pluralistic, whilst economics education is essentially monist, that is, neo-classical. As this gap in approaches, which began to be significant sometime in the early 80's (Davis 2006), persists over time, it gives rise to a growing gap between what we learn through research and what we teach in the classroom. Increasingly, our students are being left in the dark about recent discoveries, except in rare cases where tutors, motivated by a desire to bring students up to date with the research, make a special effort to find out and teach the latest findings. In the words of University College London's Wendy Carlin, head of the CORE project to reform economics education, a fresh approach is needed which involves "teaching economics as if the last three decades had happened" and which incorporates into the economics syllabus major advances in economic theory, economic history and quantitative economics[2]. We think that teaching economics as if the last three decades of research had happened is an ethical obligation on the part of tutors, and that not doing so represents a type of social injustice that many, if not most, economics students at present experience.

What are the consequences of this growing divide between research and education? One of them is to prevent students from finding out some of the remedies which have been proposed by researchers for the problems of our age, a particularly serious state of affairs where these remedies have been applied successfully. For example, behavioural economics has much to say on how people can improve their decision making processes (see Milkman *et al* 2009), and may prove critical in developing strategies to mitigate, as well as adapt to, climate change. Another is that students are deprived of potentially important tools which they can put into practice in their jobs, including - for some students - jobs in research, be it academic or not, where they will be expected to build upon current research in their fields of study. But perhaps the most damaging effect is simply to deprive students of their right to find out about the latest developments in their subject, a right which we think enjoys a wide level of acceptance in principle at the level of higher education[3].

This paper has multiple objectives. One of these is to draw attention to the growing, damaging divide in economics between research and education methodologies, and to suggest that students have a right to demand that this gap be filled through the teaching of research findings in class. A second objective is to carry out an exploratory assessment of how keen students are to close this divide by exposing them to the literature on genuine sociality, defined as non-instrumental and intrinsically motivated concern for others (Bruni and Stanca 2008), a topic which is not normally covered in economics textbooks, and which stands in sharp contrast with the neoclassical approach of assuming largely or entirely self-interested agents[4]. This assessment represents an attempt to measure how much demand there is for incorporating so-called

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[1] Fontana (2010) reports a definition of neoclassical economics given by one of its most prominent exponents, Kenneth Arrow, at a meeting of the Santa Fe Institute in 1987: "K. Arrow […] described the neoclassical approach as the mainstream one and identified it with the general equilibrium theory (GET). […] [A]gents are endowed with rational expectations […and] make their optimizing decisions on the basis of correct predictions of future prices […]. Equilibrium is to be reached by tatônnement and the equilibrium dynamics of these models is captured by difference or differential equations." (Arrow, 1988, in Fontana, 2010).

[2] See www.core-econ.org and www.youtube.com/watch?v=Ik1ZbaKjgR4&feature=em-share_video_user.

[3] Short of coercing tutors by legal or other means into teaching students the latest research findings, a gentler approach would involve economics tutors choosing to take oaths, as medical doctors do (deMartino 2011) or as bankers in Holland have recently begun to do (Boatright 2013), whereby tutors would promise to students to provide them with insights into the state of the art in their disciplines (bearing in mind of course that this can only be done within the limits of students' knowledge and abilities).

[4] We could also have chosen to expose students to multiple topics, but at the cost of a more superficial coverage of each topic, and hence a more limited basis for students to assess if they wanted a particular topic to be taught.

heterodox material in the economics syllabus. A third and final objective is to identify which students are more likely to embrace this new material. In the process, an econometric analysis is performed which, to the best of our knowledge, is the first to be performed in this area. The paper proceeds by providing a review of the literature, following which the methodology of the study is discussed; this in turn is followed by an analysis of the data, including some suggested explanations of the findings. We end with a discussion of the results and some general remarks.

2. LITERATURE REVIEW

Economics research in the last few decades has seen the rise of new methodological approaches which has made the neoclassical approach lose its dominant status (Davis 2006), leaving the stage open to pluralism (Dow 2007)[5]. Davis (2011) observes that "much of the new research in recent mainstream economics challenges the neoclassical paradigm" and argues that the "new research strategies that have emerged in recent mainstream economics […] all have their origins largely outside of economics" (pages 13 and 14). Indeed, in addition to the historically well-established schools of thought including Austrian, Marxist, post-Keynesian and institutional, the research mainstream includes a number of multidisciplinary approaches such as behavioural economics (at the interface of psychology and economics), evolutionary economics (biology and economics) and social economics (sociology and economics) to cite just a view. The frontiers between these different schools of thought are often blurred, an excellent example being Kenneth Boulding's work, which combines aspects of economics as diverse as evolutionary economics, institutional economics, ecological economics, cultural economics, economics of grants and ethics (Dolfsma and Kesting, 2013). The CORE project mentioned at the start of the paper is no doubt a step in the right direction in terms of creating a textbook that is inclusive of the different schools of thought, though an expansion of its coverage of the various schools would be, in our view, highly desirable. Whilst such diversity is to be welcomed in terms of the variety of contributions to knowledge, an important concern is that each school of thought is developing independently of the others, and this uncoordinated evolution need not be socially optimal, leading commentators such as Garnett to ask whether it would be useful for non-neoclassical economists to produce a "unified alternative to neoclassical economics" (Garnett 2012).

