

Three Essays on Happiness in Economics

Exploring the usefulness of subjective well-being data for the
economic analysis of welfare

Gabriel Augusto Leite Mota

Orientação: Prof. Paulo Trigo Pereira

07/2009

Tese de Doutorado em Economia

Biographical note:

The author was born in Oporto (the northern capital of Portugal) during the year of 1979, son of two high school teachers (the mother a music teacher, the father an engineering teacher). He attended local public schools during his primary and high school years, consistently being the best student in the class. In 1997 he joined the Faculty of Economics of Porto University where he completed a 5 years bachelor in economics. After completing the course, ranking on the top 2,5% best students, he has begun his professional career as a research assistant at the School of Management and Economics of the University of Minho, in the city of Braga. Later he moved to Porto's Portuguese Catholic University, department of Management and Economics, first as reach assistant and later as teaching assistant.

In 2003 he joined the PhD program of economics at the Faculty of Economics of Porto University having completed the courses' part of the program with an average classification of 17 (out of 20).

The present thesis completes the candidate's PhD and reflects the concerns he has always had with some open question in the discipline of welfare economics.

Apart from his academic life the author is a lover of sports (continuously practicing Karate since the age of six, and presently with teaching responsibilities), music, cinema, and science. He is extremely curious about all sorts of issues, using a very rational and scientific approach in many domains of life. He loves to debate, to learn and to transmit and exchange knowledge.

Acknowledgments:

The process of elaborating a PhD thesis would be impossible without the collaboration of many people who more direct or indirectly allow the PhD student to satisfactorily complete his job. Although the PhD student is expected to demonstrate his own ability to produce scientific knowledge, such is impossible without the aid of professors, colleagues and faculty staff that create the conditions for a PhD dissertation to be successfully concluded.

A complete list of the persons who somehow have contributed to my dissertation would be too long to exhibit here. I will then restrict my explicit thankfulness to those more directly related with the production of my PhD dissertation. I can then nominate some of those who have helped me in getting my job done, without whom the thesis would never exist or would be of a poorer quality.

I am grateful to: Prof. Paulo Trigo Pereira (who was my thesis supervisor and co-author of the paper on which section 4 is grounded) for having dedicated to me some of his scarce free time to push my limits, to help with the bibliographic searches and by producing useful comments and reviews throughout all thesis' stages of development; Prof. António Almodovar who has helped me in the beginning of the process of finding the "economics of happiness" (namely helping me to frame the analysis, and showing to me the Review of Happiness Studies and the flyer of the "Capabilities and Happiness" conference held in Milan in 2005, which happened to be the first conference I have attended); Prof. Luigino Bruni for continuously having participated in the organization of international conferences on the theme of happiness in economics (conferences in which I am having the pleasure to participate since 2005); Prof. Andrew Oswald, for having accepted me as an invited scholar at Warwick University, for showing to me the World Values Survey dataset, for helping me with econometric methodological issues and for fruitful discussions throughout my stay in Warwick; Prof. Roger E. Backhouse who has made some useful comments on section 2; Prof. Rainer Winkelmann (the teacher of the summer course on microeconomic I attended in 2008), for very useful comments on section 4; Vitor Pinto for the French version of the thesis' abstract, and Gordon Grams and Alan Dawber for the English revision of the papers on which section 2 and 3 are grounded; Prof. Álvaro Aguiar, Prof. António Brandão, Prof.

Manuel Mota Freitas Martins, Prof. Paula Sarmiento, and Prof. José Varejão, for their work as members of the PhD commission (in facilitating contacts and all sorts of bureaucratic issues) and the comments on section 2, made by the last as jury in the thesis' project discussion; Prof. José Reis for helpful comments on section 3 (as jury in the thesis' project discussion); PhD colleagues, and from the conferences, with whom very fruitful debates were possible; and finally, the Portuguese Foundation for Science and Technology (FCT), for four years of financial support.

Abstract:

This thesis attempts to demonstrate that the usage of subjective well-being data is useful for an economic analysis of welfare. Following the new strand of literature in economics called “The Economics of Happiness” (emerged during the 1990s), this thesis proceeds with a threefold analysis: 1 - framing historically the interrelations between happiness and economics, tries to prove that the happiness literature in economic is the result of dissatisfaction on the part of many economists with the mainstream economic analysis of welfare; 2 - comparing the happiness literature with the mainstream economic analysis of welfare and the capabilities approach (initiated by Amartya Sen and an already established alternative to orthodox welfare economics), tries to prove the autonomy (both methodological and philosophical), reliability and added value of happiness (more precisely of subjective well-being data) for an economic analysis of welfare (both at theoretical, applied and political dimensions); 3 - using empirical data on satisfaction with life (at individual and country levels), tries to prove that both the quality of institutions, the level of social capital and the perception of living in a fair society are important determinants of satisfaction with life, even after having controlled for the level of economic well-being.

The main conclusion of this thesis is that the direct incorporation of happiness into the economic analysis of welfare is new (although some resembles with Benthamite utilitarianism might be found), is scientifically reliable (which can be corroborated by the usage of the same kind of data and analysis in disciplines such as neurology, psychology and sociology) and adds explanatory power to welfare economics. It is also a challenge for orthodox economics as many findings of the happiness literature in economics (as well as the empirical results of the present thesis) are at odds with the assumptions, theoretical predictions and policy conclusions of traditional welfare analysis in economics.

Index:

1. Introduction	1
2. Happiness in economics as a signal of dissatisfaction (or how happiness entered economics)	5
2.1. Introduction.....	5
2.2. Dilemmas in welfare and economics.....	7
2.2.1. Some ethical considerations	8
2.2.2. Utilitarianism and economic theory	11
2.2.3. The case of welfare economics	15
2.3. Some historical context.....	19
2.3.1. Prelude: the materialistic orientation	19
2.3.2. Before the 1930s: from Bentham to early neoclassicism.....	21
2.3.3. After the 1930s: the Ordinal Revolution and beyond	27
2.4. The recent history of happiness in economics	31
2.4.1. Early authors: happiness...why not?	32
2.4.2. Contemporary authors: the acceptance and spread of happiness in economics.	36
2.5. In short... ..	41
2.6. Conclusion.....	43
3. Why should happiness have a role in welfare economics?	
Happiness versus Capabilities and Orthodoxy.....	45
3.1. Introduction.....	45
3.2. Mainstream Welfare Economics	49
3.3. The Capabilities Critique	59
3.4. Is There Room for Happiness?: (re)introducing subjective approaches into Welfare Economics	63
3.5. Happiness, Capabilities and Orthodoxy: the same policy conclusions?	66
3.5.1. Freedom.....	71
3.5.2. Income	72
3.6. Conclusion.....	76

4. Happiness, Economic Well-being, Social Capital and the Quality of Institutions.....	77
<i>4.1. Introduction.....</i>	<i>77</i>
<i>4.2. Well-Being, Life Satisfaction and Public Policies.....</i>	<i>79</i>
<i>4.3. Methodological issues and the dataset.....</i>	<i>82</i>
<i>4.4. Analysis with Individual Data.....</i>	<i>84</i>
<i>4.5. Analysis with country-level data.....</i>	<i>89</i>
<i>4.6. Conclusions.....</i>	<i>91</i>
5. Conclusion.....	93
6. References.....	97
7. Annexes.....	110

1. Introduction

In the beginning of economics as an autonomous science (since Adam Smith (1776)) a concern with political issues was present. Explaining the nature and causes of the wealth of nations and unveiling the mechanisms of wealth creation allowed economists to identify what could be done to increase such wealth and discover what could harm it. Issues like the specialization of labour, free international trade, industrialization, development of capitalism and markets liberalization could all be analyzed by their impact on wealth. Policy makers interested on the growth of national wealth (because they considered it relevant for social welfare) could rely on economists' specialized opinion on how to increase it. As a result, policy advice soon became a logical consequence of economic reasoning but within the confines of a specific part of welfare: wealth¹.

Throughout the evolution of economics (until the present) it is legitimate to say that it retained its political concerns (via the branch of Welfare Economics (WE) but also in the positive analysis²) and a materialistic conception of welfare³. Nevertheless, it is possible to identify economists who felt uncomfortable with that status quo. Economists for whom new forms of analysis, new models, and new types of data and new conceptions of welfare were necessary in order to economics become more reliable and effective.

Amartya Sen is probably one of the most notorious economists (and welfare economists) that first put forward severe critiques to the standard economic analysis of welfare. He has built an all new theoretical reasoning which created a school of thought within WE: the capabilities approach. That is probably the most important critique to

¹ It was recognized that wealth was just one part of the welfare but the one economists should be concerned with (see Bruni (2004a) for details).

² Note that considerable differences might be noticed between this two types of welfare analysis: WE have specialized itself on the normative questions, deepening its investigations even into the moral philosophical issues that eventually appear on welfare analysis; on the other hand, positive economics tried to be as much positive as it could (assuming an abstract notion of utility and the sufficiency of ordinal preferences captured via the observation of choices – see section 2 for details) but recurrently ended up with some normative content (either explicitly or implicitly). Curiously enough the implicit normative content of positive economics ended up being more respected than the assumedly normative branch of welfare economics (which some have regarded as unscientific and unreliable (see Robbins (1945) for the standard argumentation)).

³ Wealth, income, consumption and production continue to be assumed as the great proxies of what welfare is in economics.

orthodox WE, one that goes as deep as to reject all forms of utilitarianism (which is the grounding moral philosophy of most economic reasoning⁴).

At the same time other economists⁵ had also been trying to bring new ideas to economic analysis of welfare, even if not as radical as Sen's (at least not rejecting utilitarianism definitively)⁶. They were concerned with the lack of realism on various economic models and the erroneous predictions they produced. They were also unsatisfied with the orthodox economic analysis of welfare as it normally ignored several critical aspects of human welfare such as fairness, morality, reciprocity, relational and positional goods, distributional issues, human capital and all sorts of immaterial issues like environmental quality or the stress of life. These economists plead for new forms of assessing the development of nations and new ways of measuring social progress. Eventually, some came across with happiness (using subjective well-being as a measure of utility) as the ultimate goal of welfare economics and as a way to solve some of the mentioned critiques⁷.