At the same time as research has enjoyed a blossoming of methodological pluralism, economics education has hardly changed at all, retaining as its methodological basis the neoclassical approach (Knoedler and Underwood 2003)[6]. This is particularly evident in the microeconomics textbook, which, according to Colander (2005), "still reflects the research approach to economics that economists followed in the 1930s to 1960s", whilst the structure of the textbook "still reflects the structure that was developed in the 1950s with Paul Samuelson's book (Samuelson 1948)". Introductory economics textbooks are particularly prone to this problem, with leading textbooks failing to include heterodox material (e.g. Marxist, institutionalist, feminist and ecological) (King and Millmow 2003, Green 2013). This is a serious omission in the light of the finding by Salemi and Siegfield (1999) that a massive 40% of first year students in North American universities take an introductory economics course but the majority of these take no further courses in economics.

A variety of approaches have been suggested to overcome the reliance on a single (albeit mathematically very elegant) school of thought, which can be grouped into two categories. In the first, a tutor seeks to provide students with a portfolio of different, contending schools of thought (see Barone 1991), in what is known as a "top-down" or "teacher-centred" approach[7]. In the second, the emphasis is

[5] Dow (2007) and Davis (2006) discuss in detail the forces that have led to pluralism in economics research.
[6] Zuidhof (2014) discusses the intriguing possibility that economics textbooks may have encouraged the spread of neoliberalism, which, according to this author, "constructs the market as norm and means of government", thus giving a very powerful role to the free market aspect of the neoclassical school.
[7] In so far as the tutor imposes a set of topics, there is no difference here with the conventional, single school approach which focuses on neoclassical economics.

on encouraging students to develop critical thinking and reflective skills and to let them freely chart their own path in the unknown (to the students) waters of the economics discipline, often by leaving them plenty of space to pursue issues that are close to their heart as part of a process of pedagogical self-determination (Emami 2015, Girardi 2013); here the tutor acts like an experienced guide for the student, in what is known as a "bottom-up" or "student-centred" approach. Given the (partial) absence of pre-defined syllabus content[8], the bottom-up approach presents the tutor with the difficult question of how to assess students' work; this is likely to place more emphasis on the students' learning process, and less on actual content, than if the tutor adopts the top-down approach.

The gap between "what economist teach and what they do" was first identified by Colander (2005) [9]. However, Colander argues against making fundamental alterations to the economics textbook, since in his view "the teaching of economics boils down to telling stories" and the stories which economics textbooks tell, namely "TANSTAAFL" [there ain't no such thing as a free lunch], optimization at the margin and the positive effect of competition", are generally robust. In addition, Colander thinks that the advanced mathematical techniques used by economics researchers makes teaching the lessons of research difficult. We disagree. First of all, economics research has increased the number of robust "stories" that we can tell our students, and these need to find their way into the textbook. For example, we now have plenty of evidence showing that sometimes people act altruistically, so that in actual fact "sometimes there is such a thing as a free lunch"[10]. In addition, many of the findings of research can be taught non-mathematically, such as those from the economics of altruism and reciprocity, those of behavioural economics, and those from the economics of happiness, to name but a few. Essentially this is because most findings in economics have a clear intuition, which economists are usually careful to point out.

Ferguson is another author who points out that undergraduate economics education lags state-of-the-art research, and that "it is time to move the undergraduate curriculum forward into this century" (Ferguson 2011, page 46). In particular, Ferguson believes that undergraduate theory should be updated to include advances in game-theoretic representations of collective bargaining. We agree with him, but go further and suggest that modern branches of economics that have an empirical foundation should also be included in the economics syllabus, including the aforementioned areas of altruism and reciprocity, behavioural economics and economics of happiness. In addition, we go further than both Colander (2005) and Ferguson (2011), and argue that there is an element of injustice in denying students knowledge of the latest findings in economics, so that tutors should strive to keep up-to-date with research and teach it in class.

The neoclassical school of thought, which economics textbooks are based on, makes a number of assumptions about human nature, the validity of which has been questioned by a plethora of studies. The assumption of rationality, for example, has been severely contested by behavioural economists such as Kahneman (2003) (see also van Staveren 2011). Another assumption that has come under heavy criticism

[8] In the words of Shackle, "The first task of a university teacher of any liberal art is surely to persuade his students that the most important thing he will put before them are questions and not answers […and] that they have not come to the university to learn as it were by heart things which are already hard and fast […]." (Shackle 1953).

[9] It would be interesting to investigate to what extent a similar gap exists in other disciplines, in particular business and management studies, as this overlaps considerably with economics (one need only consider that often economics is taught within business schools). A closely related, though different, gap is identified by Rynes, who discusses the "considerable chasm between research and practice in management" (Rynes 2007).

[10] One of the authors was once attending a lecture in macroeconomics at the London School of Economics given by a well-known professor and subsequent adviser to the Bank of England. The professor announced to the class with the confidence that comes from stating the obvious that there is no such a thing as a free lunch. During the break, the students bought the professor a lunch. Upon his return to the lecture room, the professor found the gift, and with admirable humility (prompted no doubt by the undeniable nature of the evidence), acknowledged that there was, after all, such a thing as a free lunch.

is that economic agents are largely or entirely selfish and individualistic[11]. This assumption fails to take into account the findings of behavioural, experimental, computational, evolutionary and neuro-economics and the capability approach which demonstrate the social, relational and active dimensions of human nature (Davis and Hands 2011). In particular, neoclassical economics considers genuine sociality, i.e. genuine concern for the well-being of others, as basically an extra-economic matter, or as an element to be taken into account in terms of externalities (Gui and Sugden 2005; Bruni and Porta 2011). Yet a large body of evidence indicates that people at times choose to engage in altruistic activities[12,13] in areas of life that are anything but extra-economic in nature; these include paying taxes even when the chances of being caught by the taxman are low (Lubian and Zarri 2011), making software free and open-sourced (Baytiyeh and Pfaffman 2010), tipping in restaurant to which customers are unlikely to return (Levitt and List 2007), charitable donations (Konow and Earley 2008), alumni giving to universities (Frey and Meier 2004) and volunteering (Thoits and Hewitt 2001, Parboteeah et al 2004).

In addition, a considerable and growing body of literature at the intersection of economics and psychology has shown empirically that people who are genuinely concerned with the well-being of others are happier than those who treat others instrumentally (Ryan and Deci 2001; Becchetti *et al*. 2011)[14]. For example, Meier and Stutzer (2008) analyse data from the German Socio-Economic Panel (GSOEP) for the period between 1985 and 1999 and find that volunteers are more satisfied with their life than non-volunteers. Similarly, Nezlek (2000) reviewed a number of studies showing that the quality, and not the quantity, of relatedness predicts well-being. From a pedagogical point of view, if one accepts that teaching students what can make them happy is desirable[15], then the positive association between genuine sociality and happiness strengthens the case for teaching students the material on genuine sociality.

The modern pedagogic literature described earlier which advocates the student-centred, bottom-up approach emphasizes the importance of taking the views and needs of students into account (Emami 2015, Girardi 2013). If one adopts this perspective, the question which naturally follows is: what is the attitude of economics students towards closing the gap between what we teach and what we learn, or, to put in economics jargon, how much demand is there from students for incorporating research findings in the syllabus material? Whilst we are not aware of any study that addresses this particular question - indeed this is one of the contributions of this paper -, it is a fact that students in recent times have displayed a marked desire to redesign the syllabus and to make it more pluralistic. This is important as presumably students who are inclined to welcome pluralism in teaching in general would also welcome the pluralism associated with teaching the findings of economics research, which is characterized by a variety of schools of thought.

There have been a number of well-known instances of student activism aimed at making the economics syllabus more pluralistic. In 2000, for example, a group of students in France, including students from the prestigious Grandes Ecoles, published an online petition in which they criticized mainstream economics education, in particular its domination by neoclassical thinkers and its excessive

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[11] As a consequence, some economists argue that (mainstream) economics education inhibits cooperation (Frank *et al.* 1993); this view is supported by evidence showing an "indoctrination" effect whereby some economics students (non-majors to be precise) donate less as their training in microeconomics progresses (Bauman and Rose 2011).

[12] Bolton and Ockenfels (2000) define altruism as the willingness to sacrifice own resources to improve the well-being of others without demanding anything in return.

[13] Games played in controlled experiments have clearly shown that some people act altruistically (Johannesson and Persson 2000; Fehr and Schmidt 2006).

[14] The term 'civil economy' is sometimes used to describe a movement which consists of entrepreneurs, academics and other members of society who regard genuine sociality as the true centre of economic life. This movement overlaps significantly with the non-profit sector. Relational goods, in which agents experience utility from their relationship and not just from the exchange of goods, feature prominently in the civil economy movement and have been shown to be positively associated with happiness (Becchetti *et al.* 2008).

[15] According to Bruni and Stanca, "there is huge empirical evidence that genuine, not instrumental, i.e. intrinsically motivated sociality, is one of the heaviest components of subjective happiness" (Bruni and Stanca 2008, in Bruni and Porta's entry in The Elgar Companion to Recent Economic Methodology, 2011).

reliance on mathematics, and demanded more engagement with empirical realities and a plurality of views and approaches (Fullbrook 2002). More than 200 academic economists joined the petition, giving rise to the Post Autistic Economics Movement. The French government responded by launching an enquiry; this led to the publication of the Fitoussi report, which essentially backed the demands of the students. Similarly, in 2013 at Manchester University a student society was set up demanding that more emphasis be given in the economics syllabus to historical thinkers and less to mathematical details (The Economist 2013), a plea born out of frustration with mainstream economists' inability to predict the recession of 2008-09[16]. For the same reason some academics in the UK have been backing proposals to redesign the syllabus in ways which closely match those requested by the students (Coyle 2012), but their impact so far has been marginal[17]. It is worth noting that there is a body of academic literature confirming that students of economics welcome pluralism, though admittedly it is not extensive; Mearman *et al*. (2009) conducts focus groups with economics students from British universities and finds that they appreciate pluralism partly because they appreciate the skills which a pluralistic economics education is designed to develop, such as critical and comparative thinking skills. Similarly, Cooper et al (2011) provide indirect evidence of economics students in US being satisfied with the pluralistic education that these colleges provide[18].