This thesis is concerned precisely with the “why’s” and “how’s” of happiness in economics.

Sharing the same concerns of those who believe WE is incomplete and unsatisfactory, we seek to understand how the incorporation of subjective well-being (SWB) and the concept of happiness into economics can improve its welfare analysis. Joining the recent (from the 1990s) and growing enthusiasm with this line of work we want to prove the reliability and usefulness of happiness in economics.

In order to do so we need to analyze and compare mainstream WE (MWE), the happiness literature and also Sen's capability critique (as this is already a consistent alternative to MWE). We need to look at the history of economic analysis of welfare and see what is new about happiness in economics. We need to demonstrate that happiness is not just a relabeling of utility (one of the oldest concepts in welfare economics), that it is different from capabilities and that it is scientifically reliable.

⁴ Since Jeremy Bentham (1789), even if with variations throughout time.

⁵ Like Richard Easterlin, Yew-Kwang Ng, Richard Layard, Tibor Scitovsky, Kenneth Galbraith, Fred Hirsch, George Akerlof, E. J. Mishan and Bernard van Praag, just to mention a few.

⁶ Nevertheless, note that even before Sen's critique, Kenneth Arrow (1951b) created a shock within economics with his impossibility theorem. That theorem was particularly disturbing for the possibility of welfare analysis within an ordinal utilitarian framework.

⁷ It is during the 1970s and the 1980s that one can find the first economic studies taking happiness directly into account. Nevertheless, only after the 1990s that kind of analysis acquired a real and significant dimension.

Nowadays, the scientific community⁸ already recognizes happiness as a serious way of analyzing welfare within economics⁹. The works of Daniel Kahneman, Andrew Oswald, Andrew Clark, Richard Layard, Bruno Frey and Alois Stutzer, Richard Easterlin, Robert Frank and Luigino Bruni (among others) demonstrate the importance of democracy, social capital, expectations, positional and relational goods, employment, or even human flourishing for welfare. They show that income and wealth alone are not able to increase welfare (once we measure it with SWB) and also that happiness can impact physical health and economic growth. This thesis pretends to be one more contribution to the definition of concepts and frames of reference, to prove happiness as autonomous and novel within WE and to enlarge the empirical evidence on this field.

This thesis has three main sections (each of which represents an autonomous article) with the following logic: one historical/contextual, one comparative and one empirical (practical application).

Section two tries to trace down a short history of happiness in economics and understand why and how happiness entered into the economic analysis of welfare; *section three* adopts a comparative structure where happiness literature is contrasted with both orthodox WE and the capabilities approach, in order to prove its autonomy and relevance (both in methodology, grounding moral philosophy and policy implications); *section four* takes happiness into figures and proceeds with an empirical analysis of the impact of the quality of institutions (namely the sense of living in a fair society), social capital and economic well-being on welfare (measured by self-rated satisfaction with life). It aims to show that both institutions and social capital are relevant to welfare even after economic well-being is accounted for (so proving that welfare cannot be reduced to wealth, income or production).

All three sections are linked by the idea that this direct focus on happiness is new in economics, is reliable and adds explanatory power to an economic analysis of welfare.

⁸ Psychology, sociology and neurology are examples of disciplines where happiness is currently being seriously studied. Psychology is probably the leading “science of happiness” having started this kind of analysis early during the 1960s (which represents a considerable time advance in comparison with economics). Also a dedicated refereed journal already exists (Journal of Happiness Studies) which is to gain ISI impact factor by the year 2010.

⁹ In January 2009, using *Econlit* database we could find 301 journal articles with the word happiness on its abstract and 231 with that same word on its title (nevertheless note that only 9 journal articles had happiness on its title if we restrict our search to the years before 1990). If the same search is done using ISI Web of Knowledge we get 122 journal articles with the word happiness on its title.

In the last section of this thesis we draw some conclusions putting forward the main results of both happiness literature and the present contribution. Furthermore, some caveats are debated and some clues to future research are presented.

2. Happiness in economics as a signal of dissatisfaction (or how happiness entered economics)

2.1. Introduction

Happiness is a special word. Complex to define and subject of long-lasting discussions, it tries to capture one of the most important human feelings: that of satisfaction with one's life as a whole. For many, happiness is in fact the main reason for living.

Although happiness has always been a concern of thinkers throughout the history of humanity (mainly of philosophers from the time of the Ancient Greeks¹), its relation to science has always been complex and problematic. Subjective as it is, science has always looked suspiciously upon happiness. Even psychiatry and psychology (two branches of science most disposed to analyze happiness²) have only recently become more positive regarding the study of happiness of individuals and societies³.

Within the field of social sciences, economics could be seen as the least likely to be concerned with happiness, as its materialistic inclination (focus on wealth creation), mathematical rigor and objectivity tended to rule out subjective and immaterial issues such as happiness. Although that has been mainly the case, some recent economic studies have analyzed the interrelations that can be established between economic variables and self-rated happiness⁴. Those studies, in addition to other interesting results, allowed economists to realize that the supposed undeniable positive relation between economic growth and welfare (here measured by SWB) is far from linear, even being absent in some circumstances (after surpassing some wealth thresholds)⁵. Such facts alarmed economists, particularly those engaged in welfare analysis. Economists

¹ See, for instance, Aristotle (350b.c.).

² As happiness stands primarily as a mental phenomenon.

³ For a long time psychiatry and psychology were only concerned with the study and alleviation of psychiatric malfunctions, like depression and suicide (the prevention of suffering, not the promotion of joy and pleasure, was the focus of analysis).

⁴ The literature on this issue is already quite vast (as Kahneman and Krueger (2006) put it: "From 2001 to 2005, more than 100 papers were written analyzing data on self-reported life satisfaction or happiness, according to a tabulation of *EconLit*, ..."). See footnote 9 of Section 1 for the most recent figures within the economic literature. Oswald (1997), Di Tella et al. (2001), Frey and Stutzer (2002b) and Blanchflower and Oswald (2004b) can be used as examples of such research.

⁵ Easterlin (1974) can be credited as the first economist to empirically detect such a fact.

are now realizing that economic growth may be incapable of enhancing the welfare of societies after certain levels of wealth have been achieved (which is at odds with traditional economic analysis of welfare). That compels economic researchers to revise some of their economic theories and traditional policy advice⁶. Having said that, an analysis of how happiness has been dealt with by economics throughout history and how it entered contemporary economics is essential if we want to clearly understand what happiness in economics is and how useful it can be. That is precisely the aim of the present section: briefly to portray the historical interrelations that have existed between happiness and economics, and to understand how and why happiness has entered contemporary economics and what drives and unites the main economists pursuing such analysis.

To do so, we have divided this section into 6 sub-sections. In section 2.2 we debate some dilemmas of welfare theory in economics and how that relates to the chances of happiness being incorporated within economic analysis. In section 2.2.1 we debate the ethical questions of welfare analysis; in section 2.2.2 we briefly discuss the role of utilitarianism in economics throughout history; in section 2.2.3 we investigate the special case of welfare economics. Section 2.3 analyses the relation between happiness and economics throughout history. Knowing that SWB is the dominant concept of happiness in contemporary economics, the ordinal revolution becomes crucial for the history of such a relationship. We divide that section into two: in section 2.3.1 we study the relationship before the 1930s and in section 2.3.2, that which pertained post 1930s. In Section 2.4 we analyze the contemporary appraisal of happiness in economics and discuss the issues that link and separate authors and studies on that topic. We divide this section into two sub-sections: section 2.4.1, where the seminal papers on happiness and economics (from the 1970s) and their respective authors are surveyed; section 2.4.2, where a survey of contemporary contributions (the 1990s onwards) is conducted. Section 2.5 provides a summary of the main empirical and theoretical conclusions of the economics of happiness. Section 2.6 draws some conclusions.

⁶ Ex. GDPpc enhancing policies might, in some circumstances, be welfare detrimental.

2.2. Dilemmas in welfare and economics

Throughout this section we will be putting forward the argument that happiness only entered economics because some lacunas, some vagueness and inconsistencies in mainstream economic analysis of welfare (to which some economists were particularly alert and consequently dissatisfied) were present. That is, introducing happiness into economics was an attempt to throw light on some questions of welfare in economics that had not been sufficiently well answered. In order to prove such a hypothesis we must first understand which questions arise when economics embraces welfare analysis and what the standard answers have been. Only then can we understand how an emphasis on happiness might be an alternative means of answering such questions (and how consistent and useful it can be).

The aim of this section is precisely to explain which problems are most relevant in an economic analysis of welfare and how they have been addressed by mainstream economics, and furthermore to identify questions still to be answered, or in cases where consensus was not achieved, to enable the usefulness of happiness in economic to be assessed. Furthermore, we acknowledge the normative dimension of the incorporation of happiness into economics and the corresponding ethical implications⁷. That is, apart from all technical/validity issues, the inclusion of considerations of happiness in economics (either as a definite criterion for welfare, or as just one criterion amongst others), carries an ethical dimension that must not be neglected.

Examining economics and the way it has dealt with welfare issues it is possible to disentangle three main dimensions of analysis of the relation between economics and welfare: ethics and economics, utilitarianism and economics, and WE.

Ethical considerations are essential before any coherent and solid analysis of welfare can be undertaken (welfare judgments always imply some underlying ethical criteria) and an implicit relation between ethics and economics has always been present. In particular, utilitarianism (which represents a family of moral philosophies) has

⁷ Recall that whenever economics produces welfare considerations it becomes a normative, not a positive, discipline, see Robbins (1981).

played a special role in economics since its very beginnings, so it should be considered carefully. Finally, WE as a branch of economics also deserves special scrutiny as it includes some distinct features from the discipline as a whole that are particularly relevant for understanding the role of happiness in economics. Consequently, we have opted to divide our analysis into the above cited dimensions: ethical problems, the case of utilitarianism and the special problems of WE⁸.