In summary, given the clear calls for pluralism in the economics syllabus made by both students and academics across a number of countries, and given that the body of evidence indicating that people at times display genuine sociality is very large and well-established, it is puzzling that economics textbooks have not yet incorporated the material on genuine sociality. Various reasons could account for the slow uptake, including status-quo bias in the profession[19] (described as "protectionism" in Bruni and Zamagni 2013; see also Knoedler and Underwood 2003; Schaur *et al.* 2008), and the possibility that publishers fear that there may not be sufficient demand[20]. In the remainder of this paper, we explore the question of

[16] See www.post-crasheconomics.com/economics-education-and-unlearning/. For a recent review of students' movements around the world to reform tertiary education, see Volume 39, Issue 3 of Studies in Higher Education, April 2014, edited by Mary-Louise Kearney and Daniel Lincoln (Kearney and Lincoln 2014). An example of a global student movement specific to economics education is the International Student Initiative for Pluralism in Economics (ISIPE), an association of 65 organizations from 30 countries across the world, which laments that "where other disciplines embrace diversity […], economics is often presented as a unified body of knowledge. […] Such uniformity is unheard of in other fields […]." (www.isipe.net/open-letter/)

[17] In the US, too, the impact of calls to redesign the syllabus has been rather limited, in spite of the 1992 AER petition to promote pluralist thinking and the subsequent creation of ICARE, the International Confederation of Associations for the Reform of Economics (Garnett 2012). Frank (2012) observes that "introductory economics courses typically have been taught out of encyclopaedic texts that cover thousands of topics, many of them enshrouded in forbiddingly complex algebra and graphs. These courses are astonishingly ineffective. […] my claim is that economic principles are more easily mastered, even for students with a technical bent, if they are encountered in ecologically familiar examples than in the more formal abstract form in which they are often presented". In a similar vein, Hansen *et al.* (2002) cite evidence of the ineffectiveness of economics education and suggest narrowing the syllabus down to a more focused set of topics with greater emphasis on application of principles.

[18] However, more research needs to be done before one can accept that students of economics welcome pluralism: writing in the field of sociology, for example, Titus (2008) provides interview-based evidence that students tend to be focused on obtaining certain credentials rather than engaging in developing higher order thinking skills, and give lower ratings to academics who deviate from the mainstream syllabus.

[19] In the UK, for example, status-quo biased may be partly due to the fact that economists taking part in the Research Excellence Framework (formerly the Research Assessment Exercise) have an incentive to publish in highly ranked journals, which tend to favour a limited range of approaches, in particular the neoclassical one, so that universities have an incentive to hire economists which follow these specific approaches, both in their research and in class. See Coyle (2012).

[20] This fear may well reflect the publishers' perceived need to standardize material (Coyle 2012). However, one wonders how correct this perception is in the light of Coyle (2012)'s claim that, "most economists would regard the majority of the highly conventional material in most […] basic textbooks as over-simplified at best or actually incorrect".

whether there is demand by students for this new material, as well as which students are more likely to display this demand.

3. METHODOLOGY AND DATA

A questionnaire was constructed which asked students to rate their desire to incorporate in the economics syllabus new ideas, theories and evidence from the literature on genuine sociality. A questionnaire makes it possible to capture a large amount of numerical data with the ultimate aim of making generalized, statistically significant statements, this being our objective. Furthermore, as there is no data about students' revealed preferences, at least that we are aware of, we needed to collect data on stated preferences, which requires the use of a questionnaire. Qualitative analysis involving for example focus groups could be carried out in the future to identify any subtleties not picked up by the questionnaire, for example which questions/issues in the questionnaire students feel more strongly about and why. The material in the questionnaire was largely drawn from Becchetti *et al.* (2011)[21]. Clearly, due to space limitations, the material does not constitute an exhaustive list of all the results found in the literature[22], but many key concepts are, we think, included.

We invited students to be candid about how they felt on all aspects of the questionnaire. Not only were they given plenty of space at the end of the questionnaire to make comments, but every question in which students were asked if they agreed or disagreed with a particular statement included a space below it for them to express any thoughts they might have had about the question. Students did not raise any issue with regard to the format of the questionnaire, nor with the wording of the questions. Furthermore, whilst it is very difficult, or downright impossible, to choose a wording that is entirely value neutral, we tried to make the wording of the questions as simple and as natural as possible, for example we asked the question "I find the syllabus as it is taught at present useful and relevant to my needs – do you agree?", rather than "I find the syllabus as it taught at present unhelpful and not relevant to my needs – do you agree?". Finally, not only were all students guaranteed anonymity, but the students in Italy, who constitute the majority in the sample, were aware that the teaching and research assistants who handed out and collected the questionnaire would not be involved in marking their assessments/exams, so that there is hardly any possibility of the students thinking that the mark in the subject that they were studying could be affected by how they answered the questionnaire.