2.2.1. Some ethical considerations

Defining what “good” is is one of the essential tasks of ethics and one of the most intricate and complex problems of that discipline. In economics the conception of “the good” has normally been assumed as given and uncontroversial: utility⁹ is “the good”. As a consequence, whenever economics wants to proceed with policy analysis it looks for the effects of the policies on the utility of agents and societies. Normally, with very aprioristic and empiricist notions of utility it can be argued that economics tends to be very superficial in relation to the ethical problems of its welfare analysis. In fact, no policy can be deemed good or bad before the concept of “the good” has been clearly and explicitly defined. If economics wants to proceed with policy analysis it must adopt some clear conception of “the good” so that policies can be ranked, targeted and designed. But that forces economics to deal with ethical questions for which there are no simple or unique answers¹⁰. More precisely, economics has to find a way to measure, define and aggregate individual well-being, and build a concept of social welfare. Depending on how we measure individual well-being (and on which informational basis for social welfare judgments we choose), which criterion for individual welfare

⁸ Although separately analyzed here for the sake of neatness and clarification, WE, ethics and moral philosophy normally appear (even if implicitly) interlinked in economic analysis. Such mixture and overlapping contributes to the conflict, inconsistencies and open questions in the economic analysis of welfare. Throughout time there has been a significant overlooking of the necessity to clarify which ethical principles and moral philosophy guide economic analysis of welfare (and WE in particular).

⁹ Utility is what agents seek to maximize, and some standard positive determinants of utility are money, income, wealth, leisure or freedom to choose.

¹⁰ Normally a distinction is made between positive and normative economics. The first tries to understand and explain economic mechanisms. The latter deals with the assessment of policies and states of affairs by trying to find a way to rank and evaluate them. It is within the normative branch of economics that ethical questions are more commonly addressed. Nevertheless, positive economics is not free from ethical judgments (forecasting the consequences of economic policies normally entails normative conclusions) and normative economics sometimes proceeds with positive analysis (e.g. comparing the consequences of different social welfare functions is a logical and positive analysis). See Fleurbaey (2008).

aggregation we apply and which concept of social welfare we define, we will derive different policy conclusions and underlying ethics.

All the above tasks are demanding and complex, and it is worth our proceeding with a separate analysis of each so the specificities can be grasped and the role for happiness found.

Measuring individual well-being is a complex task because one has to specify the type of preferences we consider admissible: either social and political or just those concerning the personal taste regarding the situation; subjective (grasped via surveys, for instance) or objective (revealed through choice behaviour); all personal tastes or just those not considered “excessive”, unfair or based on false beliefs. We have also to choose between a welfarist position (with utility¹¹ considered the sole metric of welfare) and a non-welfarist position (which considers a plurality of metrics for welfare where objective achievements, resources, opportunities or rights play a key role). Furthermore, a consequentialist or non-consequentialist approach has to be chosen: should we assess only the consequences of social states or are the processes also relevant? All these options will define a specific ethics and will have advantages and disadvantages for theory construction and applied implementation¹².

The definition of social welfare criteria is another crucial issue with definite consequences for the type of morality one is advocating. Whether we have opted to proceed with utility aggregation or have used a non-welfarist approach, we must define the function that is to be maximized: is it the sum of individual figures (utility or resources), their product or the maximization of the lowest figures?¹³ Although there are ways to try to frame this question in a supposedly objective context (e.g. using the veil of ignorance as a metaphor for impartiality¹⁴ and answering the question by choosing the formula which entails the degree of risk aversion towards inequality that would be typical of the impartial agent), it is reasonable enough (because impartiality is not a definite metaphor for justice) to say that there is no absolute way to declare one

¹¹ Which can be defined as subjective (and interpreted as satisfaction or happiness) or as just a metric for ordinal preferences.

¹² See Sen and Williams (1982) where a critical analysis of different kinds of utilitarianism and non-utilitarian approaches is undertaken.

¹³ The three options can be interpreted as three different degrees of risk aversion towards inequality: sum – no aversion; product – intermediate aversion; maximin – infinite aversion.

¹⁴ As in Rawls (1971).

alternative superior to another. Each represents a fundamentally different moral position.

Finally the *aggregation of preferences* might be problematic if one wants to restrict one's analysis to ordinal preferences. Arrow (1951b) shows that there is a conflict between impartiality (that is, saying nothing about ordinal preferences that goes beyond the utility information there incorporated) and the Pareto principle if one wants to respect the independence requirement. That deems aggregation impossible. This result is of special importance as ordinalism was conceived as the "answer" to WE problems. Knowing the difficulties of cardinalism (very demanding assumptions both in theory and for applied work) and the normative nature of extra-utility information (how can we determine definite values?), ordinalism seemed the perfect solution. Arrow (1951b) destroys such a hypothesis by showing that aggregation of ordinal preferences is impossible (under certain circumstances). As a consequence, whenever one wants to aggregate preferences one must abandon either the ordinality (and choose cardinality, as in much happiness literature) or the independence requisite (as in the theory of fair allocation where the fairness criterion introduces some form of interpersonal comparison or other contractarian approaches).

Modern economics embraces the problems described above, building precise criteria for the evaluation of states of affairs in relation to basic principles of social ethics alongside the assumption of some conception of individual ethics¹⁵. Moreover, it aims to be as neutral as possible. In fact, wariness about the possibility of too great a value judgment has pushed distribution issues away from economics. Instead, efficiency has been the focus of attention (in particular Pareto efficiency¹⁶). Nevertheless, that is already an option with sizeable consequences: there might be inefficient movements better for social welfare than the efficient ones. Furthermore, if economics wants to compare state of affairs over time and space it should be able to rank pairs (allocation, population) where the size of the population could also be relevant (in order to avoid odd conclusions as in classical utilitarianism, where it is possible that more heavily

¹⁵ Normally individual ethics is rooted in economists' conception of human beings based on some moral philosophy (commonly utilitarianism). More recently, mostly with the advent of experimental economics, new results have shown that altruism, reciprocity and fairness are crucial elements of individual human ethics that might conflict with traditional economic assumptions.

¹⁶ With the potential Pareto improvement concept also used, mostly in what is called "New welfare economics" and cost-benefit analysis.

populated areas with low average welfare are better than territories with smaller populations and higher average welfare).

According to Fleurbaey (2008) there are four branches of normative economics: the theory of social choice¹⁷, the theory of fair allocation (initiated by Kolm (1972)), the theory of inequality and poverty measurement (springing from the Lorenz curve and Gini coefficient analysis) and the theory of axiomatic bargaining and cooperative games (initiated by Nash (1950) and Shapley (1953)). It is beyond the scope of this section to detail all of them. All we shall say here is that all these sub-fields are different but share some basic characteristics: they¹⁸ try to rank alternatives on the basis of a population's utility function and/or personal characteristics (such as abilities and needs) and tend to show some relation to political philosophical concepts: justice in terms of equality of resources, veil of ignorance or maximin principle, related to Rawls (1971); or freedoms, capabilities and functionings, related to Sen (1999). Contrasting happiness with these main fields of normative economics and with the tasks detailed above will help us evaluate what it contributes in novelty and what problems it can solve for ethics in economics.

2.2.2. Utilitarianism and economic theory

Utilitarianism is a family of moral philosophies which states that the ultimate goal of a society is the general utility, which is to be maximized.

This kind of philosophy has been deeply bound up with economic thought since its very inception. Bentham (1789) is usually credited with the creation of such a moral philosophy and economists throughout time have been keen on using it as the basis for their value analysis. There have been several versions of utilitarianism that have influenced economics throughout history, but consequentialism (the idea that only consequences matter) and its outcome version (which evaluates the goodness of an outcome by the social utility level at that outcome) are normally present. And although utilitarianism can accommodate very different notions of utility, from pure hedonism (where utility is conceived as pleasure and freedom from pain) to the rational choice

¹⁷ With Arrow (1951b) impossibility theorem, Sen (1970) and Gibbard (1974) liberal paradoxes and Harsanyi (1953) impartial observer argument as fundamental contributions.

¹⁸ Excepting the theory of cooperative games.

versions (where utility is just a numerical representation of preference revealed by observed choice behaviour)¹⁹, such diversity is, for some, not enough. For instance, Sen (1976, 1979a, 1979b) renounces utilitarianism due to its incapacity to accommodate plural conceptions of utility (with different kinds of utility having different intrinsic value²⁰) or to incorporate extra-utility information.

A short description of the different forms by which utilitarianism has been addressed in economics throughout time (different versions supported by different economists) might be helpful in framing the incorporation of happiness within an economic analysis of welfare.

Benthamite utilitarianism was the first to appear, and this has its origins in the works of Jeremy Bentham. It assumes that individuals are self-interested and that pleasure is the sole item of intrinsic value (alongside freedom from pain). Furthermore, it assumes that, although hard to measure and compare from individual to individual, pleasure is the same for every person (depending on its intensity, duration, certainty, propinquity, fecundity and purity²¹), and that rough estimates of aggregate net pleasure should be computed for policy (and moral) evaluation. According to this doctrine, security of expectations, abundance of goods, equality and the possibility of subsistence are the most important determinants of pleasure (and of happiness). As a consequence, a legal code should be drawn up that distributes equal rights and correlative duties (at the same time dealing out punishment to those who violate their duties, so that the hedonistic egoist is forced to align himself with the common good²²). Furthermore, assuming diminishing marginal utility of money, no costs of income redistribution, and individuals sharing the same utility function which depends only on income, this system of thought also implies the promotion of egalitarian distribution of income.

¹⁹ A hedonistic utilitarianism can be found in Jeremy Bentham (or even prior in David Hume and Hutcheson), David Ricardo, James Mill and the early J.S. Mill. Even Sidgwick, Stanley Jevons, Edgeworth and Alfred Marshall use some version of hedonistic utilitarianism. That is, classic and marginalist economists were normally hedonistic. Only after Robbins (post 1930s) did utilitarianism in economics tend to lose its hedonic inclination, so that nowadays utility is rarely defined in hedonistic terms.

²⁰ As in the case of utility supported moralities.

²¹ See Bentham (1789) for details.