After a successful pilot[23], the questionnaire was distributed to 465 undergraduate students in Italy, at the University of Padua and the University of Verona[24], and to 136 students in the UK, at London Metropolitan University. Students were all in the 2nd or 3rd year of their studies, ensuring that they had an appreciation of the economics syllabus. Their programme of study had to include a significant component of economics.

Descriptive statistics of students in the sample are displayed by country of education in Table 1[25]. Attitudinal variables are measured on a Likert scale with a minimum of 1 (= "I strongly disagree") and a maximum of 5 (= "I strongly agree").

[21] Goodwin *et al.* (2014) is another useful reference, though it does not have as much material on genuine sociality.

[22] For example, various authors find a negative impact of watching TV for long hours on well-being (e.g. Frey *et al.* 2007), partly because this activity crowds out relationality (Bruni and Stanca 2008); another example is that constant membership of voluntary organizations in the US has gone hand-in-hand with declining participation (Putnam 2000). These findings were not included in the questionnaire.

[23] As the study is exploratory and, to the best of our knowledge, the first of its kind in economics education, plenty of space was allowed in the questionnaire for students to express their personal views. This was particularly useful when piloting the questionnaire.

[24] For students in Italy the questionnaire was translated from English into Italian.

[25] The questionnaire includes more questions than those covered in this paper, such as which activities, if any, students would like to introduce in the classroom to promote altruistic behaviour; these are not reported here for

Table 1: Table Heading Here

The findings above are analysed and discussed in the following section.

4. RESULTS

Beginning with the students' attitude towards the current syllabus, we find in Table 1 that students in both Italy and in the UK find the syllabus useful and relevant to their needs, with students in Italy more so than those in the UK (4.24 and 3.85 respectively[26]). Looking at the attitudinal variables (ethical stance, materialism, virtue and instrumentality), a somewhat perplexing finding is that although treating one's neighbour as oneself is seen as more important in the UK (3.66) than in Italy (3.21), materialism appears to be higher in the UK (3.81) than in Italy (3.37)[27]. Students in both Italy and the UK tend to regard the mainstream recipe of relying on material incentives to tackle issues of market failure as insufficient, and believe that these incentives must be supplemented by virtuous behaviour involving honesty and integrity, slightly more so in Italy (3.96) than in the UK (3.83)[28]. Finally, students in Italy on the whole do not have strong views as to whether employers value generosity in their employees (3.06), whilst those in the UK believe that employers do value generosity, albeit to a small degree (3.20)[29].

Specific results and ideas from the recent literature on genuine sociality were briefly described in the questionnaire and students were asked to rate how keen they were to include each result in the economics syllabus. Average responses for each result in the literature are shown in the Appendix. On the whole the response was moderately positive: on average 3.52 for students in Italy and 3.32 for students in the UK.

Students indicated that, should there be a need to reduce teaching of other topics in microeconomics[30] to make space for the new topics, preferred areas of reduced coverage would be oligopoly and monopoly (indicated by 47% of students in Italy and by 49% in the UK) as well as optional topics such as uncertainty, asymmetric information, capital markets and international trade (indicated by 46% of students in Italy and by 47% in the UK).

Students were then asked to provide and overall numerical figure summarizing their attitude towards introducing genuine sociality in the economic syllabus. As Table 1 shows, that there is a moderate degree of support among students for broadening the economics syllabus to include research about genuine sociality, with students in the UK showing more support than students in Italy: 3.61 versus 3.29 respectively, both numbers being significantly different from 3 at the 0.01% level[31]. The students' overall ratings are somewhat different from the averages of 3.52 for Italy and 3.32 for the UK which were reported above across specific areas of the literature, though they are in the same ballpark[32]. Students'

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reasons of space and focus. Data was also collected about whether students were married and about how many children they had, but the response rate was very low, and so these variables have been omitted in the table and in the analysis that follows. 10 students described themselves as agnostic, and were given a score of 0.5 for the dummy variable 'Religion'.

[26] This difference is significant at the 0.1% level.

[27] Both these differences are significant at the 0.1% level.

[28] This difference is significant at the 10% level.

[29] The figure for Italy is not significantly different from 3, whilst that for the UK is significantly different from 3 at the 5% level.

[30] We asked students to consider only topics in microeconomics as altruism, on those rare occasions when it appears in the syllabus, is normally taught as a topic in microeconomics.

[31] When students were asked whether they wished to broaden the economics syllabus to include activities designed to promote altruistic behaviour; the average was 3.53 in the UK and 3.27 in Italy, very much in line with answers to the question about broadening the syllabus to include results from the literature on genuine sociality.

[32] The discrepancy between the overall rating and the average of the individual questions reported in the Appendix can be accounted for if students in the UK place a lot of weight on corporate social responsibility (CSR, covered in questions 1, 2 and 3 in the Appendix) relative to other topics (covered in questions 4 to 10), as students in the UK

overall support for broadening the syllabus may be due to a number or reasons, an important one in our view being increased realism compared with assuming that economic agents are entirely selfish.