²² That is, although self-interest might be in line with the common good, if there is room for unchecked abuse of power of some egoist over others, that egoist's judgment would become corrupted and deviant from virtue (the common good).

Another relevant version of utilitarianism is that put forward by *J. S. Mill*, which introduces the notion of different kinds of pleasure comports with different intrinsic values²³. For him, human nature is highly plastic, with sympathy and the desire to do right as restraints on self-interest. The sense of justice, security and freedom only appear when we cooperate with others under the regulation of an optimal legal code which also operates in self-interested market operations. It continues to accept the postulate of diminishing marginal utility of income but considers individuality as the main source of happiness and renders the measurement of utility almost impossible (only the elite of competent persons who have experienced all kinds of pleasures (those of satisfying self-interest but also those of justice and freedom) should be counted to determine the value of such a state of affairs).

Henry Sidgwick (and then Francis Edgeworth) during the marginal revolution at the end of the 19th century returned to hedonism²⁴ but added some new ideas. It was mainly Edgeworth who pursued the mathematical calculus of hedonism by trying to compute the “natural” utility function derived from the views of a competent impersonal observer. He had even put forward the idea of contractarian utilitarianism where bargainers choosing from different efficient social contracts would opt for the utilitarian one²⁵.

Later (during the 1930's and 1940's) hedonism began to find itself under siege. Authors such as Lionel Robbins, Abram Bergson, Paul Samuelson, R. G. D. Allen and John Hicks²⁶ started to reject interpersonal comparisons of utility and cardinal measurability. They claimed that hedonism was subjective and not necessary to the analysis of efficient allocations (which should be the aim of the economic analysis of welfare). In fact, cardinalism is a strong and demanding assumption: assuming cardinal interpersonal comparison of utility implies the full comparability of one person's feelings of pleasure or pain with those of others. At the time that was far from being proved or even conceived as provable²⁷. In such a context, the aforementioned

²³ See Mill (1848).

²⁴ As they assumed pleasure to be the only thing of intrinsic value and the purity of quantitative hedonism as the sole way to assure internal consistency of utility theory. See Sidgwick (1874, 1883) and Edgeworth (1881).

²⁵ See Edgeworth (1879, 1881, 1882, 1887, 1889).

²⁶ See Robbins (1945), Hicks (1939), Bergson (1938), Allen (1934) and Samuelson (1937, 1938).

²⁷ Even psychology conceived introspection as not scientifically rigorous. Observing behaviour was the objective way to analyse individuals.

economists were making a strong point: if ordinalism was sufficient for welfare analysis the problems of ranking states of affairs and overcoming the difficulties of cardinalism were jointly solved. As a consequence, utility ceased to be an expression of a psychological sentiment and started to be a formal numerical representation of preference orderings revealed by consistent choice behaviour. That conception of utility dispensed with the need to understand motivations or reasons for such revealed preferences. Decision utility was not psychologically explained nor ethically justified. Furthermore, distributional issues were conceived as being beyond the scope of economic analysis (belonging to the realm of political philosophy) and Pareto efficiency was considered the fundamental criterion of analysis.

This revolution opened a space for *new theories* that attempted to respect its legacy, although these were also capable of dealing with some problems brought about by that very revolution. Harsanyi's rational choice utilitarianism (where hedonism is rejected as naïve but cardinality and interpersonal comparison of utility are accepted in the revealed preferences framework, once the concepts of fully rational and moral behaviour are defined) and ordinal utilitarianism (where the comparison of levels of utility which represent revealed preference orderings is allowed) are attempts not only to retain ordinalism (and reject hedonism) but also to allow for some form of interpersonal comparisons of utility so that the Arrow Impossibility Theorem might be "escaped from"²⁸.

Despite all that evolution utilitarianism has faced in economics throughout time, it has not yet reached a "stable equilibrium". At the present time it is still a subject of debate as to which form of utilitarianism should be used in economics, or even if any form should be used at all. In fact, some authors claim that we need to go beyond utilitarianism for a complete and consistent analysis of welfare to be undertaken²⁹. They suggest that extra-utility information might be needed to define a moral code and to solve the Arrow Impossibility Theorem and its extensions. Binmore (2005) suggests the introduction of the concept of cultural norms and conscience (which regulate natural selfishness via the guilt sentiment) as crucial information for welfare economics. Sen (1999) presents the concepts of human functionings and capabilities or freedoms as the

²⁸ See Riley (2008) for details.

²⁹ See Sen and Williams (1982) for a detailed discussion on the pros and cons of utilitarianism and its alternatives.

correct informational basis for welfare economics as utility proves to be insufficient (see the problems raised by the liberal paradox of Sen (1970)).

On the other hand, some authors³⁰ think the problems posed by mainstream economic utilitarianism can be overcome by the incorporation of ethical thinking within the ordinal paradigm (some form of qualitative ordinalist utilitarianism) while others³¹ advocate a return to some form of hedonism and cardinalism (which is generally the opinion to be found in happiness literature), even if with new insights and improvements.

2.2.3. The case of welfare economics

Welfare economics is the branch of economics that analyses the impacts of policies on the welfare of individuals and societies. It aims to state which political alternatives are best. Nevertheless, welfare analysis in economics has not always been carried out within the confines of a special branch. In fact, it started as soon as economists tried to understand economic laws and put forward policy advice³². Only later (with the complexification of the discipline and the consequent subdivision into branches) was there room for the creation of a specific branch of economics exclusively dedicated to the analysis of the impact of economic policies on social welfare (and the consequent ranking of those policies).

As a “son” of positive economics, WE tried to remain as objective and neutral as possible³³ not only maintaining its mathematical and formal rigour but also using the Pareto principle as the main welfare criterion. Consequently, WE became limited by the Pareto principle’s scope: only situations where a policy implied at least one person gaining something without anyone incurring losses were tractable. That meant that whenever a policy implied gains for some at the expense of others, that same policy

³⁰ See, for instance, Edwards (1979) and Riley (1988, 2006a, 2006b).

³¹ See, for instance, Kahneman et al. (2004), Kahneman et al. (1997), Kahneman et al. (1999), Feldman (2004), Ng (1999b) and Layard (2005a).

³² Support for international trade, division of labor, market competition, small government, etc., can be counted as examples of early policy advice (from the classical economists). Even the first major work of economics, Smith (1776), had some normative content, namely that on the advantages of a liberal economy (under certain conditions).

³³ Focusing its analysis on efficiency issues where optimality meant Pareto efficiency.

could not be evaluated by WE³⁴. Therefore, whenever it was necessary to analyze issues of welfare distribution the tool of social welfare functions was needed to force the ethical debate on what should be the criterion for social welfare. That debate (which can also be seen as a consequence of the 2nd fundamental theorem of welfare economics) proved that it might be impossible to use just the Pareto criterion if economics wanted to produce solid welfare analysis (explicit ethical choices are mandatory). Furthermore, Arrow's impossibility theorem (AIT) deemed the aggregation of individual preferences (in a sufficiently satisfying way³⁵) impossible if we only take into consideration preference orderings (challenging the ordinalist paradigm). More precisely, orthodox WE relies on three main theorems that can be seen as the fundamentals of this branch:

First fundamental theorem of welfare economics (1stFTWE): A competitive market in equilibrium represents a Pareto efficient allocation of resources. With roots in Smith's claim that self-interested agents acting on a decentralized market will be guided by an "invisible hand" for the promotion of the common good³⁶, this theorem is a formalization of that idea, developed by Lerner (1934), Lange (1942) and Arrow (1951a)³⁷. This theorem can be seen as the departure point for the creation of WE as a specific branch of analysis (see Feldman (2008)). Nevertheless, it has been subject to several criticisms over time, namely for the unrealism of its assumptions. In real life preferences are not given (instead being prone to change over time), utility is interdependent, disequilibrium is the rule (excess supply or demand), market power and monopoly are frequent, and externalities, information asymmetries and public goods abound. Pigouvian taxes (as in Pigou (1920)) and the Clarke (1971) and Groves and Loeb (1975) mechanism are examples of attempts to resolve some of the above problems, but most have remained unsolved. Furthermore, the 1stFTWE is useless for distributional problems. For that, a new welfare theorem had to be created.

Second fundamental theorem of welfare economics (2ndFTWE): any Pareto optimal equilibrium can be achieved by the competitive market provided some

³⁴Note that the solutions for such limitations (such as the Kaldor-Hicks criterion) were not consistent.

³⁵E.g. ruling out dictatorship.

³⁶Which is represented by the notion of Pareto optimality based on non-comparable and non-summativ vectors of utility, for modern WE, in contrast to classical thinking for which the definition of common good was rooted on the total value of products and services ("national dividend" in Smith's words).

³⁷Those authors used the context of walrasian general equilibrium models (self-interest (consumers maximizing utility, producers profits) and price-takers agents) with the inexistence of externalities to mathematically prove Smith's idea.

appropriate lump-sum taxes and transfers are imposed. This theorem was intended to prove that the market mechanism was a powerful one because it could reach any desirable distribution with the advantage of retaining Pareto optimality (as opposed, for instance, to planned economies where the distribution can be managed, but not efficiently). Nevertheless, it remained impossible to solve the problem of which optimal equilibrium should be chosen, which resources distribution was optimal. For that, the creation of the Bergson (1938) Economic Welfare Function (a function which expressed the preferences of society) could lead to a solution. Maximizing such a function would indicate which state of affairs would be preferable. But then the problem was transferred to the decision of which Bergson economic welfare function should be chosen. Furthermore, Arrow (1951b) with its AIT brought even more difficulties to the task of WE.

Third fundamental theorem of welfare economics (3rdFTWE): there is no social preference relation that satisfies the conditions of completeness, transitivity, universality, Pareto consistency, independence and non-dictatorship. This result was very negative for WE (mostly for applied WE), since it proved that as individuals have different preferences over all kinds of issues (such as wealth distribution or political parties³⁸) it is impossible to construct a social preference relation that satisfies some reasonably basic conditions. That has forced economists to find ways out of such an impossibility, with Maskin (1999)'s implementation theorem³⁹ as one of the sole consistent solutions for the 3rdFTWE⁴⁰.