To identify the determinants of students' willingness to broaden the syllabus to include material on genuine sociality, ordered probit regressions were run. Cluster analysis of the data, which constitutes an alternative and potentially insightful approach, would assist in identifying clusters of closely related variables and how these clusters relate to each other; however, our aim is to assess which individual variables (age, religion, etc.) determine a single variable, namely the students´ disposition to incorporate genuine sociality in the economics syllabus, and regression analysis serves this purpose well. The regression is probit so as to take into the account the fact that the data on student preferences is truncated, as it is based on a Likert scale ranging from 1 to 5. The regressions are as follows:

Table 2: Table Heading Here

Variables found to be insignificant in Specification 1 were excluded in Specification 2 (after testing for redundant variables)[33]. Given parsimony and the chi-squared statistic (as well as, arguably, the adjusted R^2), the second specification is more convincing; significant variables in this regression include age[34], part time employment, religion, ethical stance, virtue, and Italian university[35]. We now briefly discuss each of these.

1. Older students are more inclined to broaden the syllabus. This may seem paradoxical as it is normally the young who are associated with "high" ideals of altruism and solidarity; a possible explanation is that older students may be more capable of distancing themselves from the mainstream syllabus and of being critical of it, whilst younger students may be more inclined to unconditionally accept what tutors teach them. Another possible explanation is that younger students may be more dualist than older ones, i.e. more inclined to seek the sort of straight-forward, black and white answers to economic problems that neoclassical economics offers through the use of simplified mathematical modelling.
2. Students who work part time are more inclined to want to broaden the syllabus, perhaps because they perceive a need for altruism in the workplace; this result is unlikely to be due to instrumental thinking whereby students think that employers value generosity in employees, as this particular variable turns out to be insignificant in specification 1. However, working full time has no effect on willingness to change the syllabus, perhaps because for students who work full time employability and "putting bread on the table" take priority over engaging in discussions about genuine sociality.
3. Students who have a religion are more inclined to broaden the syllabus to include material about genuine sociality, reflecting the positive message of solidarity and empathy that many religions have about how to relate to others[36]. Interestingly, the results suggest that there is more to having a religion than wanting to treat others well, as both 'religion' and 'I agree with the principle "Treat your neighbour as yourself"' are statistically significant.
4. Students who believe that virtues such as honesty and integrity are necessary to overcome problems of free-riding, shirking and moral hazard, and that it is not enough to rely on material incentives to overcome these problems, are more likely to want to broaden the syllabus to include

gave higher scores for questions on CSR than students in Italy, while students in Italy gave higher scores for all the other questions.

[33] Both specifications passed the test for the validity of the proportional odds assumption.

[34] As there are a few substantially older students (see Table 1), we re-ran the regressions in Table 2 leaving out students above the age of 25, and found that the results remain essentially unaffected.

[35] Following the advice of a referee who expressed concern about multicollinearity, we have taken specification 1 and removed the variables 'Ethical Stance' and 'Virtue'. This new regression yields results that are similar to those of Specifications 1 and 2 and is presented in Appendix 2.

[36] In the sample, 90% of students who reported having a religion described themselves as Christian.

material about genuine sociality; this can be understood by considering that genuine sociality is itself a virtue, i.e. these students appear to have a positive attitude towards virtues in general[37,38].

5. Students in Italian universities are less inclined to broaden the syllabus, perhaps because the education system in Italy, whilst very sound in a number of ways, encourages more conformity and less critical thinking.

Table 2 also reports in italics the average marginal effect of each independent variable. For specification 2, not surprisingly belief in treating one's neighbour as oneself has the highest marginal effect (0.0431), followed closely by studying in Italy (0.0389) and being in part-time employment (0.0383).

5. CONCLUSION

This study focused on the wide difference in methodological approaches between economics research and economics education. In particular, it recognized that, whilst in economics research there is a pluralism of approaches, in economics education the neoclassical approach is dominant, and because a large proportion of research in the last few decades has been interdisciplinary in nature, a lot of what economists have learnt through research is not finding its way into economics textbooks. We are not teaching what we are learning, to the detriment of our students and of larger society as well.

We focused on the large body of recent evidence showing that people sometimes display genuine concern for the well-being of others, a body of evidence unknown to most undergraduate students as it does not enter mainstream textbooks, which, in contrast, assume individuals to be mainly or entirely selfish. We asked undergraduate students in Italy and in the UK whether they wish to be taught this material. We showed that there is a moderate degree of demand by students to broaden the syllabus to include the recent research literature about genuine sociality[39]. We think that this finding helps to strengthen the case for introducing in mainstream economics textbooks more than two decades of literature on genuine sociality: since genuine sociality has been shown to exist, to be practiced in a variety of situations, and to be desirable in that it increases happiness, and since students are happy be taught this material, why continue to delay its coverage in mainstream textbooks?