Founding WE on the above-mentioned theorems makes it a narrow discipline with the Kaldor-Hicks compensation principle, Marshall's consumer surplus or cost-benefit analysis as the main tools⁴¹ of analysis and the promotion of GDPpc (assuming it is a Pareto movement) as the main policy advice.

³⁸ Note that this AIT can be reinterpreted as an extension of Condorcet's voting paradox.

³⁹ See Feldman (2008) for a summary.

⁴⁰ Another way to get around AIT is to drop some of the required conditions (like independence). Moving to non-welfarist paradigms or restoring cardinality (as in the happiness literature) are examples of such an attitude.

⁴¹ Note that many of these tools for applied WE suffer from theoretical inconsistencies. In particular, the Kaldor-Hicks criterion was conceived as a way to implement policy analysis without normative content (and to cope with Pareto criterion's practical limitations): a policy would be acceptable if it generated more gains than losses. Nevertheless, that implies comparing the gains of some with the losses of others, i.e., interpersonal comparison of utility, which was the "thing" to avoid. See section 3 (or Leite Mota (2007)) and Feldman (2008) for details.

Despite the development of WE, welfare issues remained present within positive economic analysis (mostly within microeconomics), even if that was not explicitly recognized⁴². And while WE has undergone the evolutionary process described above, debating some important questions regarding the ethics of normative reasoning in economics⁴³, those oriented towards positive analysis have largely ignored such problems. The result has been that significant differences can be found between WE and welfare analysis within positive economics. Moreover, positive economics has ended up with inconsistencies between its rhetoric and the implicit ethical assumption⁴⁴.

The above description of WE serves the purpose of showing that self-rated happiness as a measure of welfare can be incorporated within WE as it represents a cardinal interpretation of utility, which is compatible with the construction of social utility functions (escaping the AIT) capable of indicating some optimal state of affairs. The problem lies in its subjective nature, which raises some validity issues⁴⁵. Furthermore, depending on the interpretation of happiness (what are we grasping with self-rated happiness data), different moral philosophies might be implied. Nevertheless, the inclusion of happiness in WE can be fruitful, mostly if it is assumed as a cardinal interpretation for utility on the social welfare functions.

Throughout this entire section we have been able to see that normative problems in economics are a difficult topic for which definite conclusions still need to be found. Furthermore, we have also realized that the orthodox interpretation of utility is problematic for welfare analysis in economics and that the most important alternatives can be found either in a non-utilitarian framework or in the return to some form of cardinality.

⁴² Whenever a utility function is used, welfare implications might be drawn. In microeconomic analysis utility functions are used as objective functions within maximization problems of individual agents (consumers, producer or both). There the conditions for optimality are established and an implicit equivalence between optimality and Pareto efficiency is normally present. The design of the utility functions is normally effected automatically or with very rudimentary and naïve justifications. Nevertheless, all those choices carry important welfare assumptions that are often disregarded.

⁴³ With consequences for its reputation that went as far as many economists deeming WE unscientific and useless when the impossibility of total neutrality and objectivity was asserted (see the case of Robbins (1945)).

⁴⁴ E.g. there is frequently an ordinal rhetoric and an implicit cardinality of utility/welfare implied by the design of the maximized utility function.

⁴⁵ For positive economics self-rated happiness sounds very awkward due to its subjective and cardinal nature.

Happiness is clearly closer to cardinalism and Benthamite utilitarianism and it will be through the consolidation of empirical results and the formulation of more detailed descriptions (with the aid of psychology and neurology) regarding what SWB actually represents that happiness will gain significant relevance in the economic analysis of welfare.

2.3. Some historical context

Trying to draw a historical portrait of the relation between happiness and economics is not an easy task. That is mainly because it is possible to approach such a task from very different angles, each of them telling a different story. We can analyze the use of the word happiness throughout the history of economic thought, or understand what the conception of happiness for economists throughout time was, or even assess the importance and fitness of happiness for economics throughout history. Each of these lines of investigation answers a different question and entails a different conclusion.

In this section we want to present a very brief outline of the relation between happiness and economics throughout history. Nevertheless, our main focus will be on the history of the acceptance of self-rated happiness as a measure of welfare. As a consequence, the ordinal revolution that occurred in economics during the 1930s becomes especially relevant as its focus was the denial of the reliability and usefulness of subjective variables within the discipline⁴⁶. Consequently, we have divided our analysis into two time periods: the relation of economics to happiness before and after the 1930s.

2.3.1. Prelude: the materialistic orientation

Since the very beginning, economics (while being a social science) has pursued a quantitative analysis and formality in its argumentation (more pronouncedly since 19th century early neoclassicism). It has also shown a bias towards the analysis of material realities, somehow ignoring the interrelations that could exist between them and the

⁴⁶ See Cooter and Rappoport (1984) for a detailed discussion.

subjective perceptions of such realities⁴⁷. In doing so it has created a set of models that can be seen as incomplete and that might lead to erroneous welfare conclusions (and consequently to erroneous policies⁴⁸).

That kind of orientation has created opposite positions: those praising the rigor of its analysis and the objectivity of its conclusions; others attacking the inadequacy of that methodology in being able to pursue analysis of social phenomena and accusing it of ideological bias encapsulated in its mathematical formalization⁴⁹.

For the present, that debate continues. Critics from both within⁵⁰ and without the mainstream argue that economic analysis is not confined to wealth, money, interest rates, national accounts, inflation, exchange rates and so forth (the traditional economic variables). Politics, environment, culture, art, health, social capital, human development (and human capital), welfare and even happiness are also topics that had and have a place in economic science (even if some more marginally than others). Some of the items above mentioned are subjective, are related to the non-material side of life and are important to life satisfaction.

Nevertheless, economics is still the most formalized social science, the only one being awarded a so-called Nobel Prize⁵¹ and the one with more presence and impact within governments across nations (through advisors, consultants or even ministries) and global institutions (World Bank, United Nations, I.M.F., etc.). This kind of respect for and prestige of economics is unique amongst social sciences and is a consequence of its methodology (mathematical dominance) and field of analysis (objective, measurable and material realities).

⁴⁷ It has also ignored some more immaterial realities (such as environmental sustainability, social ties, urban landscape, etc.) and their impact on welfare. Normally, economists have deemed subjective issues and immaterial realities unsuitable for scientific scrutiny, and thus outside the scope of economic analysis.

⁴⁸ As an example, assuming that a higher GDPpc is always good might be a mistake. A higher GDP pc might have been reached through the destruction of some very important resources or through the impoverishment of people's working conditions. If that is the case, that higher GDP pc might correspond to a lower welfare.

⁴⁹ Mostly due to the methodological individualism and rationality principle, both facilitators of an efficient use of mathematics but with an impact on the underlying ethics of economics.

⁵⁰ It is important to stress that there have always been economists who have tried to incorporate some immaterial variables in their analysis (while still using orthodox methodologies and techniques). Nevertheless, that kind of research has for a long time remained marginal.

⁵¹ A prize not created by Alfred Nobel himself but by the Sveriges Riksbank in 1969. The actual name of the prize is the Sveriges Riksbank Prize in Economic Sciences. Nevertheless, it shares with the Nobel Prizes their reputation and ceremonies.

As a result, economics is normally conceived as a science that only analyses quantifiable and objective⁵² realities, using maths as a standard language. Moreover, the word “economic” is commonly synonymous with the material side of societies (e.g. economic welfare understood as the utility agents can obtain from material wealth). As such, it is not surprising that something as subjective, complex and controversial as happiness has not entered the core of economics for a long time. Although some economists have demonstrated concern with happiness⁵³, it was normally addressed in an indirect way and explicitly assumed to be beyond the main focus of economics.

2.3.2. Before the 1930s: from Bentham to early neoclassicism

Taking into account that economics was born during the 18th century, this first period of analysis is considerably large. Furthermore, economics suffered significant transformations throughout this period. Nevertheless, we think it is possible to schematize the relation between happiness and economics in a coherent and useful way if we direct our analysis towards understanding how happiness as subjective reality was directly accepted, measured or incorporated into economics⁵⁴.

During the 18th century, the century of the birth of economics, Jeremy Bentham published his work on moral and legislation (Bentham (1789)). That work postulated that human beings are pleasure seekers and pain evaders and that the good (policy, behaviour, etc.) is to be found in what maximizes pleasures over pains (or what maximizes happiness). It endorsed a hedonistic conception of utility and placed it on the highest level possible: the ultimate value. In his own words:

“The principle of utility is the foundation of the present work: it will be proper therefore at the outset to give an explicit and determinate account of

⁵² Note that quantifiable and objective don’t mean the same thing: subjective realities might be quantifiable (in fact that might be the case with happiness). Nevertheless, the bias of economic science has been towards quantifiable and objective realities.

⁵³ Tibor Scitovsky, Kenneth Galbraith, Richard Layard, Yew-Kwang Ng and Richard Easterlin are examples of 20th century economists with an explicit interest in happiness. Also see Bruni (2004a, 2004b) for an historical perspective.

⁵⁴ In fact, this focusing option is crucial. During this time period (and also depending on the author in question) the variety of conceptions of happiness (and consequent possible roles for happiness in economics) are so vast that such analysis is suitable for the construction of a complete thesis, not a part of a chapter. For instance, the conception of happiness for Smith, Malthus or J. S. Mill was much more eudemonic while Bentham, Sidgwick, Jevons or Marshall had a more hedonistic vision.

what is meant by it. By the principle of utility is meant that principle which approves or disapproves of every action whatsoever, according to the tendency it appears to have to augment or diminish the happiness of the party whose interest is in question: or, what is the same thing in other words, to promote or to oppose that happiness. I say of every action whatsoever, and therefore not only of every action of a private individual, but of every measure of government.

A measure of government (which is but a particular kind of action, performed by a particular person or persons) may be said to be conformable to or dictated by the principle of utility, when in like manner the tendency which it has to augment the happiness of the community is greater than any which it has to diminish it.”

Bentham (1789), I.3,4

This idea that individuals are the best judges of their own well-being and that social welfare is to be found in the aggregation of individual well-being was revolutionary and had a profound impact on the moral philosophy of the time.

In economics this Benthamite moral philosophy eventually became the standard grounding philosophy (mainly within the Anglo-Saxon line of thought), not only during the 18th century but also (as we have already described in section 2.2.) during the marginal revolution and early neoclassical economics. That meant happiness was present even during the birth of economics but only as part of the moral philosophy economists used to ground its welfare analysis. In fact, before the 1930s we detect what we can label as “some early concerns with the impact of material welfare on happiness”. That is, happiness was the ultimate goal for humans and societies and it was up to economists to discover the ways to augment the riches of societies in order to contribute to an improvement of happiness.

Conceived as that, the relation between happiness and economics has a long history. That is why we can go back to the 18th century to find the first known references to happiness within the context of economic analysis.

The Italian tradition of thought initiated by Ludovico Muratori, Guiseppe Palmieri, Pietro Verri, Genovesi and others, explicitly stated that the main concern of economic (and policy) administration should be the enhancement of Public Happiness

("Felicittá Púbrica" in Italian words). For them, happiness was intrinsically social and the process of how wealth becomes happiness was an issue⁵⁵.

Within the Anglo-Saxon tradition of thought happiness was also acknowledged as relevant. Adam Smith, Thomas Malthus and David Ricardo were all somehow interested in happiness.

Adam Smith (1776) thought that the object of economics was the wealth of nations (trying to explain what causes it), its distribution (mainly amongst countries) and growth. Nevertheless, he (along with other classical and utilitarian economists) was convinced that wealth should be considered a means to something: happiness. That is, although not directly addressing happiness, economics was important because it could identify the mechanism of wealth enhancement. And by enhancing wealth, nations would become happier⁵⁶. Therefore, happiness was not the core of economics but was the ultimate reason why economics would be relevant.

Malthus (1798) generally agreed with Smith. Nevertheless he was more specific: he stressed that the main reason why economics could not admit happiness to its core was because happiness was subjective and tough to measure (and economics ought to be objective); he also pointed out that the relation between happiness and wealth was not as linear as Smith thought (it was rather complex).

"The professed object of Dr. Adam Smith's inquiry, is, the nature and causes of the wealth of nations. There is another inquiry, however, perhaps still more interesting, which he occasionally mixes with it; I mean an inquiry into the causes which affect the happiness of nations, or the happiness and comfort of the lower orders of society, which is the most numerous class in every nation. I am sufficiently aware of the near connection of these two subjects, and that the causes which tend to increase the wealth of a State, tend also, generally speaking, to increase the happiness of the lower classes of the people. But perhaps Dr. Adam Smith has considered these two inquiries as still more nearly connected than they really are; at least, he has not stopped to take

⁵⁵ This Italian tradition affected France and the ideology of the French Revolution. See, for example, Sismondi and his concern with "felicité publique". See Bruni (2004a, 2004b) for details.

⁵⁶ Note that Smith was well aware that wealth was only just one determinant of happiness. He knew that non-material aspects of life were also crucial for happiness. See Smith (1759) in his "Theory of moral sentiments" for several examples.

notice of those instances, where the wealth of a society may increase (according to his definition of wealth) without having any tendency to increase the comforts of the labouring part of it. I do not mean to enter into a philosophical discussion of what constitutes the proper happiness of man; but shall merely consider two universally acknowledged ingredients, health, and the command of the necessaries and conveniences of life”.

Malthus (1798), XVI. 1

Also David Ricardo can be described as considering happiness the ultimate reason why material welfare ought to be promoted. In his own words:

“... Who, under such circumstances, would exhort him to forego the use of the better machinery, because it would deteriorate or annihilate the value of the old? Yet this is the argument of those who would wish us to prohibit the importation of corn, because it will deteriorate or annihilate that part of the capital of the farmer which is for ever sunk in land. They do not see that the end of all commerce is to increase production, and that by increasing production, though you may occasion partial loss, you increase the general happiness. To be consistent, they should endeavour to arrest all improvements in agriculture and manufactures, and all inventions of machinery; for though these contribute to general abundance, and therefore to the general happiness, they never fail, at the moment of their introduction, to deteriorate or annihilate the value of a part of the existing capital of farmers and manufacturers.”

Ricardo (1817), 19. 13

Even later, and during the marginalist revolution, Henry Sidgwick, Stanley Jevons, Alfred Marshall and Francis Edgeworth still considered happiness relevant:

“... We might no doubt speak of an “economic” distribution of wealth, no less than of labour; but this is really a confirmation of the view just stated; since in so speaking we should be understood to be assuming that the end of the distribution was to produce the greatest possible amount of happiness or

satisfaction, and affirming that the arrangement spoken of as “economic” was well adapted to this end.”

“...The common sense of mankind, in considering these inequalities, implicitly adopts, as I conceive, two propositions laid down by Bentham as to the relation of wealth to happiness:---viz. (1) that an increase of wealth is---speaking broadly and generally---productive of an increase of happiness to its possessor; and (2) that the resulting increase of happiness is not simply proportional to the increase of wealth, but stands in a decreasing ratio to it.”

Sidgwick (1883), II. 5 and VII. 1

“I wish to say a few words, in this place, upon the relation of Economics to Moral Science. The theory which follows is entirely based on a calculus of pleasure and pain; and the object of Economics is to maximise happiness by purchasing pleasure, as it were, at the lowest cost of pain. The language employed may be open to misapprehension, and it may seem as if pleasures and pains of a gross kind were treated as the all-sufficient motives to guide the mind of man. I have no hesitation in accepting the Utilitarian theory of morals which does uphold the effect upon the happiness of mankind as the criterion of what is right and wrong. But I have never felt that there is anything in that theory to prevent our putting the widest and highest interpretation upon the terms used.”

Jevons (1871), I. 29

“Lastly, the spirit of the age induces a closer attention to the question whether our increasing wealth may not be made to go further than it does in promoting the general wellbeing; and this again compels us to examine how far the exchange value of any element of wealth, whether in collective or individual use, represents accurately the addition which it makes to happiness and wellbeing”.

“When we speak of the dependence of wellbeing on material wealth, we refer to the flow or stream of wellbeing as measured by the flow or stream of

incoming wealth and the consequent power of using and consuming it. A person's stock of wealth yields by its use and in other ways an income of happiness, among which of course are to be counted the pleasures of possession: but there is little direct connection between the aggregate amount of that stock and his aggregate happiness. And it is for that reason that we have throughout this and preceding chapters spoken of the rich, the middle classes and the poor as having respectively large, medium and small incomes—not possessions .”

Marshall (1890), III. VI. 19, 21

Also Pigou (1920), who cites Sidgwick (1883) on the difference between maximizing happiness and maximizing real income per head, continued the tradition of separation between wealth and happiness and the defence of economics as the science of wealth, not of happiness (only indirectly would economics deal with happiness).

For all these economists the welfare of a society could be divided into economic (the material welfare, which could be expressed in money terms) and non-economic (the immaterial side of satisfaction). Economics should only deal with the economic welfare which was conceived as the material prerequisite for well-being.

Taking mostly into consideration simply the above cited authors (who belong to the Anglo-Saxon line of economic thought, which happened to be the dominant one⁵⁷) we can conclude that happiness was an indirect concern because it was accepted as the ultimate goal of society (and of policy) and, consequently, as the reason why wealth augmentation mattered, but not the focus of economic reasoning.

The relation between happiness and wealth was known to be positive but non linear and there was a clear distinction between economic welfare and non-economic welfare⁵⁸ (the former was related to the material side of satisfaction and the latter to the immaterial one). It was recognized that material welfare was not the whole of welfare.

⁵⁷ The continental traditions (French, German and Italian) have been continuously more directly preoccupied with happiness but had a much weaker impact on the Economic Thought.

⁵⁸ One particular distinction emerged from the Material Welfare School. For this School the distinction was between utility and ophelimity. Utility referring to the material aspects of satisfaction (essentially the satisfaction of basic needs – the economic welfare). Utility was thought objective, measurable and comparable between individuals. Ophelimity was the non-economic welfare and referred mostly to desires (subjective and incomparable between individuals). Economics should deal only with material welfare. See Cooter and Rappoport (1984) for details.

Human welfare was conceived as broader than economic welfare. Economics should not deal directly with happiness but should have it as an underlying goal. That is, economists were necessary to provide the material “means” to the happiness “end”.

In short it is possible to state that during this period happiness (although with possible different interpretations, mostly in respect to its determinants) was accepted as a subjective reality (with some psychological content) that ideally could be measurable (something that the marginalists were especially keen on, using mathematical calculus for that purpose) and should serve as ultimate guide for economic policy design and social welfare. Nevertheless, it was considered outside the core of economics as some of its determinants were variables not under economic control. Furthermore, material wealth (the main economic variable) was thought to be positively correlated to happiness (although with diminishing marginal returns) so the economic “job” was justified (directly assessing happiness, to check the impact of economic policies, was thought unnecessary⁵⁹).

2.3.3. After the 1930s: the Ordinal Revolution and beyond

During the 1930s a major theoretical revolution occurred in economics.

As stated previously, before the 1930s, the main economic theories were based on the assumption that agents were pleasure seekers and maximizers. Concepts such as diminishing marginal utility and risk aversion were thought to be psychological facts that should be incorporated as assumptions in its models. The Benthamite utilitarianism background allowed economists to support cardinality as real and eventually measurable (in some future era).

But after a long period of Benthamite utilitarianism as the dominant philosophy underlying the constructions of economic theory, these ideas were disputed. During the 1930s, some started to think that Benthamite utilitarianism (and particularly cardinality) was a wrong basis for explaining economic behaviour.⁶⁰

⁵⁹ In fact, during this time period, happiness has never been actually measured.