We then proceeded to identify which students were more likely to welcome a broadening of the syllabus to incorporate material on genuine sociality. We found that these students tended to be older, to value virtue and to have a religion. The finding about age surprised us, as we were expecting younger students to be more welcoming of the "high and noble" ideal of altruism: we suggested as a possible explanation that older students may be more mature and so more capable of criticizing and of distancing themselves from the mainstream syllabus; if this explanation is correct, and if, as we believe, the mainstream syllabus suffers from important shortcomings stemming from the exclusion of genuine advances in economics research, then one may expect older students to be keener to broaden the syllabus to incorporate research findings from across the board, not just those that are about genuine sociality. As

[37] Surprisingly, the variable capturing materialistic attitude, namely the extent to which students consider future earnings to be the main determinant of their choice of job, turns out to be insignificant in specification 1. Furthermore, we do not find any significant correlation between materialism and age.

[38] For a discussion of how positive economics, which plays an important part mainstream economics educated, has neglected the essential role of virtue and duties, see Wight (2014).

[39] As an extension, it would be useful to ask students which topics of research on genuine sociality, if any, they have covered in class, and to see if those students who were exposed to this material display more or less demand for it than those who were not; this distinction could be achieved through teaching different content to two separate groups, though such an exercise may well require the approval of a university's ethics committee, an approval that may well not be granted. Another possible strategy is to gauge by means of a single questionnaire the extent of demand for conventional topics and that for genuine sociality, and then to explicitly compare the two; such an exercise would be complicated by the need to take into account which topics the students have been taught and which not.

for the findings regarding virtue and religion, these were as we had expected, since practicing altruism is a virtue and religions generally encourage their adherents to be generous. It is difficult to predict how keen students who value virtue and those who have a religion would be to incorporate recent research findings in general; however, in so far as religions are holistic, multidisciplinary entities, we think that individuals who have a religion will be inclined to broaden the syllabus to include findings from multidisciplinary areas such as behavioural economics and social economics[40].

Given that many research findings in economics in the last few decades have come from studies involving different disciplines, modern pedagogical thinking in economics education supports the case for incorporating in the syllabus recent findings from economics research, as doing so encourages pluralism in economics (Freeman 2009) and democratization of the classroom[41] (Boettke 2011; Schneider 2010; Emami 2015). Whilst we do not develop here the implications for pedagogic practice of incorporating recent research findings in the syllabus, as this would involve a significant shift in the paper's focus, we would like to point out that they can be significant. In the case of genuine sociality, for example, tutors can combine the material taught in class with offering students the possibility of service-learning, where students display genuine sociality by actively engaging in projects in which they assist other members of society who are in need, generating in a real sense social cohesion and a spirit of unity to the benefit of all project participants. Service learning has as one of its pillar the work by John Dewey, who described the role of education as helping people become active participants in their democracies (Meyers 2009).

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[40] We also found that students in the UK were keener to incorporate genuine sociality in the syllabus than those in Italy, and suggested that this may be due to the possibility that the Italian education system encourages more conformity and less critical thinking than that of the UK; if this explanation is correct, then, ceteris paribus, one can expect that students in Italy will be less inclined to embrace research findings in general.

[41] Democratization of the classroom involves giving students more say in various aspects of their education, including the design of the syllabus; in our view, this should be done up to a point and gradually, so that both students and staff are at ease with it. By giving students a say in the design of the syllabus, tutors can explicitly take into account students' needs and cover those topics which students consider of greatest relevance to their lives (Girardi 2013). Furthermore, promoting students' authorship of a course can increase their engagement with the course material (Schneider 2010).

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Appendix

Students' attitudes in front of new evidence and ideas coming from the recent literature on genuine sociality.
Note: 1 = "I strongly disagree", 2 = "I disagree", 3 = "I neither agree nor disagree", 4 = "I agree" and 5 = "I strongly agree"

	Italy	UK
1: Corporate social responsibility (CSR) can be interpreted in economics as an attempt to internalize externalities such as pollution. I think CSR should be given more space in the economics syllabus.	3.13	3.3
2: Recent evidence suggests that firms that have social objectives in addition to profits tend to display a higher productivity and a higher social return than firms that focus entirely on profits, though they also tend to display lower profits[†]. I think that research of this kind should be included in the economics syllabus.	2.97	3.15
3: The return on socially responsible equity indices tends to be about the same as that on conventional equity indices, and tends to be higher when adjusted for risk. I think that this and other similar findings should be included in the economics syllabus.	3.38	3.50
4: Economists and psychologists studying happiness have found that friends and family significantly and positively affect happiness, and that this effect is more robust than the effect of income on happiness. I think that research of this kind should be included in the economics syllabus.	3.96	3.27
5: Economists and psychologists studying happiness have found that practicing a religion significantly and positively affect happiness, for example by acting as a shock absorbing device in times of difficulty (e.g. while unemployed). I think that research of this kind should be included in the economics syllabus.	4.53	3.78
6: The recession which began in 2007 has highlighted the short-term duration of highly speculative institutions (e.g. some investment banks). I think that this and other similar findings should be included in the economics syllabus.	3.00	2.95
7: In laboratory experiments, many people share their payoffs even though they could have gained considerably more by not sharing, i.e. they don't behave as selfishly as economics textbooks normally assume. I think that this and other similar findings should be included in the economics syllabus.	3.77	3.24
8: The branch of economics that studies relational goods looks at the value of relationships between buyers and sellers that is in addition to the commercial value of the exchange (e.g. a friendly relationship established between a barber and his customer who meet for the first time). I would like to see a discussion of relational goods introduced in the economics syllabus.	3.48	3.27
9: There are two notions of reciprocity in economics: direct, where I help you and later you help me, and indirect, where I help you and later you help someone else, with both kinds of reciprocity found in firms. I think that a discussion of reciprocity should be included in the economics syllabus.	3.68	3.45
10: It is becoming increasingly uncommon for businesses to be run by a stable director who feels responsible for the long run results of the company. I would like to see a discussion of this in the economics syllabus.	3.31	3.24
Average	3.52	3.32

[†]On subsequent, closer inspection of the literature, it would have been more accurate to state that the evidence for profits is mixed, favouring neither type of firm.

Table 1
Characteristics of students in the sample

Variable		N	Mean	Std dev	Min	Max
I would like the economics syllabus to be broadened to include research about altruistic behavior – do you agree?	Italy	424	3.29	0.92	1	5
	UK	131	3.61	0.86	1	5
I find the syllabus as it is taught at present useful and relevant to my needs – do you agree?	Italy	459	4.24	0.63	2	5
	UK	134	3.85	0.74	1	5
Year of study (2nd or 3rd)	Italy	356	2.57	0.50	2	3
	UK	118	2.48	0.50	2	3
Percentage of degree consisting of economics	Italy	337	73.53	22.60	10	100
	UK	110	69.91	25.27	8	100
Age (years)	Italy	417	21.41	1.42	19	30
	UK	124	23.45	5.28	19	57
Male (1) or female (0)	Italy	433	0.42	0.49	0	1
	UK	131	0.55	0.50	0	1
Full time employment (1) or not (0)	Italy	423	0.02	0.13	0	1
	UK	121	0.19	0.39	0	1
Part time employment (1) or not (0)	Italy	423	0.33	0.47	0	1
	UK	121	0.34	0.48	0	1
Student has a religion (1) or not (0)	Italy	462	0.58	0.49	0	1
	UK	135	0.46	0.49	0	1
Number of siblings	Italy	374	1.22	0.76	0	5
	UK	107	2.35	1.74	0	10
'Treat your neighbour as yourself' is a valid ethical basis on which economics decisions should be made – do you agree? (ethical stance)	Italy	457	3.21	1.01	1	5
	UK	134	3.66	0.96	1	5
For me, future earnings are the most important determinant of my choice of job – do you agree? (materialism)	Italy	461	3.37	0.87	1	5
	UK	132	3.81	1.11	1	5
Moral hazard, free-riding, shirking and other problems cannot be solved by means of material incentives and rules alone, but require ethical behavior on the part of agents such as honesty and integrity – do you agree? (virtue)	Italy	451	3.96	0.72	2	5
	UK	133	3.83	0.75	1	5
Employers value generosity in their employees – do you agree? (instrumentality)	Italy	433	3.06	0.93	1	5
	UK	130	3.20	1.15	1	5

Table 2

Determinants of students' willingness to broaden the syllabus to include material on genuine sociality, ordered probit

	Specification	
	1	2
Satisfaction with current syllabus	-0.0894 (0.0946) *0.0142*	
Year of study	-0.0194 (0.136) *0.0031*	
Percentage of degree consisting of economics	0.00244 (0.00301) *0.0004*	
Age	0.0563** (0.0242) *0.0089*	0.0590*** (0.0181) *0.0094*
Male	-0.310** (0.137) *0.0490*	-0.137 (0.103) *0.0218*
Full time employment	-0.249 (0.287) *0.0397*	-0.135 (0.227) *0.0215*
Part time employment	0.271* (0.140) *0.0426*	0.241** (0.107) *0.0383*
Religion	0.0834 (0.145) *0.0132*	0.210** (0.106) *0.0335*
Number of siblings	0.00973 (0.0687) *0.0015*	
'Treat your neighbour as yourself' is a valid ethical basis on which economics decisions should be made – do you agree? (ethical stance)	0.240*** (0.0734) *0.0380*	0.271*** (0.0524) *0.0431*
For me, future earnings are the most important determinant of my choice of job – do you agree? (materialism)	-0.0656 (0.0709) *0.0104*	
Moral hazard, free-riding, shirking and other problems cannot be solved by means of material incentives and rules alone, but require ethical behavior on the part of agents such as honesty and integrity – do you agree? (virtue)	0.339*** (0.0929) *0.0537*	0.220*** (0.0684) *0.0351*
Employers value generosity in their employees – do you agree? (instrumentality)	0.0321 (0.0656) *0.0051*	
Italian university	-0.259 (0.174) *0.0406*	-0.246* (0.130) *0.0389*
LR chi^2 (p-value)	61.55 (0.0000)	84.86 (0.0000)
McFadden's adjusted R^2	0.034	0.049
Cragg-Uhler (Nagelkerke) R^2	0.202	0.174
Number of observations	301	485

. *** indicates significance at 1% level, ** at 5% level, and * at 10% level. Standard errors are in parentheses except where specified.