⁶⁰ One main protagonist of that criticism was Lionel Robbins. Robbins (1945) clearly supported a neo-positivist approach to economics: only objective facts (as observable choices) could enter economic analysis. This kind of reasoning can even be traced back to the earlier ideas of Vilfredo Pareto who endorsed a behaviourist approach to economics where precise utility functions were not needed: indifference curves (as rankings of preferences) of generic utility functions were enough.

Lionel Robbins was one of the leading economists behind this revolution as he was worried about the dangerous path economics was taking, particularly as far as utility measurement was concerned. For him, economics was trying to measure immeasurable realities: utility is a phenomenon that happens only inside individuals' minds, and thus is completely subjective. This subjective character forbids any objective measurement and interpersonal comparisons. Furthermore, economic science did not need to measure utility: individuals make choices and decisions observable through their market behaviour and that is all that is necessary.

It began to be thought that the only scientific and objective thing economics could look at was the agents' observable behaviour (namely their market behaviour, their buying and selling decisions). Psychological explanations for that behaviour were thought unnecessary and beyond the scope of economics. From the observation of market behaviour economists could infer agents' preferences, which was sufficient to build theories and to predict economic behaviour. Moreover, using the Pareto principle (which asserts that one situation is better than another if in the former at least one person is better off without anyone being worse off), economists were able to proceed with policy analysis without the necessity to compare personal utilities. In fact, that was a strong argument because the alternative, cardinally comparing subjective utilities, was very demanding in terms of assumptions and methodology: one would have to assume that subjective utility was measurable and comparable between different individuals (e.g. the utility of eating an orange for person A equivalent to the utility of eating an apple for person B). At that time, such assumptions were considered too strong and, furthermore, unnecessary. Not surprisingly, cardinality and the search for psychological fundamentals of utility soon failed to attract interest and lost credibility.

This process of expelling psychology and all the cardinal properties of preferences was labelled the Ordinal Revolution.

By the end of that revolution, economics had become a behavioural science, only concerned with the observation of objective choice decisions and assuming that the preference ordering extracted from agents' choice decisions (assuming that the preference ordering is complete, transitive and convex) was all economists could say about individuals' preferences. All that helped the abstractionism and mathematicism of the theories then produced (see the case of general equilibrium models). Ordinalism

rejected utility measurement and comparison: utility was subjective and incomparable, not a scientific object⁶¹.

This transformation in economic thought impacted WE. In particular, it originated Paretian WE: WE was no longer the analysis of economic welfare (the production and distribution of the material means that allow individuals to satisfy some needs, namely their materialistic and basic ones); instead WE began to transform into the analysis of revealed preferences (welfare grasped with the help of indifference curves) obtained from the observation of individual choices (assumed as the observed result of an individual utility maximization behaviour)⁶². WE was no longer about evaluating how well material needs were satisfied. WE was about analyzing how free agents were to make their choices and to pursue their own interests (how well agents' preferences could be satisfied). Also, WE relied on the capability of the price mechanism to translate and incorporate the importance goods and services had for individuals and society.

These transformations in WE eventually led to the use of surplus analysis, compensation criterion, money valuations and Pareto efficiency as main tools to judge the economy and guide welfare policies.

But was that the end of the story? Were the problems of the economic analysis of welfare definitively solved? In fact, ordinalism was an attempt to allow economics to proceed with policy analysis without the need to engage in value judgments, which was the ideal from a scientific point of view. Nevertheless it failed to achieve such goal, and for several reasons: for Coote and Rappoport (1984) ordinalism was not an improvement on WE but just a change of focus. Instead of dealing with economic welfare and ways of improving it, it diverged into the analysis of efficiency (with the restrict criteria of Pareto); Arrow (1951b) demonstrated that with preference orderings and a number of reasonable assumptions about the characteristics of a social welfare function there was no way to build such a structure as a social welfare criterion. That is, within the ordinal paradigm ranking policies it would be mostly impossible; the applicability of the Pareto principle proved itself very limited. In most actual situations

⁶¹ Using the Material Welfare School language, we may say that, for ordinalists, utility and ophelimity were one and the same thing, both with the proprieties of the latter.

⁶² As a consequence, WE could also study all choices, not just those relative to some kinds of goods or services (so opening the space for economic analysis of immaterial realities, if the respective choice behaviour is observable).

a policy benefits some at the expense of others. In such situations the Pareto principle is useless⁶³. This failure to expel value judgment from WE generated three different types of reactions amongst welfare economists: some continued the search for objective social welfare criteria, retaining ordinalism for the most part and believing that the AIT was solvable; others accepted the impossibility of neutrality in WE and developed new forms of reasoning, new models, new frames of reference either using extra-utility information (see Sen (1979b) as an example) or returning to cardinality (see, for example, Ng (1978)); finally, others gave up on WE⁶⁴ as they believed value judgments would be corruptive of the scientific analysis they were pursuing.

Although ordinalism proved incomplete in WE, it nevertheless impacted greatly on economics, so much so that even nowadays the standard rhetoric on utility is ordinal. The fact is that such a way of reasoning clearly lays aside any possibility of the concern of economics with subjective and complex matters such as happiness (directly or indirectly): economics only deals with preferences and choices, not with the rationales behind them or the inner subjective agents' sensations.

In conclusion we may say that this ordinal revolution deeply impacted on economic theory, namely microeconomics and (what is more relevant to us) WE. Even if some were aware of the lacunas and insufficiencies of ordinalism (mostly those concentrated in WE) it became a standard assumption that there was no room for subjective, introspective and psychological analysis within economics. Economics was a positive science that could only deal with objective facts (observed choice behaviour)⁶⁵.

It comes as no surprise that, in such an environment, the question of the happiness of individuals, and more specifically, the question of how economic decisions impact on it (and also how individual happiness impacts on economic decisions) was ignored and considered non-scientific, and consequently outside of the scope of

⁶³ Note that even the Kaldor-Hicks compensation principle that tried to remedy such uselessness failed to do so, as it implies some interpersonal comparison of utility, which was exactly what ordinalism was attempting to avoid in the first place (see section 3.2 for details on the Kaldor-Hicks compensation principle).

⁶⁴ See Robbins (1981) who even suggests the relabeling of WE as Political Economy.

⁶⁵ As we have said earlier, this kind of reasoning, when complemented by the AIT, raised voices claiming that WE was not scientific and that it should be abandoned. In other words, if it was to be objective (focusing on efficiency and retaining ordinality) WE turned out to be ineffective (no social preference relation was possible). If it wanted to become effective, it had to abandon ordinality or the Pareto criterion (losing its so called objectivity). As such, some deemed it useless.

economics. It can thus be said that the ordinal revolution further withdrew happiness from economics.

Happiness was never at the core of economics. But, in the beginning it was seen as an underlying concern, the ultimate goal, and the lasting reason why economics mattered. Consequently some attention was drawn to the transformation problem (how national wealth eventually becomes national happiness). After ordinalism all choices were assumed to lead to happiness (no matter by which means or through what psychological scheme) and happiness itself was seen as scientifically intractable. So, if all choices led to welfare (happiness) there was no need to pay attention to the transformation problem or to study something as ambiguous as happiness. Precisely because happiness was assumed to be subjective it was considered beyond the focus of economics to measure it or to find its determinants.

2.4. The recent history of happiness in economics

It might be too early to establish the economics of happiness as a branch within economic theory (internal consistency and time span are still lacking in the studies of happiness in economics⁶⁶). Nevertheless, it is irrefutable that there has been a huge growth in the interest of economists in the issue of happiness: empirical, theoretical and formal analyses that take happiness into consideration abound (see footnote 3 of this section).

Whether “happiness in economics” or the “economics of happiness” is the correct label to accord to this new line of work is beyond the scope of this section⁶⁷. Instead, we will try to understand why this line of investigation has emerged and what links the different economists engaged in it.

In the following sub-sections we will try to trace the earlier and more recent contributions of various economists to the issues of happiness in economics and analyze the main similarities among them and their theories. We will also attempt to see why those authors felt it necessary to summon happiness into WE analysis.

⁶⁶ It may even be argued that such a branch will never exist as sufficient specificity, interest and dimension cannot be achieved.

⁶⁷ Here it suffices to say that this line of work has emerged with verifiable strength.

2.4.1. Early authors: happiness...why not?

We have already said that happiness has never been at the core of economic analysis. At the most it has been an indirect/underlying concern. At the very last, it has been completely overlooked. Nevertheless, it is possible to find some exceptions within the last few decades. Here, we try to identify the few economists that first thought the direct introduction of happiness into economics (and subsequent analysis) could be fruitful.

Four main authors can be listed as those who first explicitly and directly incorporated both the word and data of happiness into their economic analysis: Richard Easterlin, Yew-Kwang Ng, Tibor Scitovsky and Richard Layard. During the 1970s and 1980s, all these economists brought to the surface the issue of happiness in economics with papers or books in which the data on subjective well-being or the concept of happiness were explicitly used as the main focus of analysis.

Easterlin and Ng have analyzed this issue with empirical papers (Easterlin (1974) and Ng (1978)). Scitovsky devoted a chapter of his “The Joyless Economy” (Scitovsky (1976b)) and a paper (Scitovsky (1976a)) to the analysis of the relations between economic growth, income and happiness. Layard wrote an article evaluating the consequences for public policy of using happiness as a measure of welfare (Layard (1980)). In all these works happiness was used as a standard for welfare, as the ultimate goal for societies, and policy implications were drawn.

Each of the above cited authors has a different background, but they all saw in happiness an opportunity to enrich the economic analysis of welfare and to incorporate within the discipline a concept they thought to be central to human welfare.

It is worth analyzing each author separately in order to understand how and why they have introduced happiness into their analysis.

Richard Easterlin is a North American economist specializing in the fields of demographic economics and economic analysis of well-being. Having started his career during the 1960s by analyzing issues such as the American baby boom and the economic growth he soon realized that happiness could be useful to an economic theory of welfare. Later, Easterlin edited the “Happiness in Economics” volume of the *Critical Writings in Economics* (Easterlin (2002b)), in which he assembles economists’ main

contributions to the understanding of the happiness of individuals and nations. In that volume's introduction Easterlin states that it was not by accident that he came across happiness. Ever since the beginning of his career he had had relations with scientists from other disciplines (namely demographers, sociologists and psychologists). That had allowed him to come into contact with some extra economic data and to be more open to problems that traditionally had not been main concerns of economics. This proximity to other areas of scientific knowledge opened up for him the doors to the study of happiness, something unusual at the time⁶⁸.

Thus, in this case, it was Easterlin's interdisciplinary tendencies (studying issues of other sciences and discussing them with scientists from those other disciplines) that prompted him to incorporate happiness (collected from surveys) into the framework of economic analysis, namely through the analysis of the relation between economic growth and happiness⁶⁹.

Yew-Kang Ng, a Malaysian economist, spent most of his career in Australia. He is a microeconomist specializing in WE and was also one of the first economists directly to address the issue of happiness. In 1978 he published the article "Economic Growth and Social Welfare: the Need for a Complete Study of Happiness" (Ng (1978)) in which he tries to develop a theoretical background for happiness within economic theory. Quoting Easterlin (1974) and Scitovsky (1976b) amongst others, and using the Harrod-Hirsch concept of positional goods, he stated that, if economic analysis is to be more complete and rigorous, it must be able to analyze the subjective side of welfare. For him, economics (at that time) was only capable of providing some insights into objective, but not into subjective, welfare. Assigning happiness a central role in the evaluation of welfare could provide economics with a more viable means of understanding the welfare of societies and new policy advice. For him, this task would only be possible if economists were able to talk with other scientists, namely with psychologists. For this economist WE was not a complete theory of wellbeing (nor even

⁶⁸ Easterlin explicitly admits that the main study that has alerted him to the issue of happiness was Cantril (1965), in which Hadley Cantril (a social psychologist) looked at surveys on subjective well-being (or happiness).

⁶⁹ Easterlin (1974) relies on Moses Abramovitz (1959), who thought that the relationship between income growth (economic growth) and welfare is rather complicated and not a simple positive correlation. Relying on data obtained from surveys conducted since the end of the Second World War (since the mid-1940s) Easterlin confirms Abramovitz's suspicion.

a complete theory of the economic causes of wellbeing). It overlooked some aspects of actual wellbeing and ignored the relations between economic factors and non-economic ones that also affect wellbeing.

Ng's early interest in happiness was enhanced by several factors: the availability of data on self reported happiness, the psychologists' analysis of it, Easterlin (1974) and the feeling that something was missing from WE ⁷⁰.

Tibor Scitovsky was a Hungarian economist trained at the London School of Economics (LSE). Like Ng, he was also a welfare economist who was not happy with the capacity of WE to analyze the actual welfare of individuals and society.

In his book (Scitovsky (1976b)) he clearly states that welfare should not be confused with consumption (obtainable with income) as was generally the case. There he stressed the difference between stimulus and comfort. Both are psychological needs of individuals that produce different types of feelings: stimulus promotes joy (pleasure); comfort generates joylessness (boredom). His thesis was that economic growth was more likely to promote comfort than stimulus. As an example, he cited job specialization, which has made work a less pleasant activity (decreasing the enjoyment of workers). And even if that specialization promoted consumption, that promotes only comfort. In the end, as a result of work specialization, society might be richer but lacking in joy.

It is in this context that, in chapter 7 of his book, he explicitly endorses the problem of income versus happiness. Throughout that chapter, also using the data from Easterlin (1974), Scitovsky makes it clear that the relation between happiness and economic growth is far from being positive, straightforward and simple. Pointing out the comfort bias of economic growth and consumption, and the failures in the price system to incorporate all relevant welfare information, he clearly endorses the need for economists to build more reliable indicators of welfare: the traditional GDP is just not a reliable source of society's welfare. What Ng called subjective, Scitovsky called qualitative. But the conclusions are similar. Happiness is the main goal of society and

⁷⁰ In an email exchange with Yew-Kwang Ng, I was able to obtain the following answer to the question "how did you come across happiness?": "Happiness is our ultimate objective. I have been an economist in training but have a broader interest than many other economists. Also, welfare economics has been my main interest since my student days. I define welfare as nothing other than (possibly longer term) happiness. Thus, I have always been interested in problems related to happiness"

the traditional economic analysis of welfare is biased towards the objective, material and quantitative side of wellbeing. However, to enhance happiness, the subjective or qualitative aspects of welfare are crucial.

Layard is an LSE labour economist (also concerned with education and public policy problems) who envisaged the impact happiness analysis within economics might have, especially on the public policy domain.

In 1980 he published an article in “The Economic Journal”, Layard (1980), where happiness as a metric for welfare is considered a challenge for public policy design. There he stresses that status ranking and expectations impact on happiness, causing it not to be perfectly correlated with economic growth over time. Incorporating both Scitovsky’s and Easterlin’s works, he supports a change in policy design so that economic growth might effectively promote welfare (happiness enhancement).

All these authors thought it necessary for economics to subsume subjectivity (specifically happiness), in order to build a better economic theory of well-being⁷¹. Furthermore, we may say that they are linked by: 1) the areas of specialization within economics; 2) their openness to the contributions of other sciences; 3) a feeling of dissatisfaction with the economic analysis of wellbeing.

1) Although Easterlin and Layard may not be welfare economists by training, they are clearly concerned with welfare analysis of societies. Being economists has made them particularly alert to the relations between the economy and welfare (and in particular with happiness). Scitovsky and Ng were both welfare economists.

2) All four were supporters of an interdisciplinary approach to economics (in particular in WE), mainly endorsing the need for a permanent exchange of information and knowledge between economics and psychology (so that economics could better understand the subjective side of welfare and behaviour).

3) All of them felt mainstream WE (and, more broadly, economics) unsuited to dealing with the subjective side of actual phenomena. That had biased WE towards the material aspects of welfare, something they felt to be at odds with a reliable and rigorous evaluation of it. For instance, they all thought the traditional usage of GDP as

⁷¹ In which the subjective sides of life were contemplated and explained.

the best measure of welfare was misleading and could result in wrong welfare policy advice.

Although these four economists were the most prominent, some others could also have been mentioned⁷². But our aim was just to make the point that economists who first took the study of happiness in economics seriously had something in common⁷³.

It seems to us that this early contemporary usage of happiness in economics had a more instrumental rather than conceptual/structural purpose. The economists who were dissatisfied with the tools, models and conclusions they normally worked with found in self-rated happiness and in the relation it showed to economic growth (and income) one very good opportunity to demonstrate and illustrate their point: there was something wrong with WE and a change was necessary (both at theoretical and policy levels).

In conclusion, happiness first appeared directly in economic analysis, not by accident or frivolously, but instrumentally: it fitted the interests of those economists who thought that the immaterial side of life was important (or even that happiness was the main goal of all individuals and societies) and who were dissatisfied with WE models and policy prescriptions.

2.4.2. Contemporary authors: the acceptance and spread of happiness in economics.

If we look at the above-mentioned Critical Writings in Economics devoted to the subject “Happiness in Economics” we see that, after the first wave of enthusiasm for that subject in the 1970s, there was rather an abandonment of the issue during the 1980s

⁷² We could have mentioned the paper of Morawetz et al. (1977) in which he and his co-authors analyze the effects of income distribution (within small communities in Israel) in self-rated happiness (collected via interviews); some works of E. J. Mishan (another dissatisfied welfare economist of that time) from the 1960s and the 1970s, namely Mishan (1977); some contributions of W. Beckerman (an environmental economist). Nevertheless, the selected authors, who have more directly endorsed the issue of happiness, can be regarded as the representatives of early contributions and are those who have returned to this topic since it has gained recent notoriety.

⁷³ Also beyond of the scope of this analysis is the casting of those who first demonstrated concern with qualitative aspects in economics. That research would lead us to names such as Torstein Veblen, Frank Knight, J. M. Keynes or Kenneth Galbraith (amongst others).

and part of the 1990s⁷⁴. Even the early authors who addressed happiness in economics did not pay particular attention to the subject during that period of time.

This clearly shows that the early interest in happiness was not so deep or, at least, that happiness wasn't seen as sufficiently reliable or credible to be assigned special attention. Nevertheless, recently (approximately in the last 15 years) this issue has gained new vigour. Suddenly more economists (including the early authors) have begun to show interest in the data on self-reported happiness (or more broadly subjective well-being) and in the consequences of such analysis for economic theory (and for WE in particular). Authors such as Bernard van Praag (who is linked to the Leyden school⁷⁵), Bruno Frey, Andrew Oswald, Robert Frank and Amartya Sen (the latter more as an outsider⁷⁶) together with Richard Easterlin, Yew-Kwang Ng and Richard Layard (the early contributors), all are publishing new articles and books on the relations between happiness and economics⁷⁷. All these new contributions match up to the old ones and, although adding some new insights, empirical results and conclusions, they basically reinforce what has already been discovered: the relation between happiness and income (economic growth) is not linear (it tends to show diminishing returns as income rises) and the relative aspects of consumption are crucial to welfare (society's standards of living and consumption impinge upon individual satisfaction).

It is now worth proceeding with a glance at the contemporary authors to find out what are they doing and what is driving them regarding the economics of happiness.

Bernard van Praag is a Dutch econometrician and welfare economist who has been concerned with the analysis of welfare, in particular with the problems of distribution of and satisfaction with income. In Van Praag and Ferrer-I-Carbonell

⁷⁴ As an exception we can refer to van de Stadt et al. (1985), where empirical evidence of utility being relativity dependent is found (namely dependent on habit formation and the utility of other people). Although not clearly endorsing the happiness issue, it deals with the relativity of utility (welfare), something which the happiness literature also stresses.

⁷⁵ This school of thought (which can be traced back to the late 1960s and early 1970s), arising at Leyden University, was concerned with satisfaction with income. Although not studying happiness per se, it is an example of an economists' early attempt to capture subjective aspects of welfare.

⁷⁶ Although we include Sen in the group of economists concerned with happiness, he stands apart from the others. Giving a very broad and philosophical interpretation of happiness, he thinks that conceiving happiness as SWB (which is what can be directly measured by surveys) is poor as it fails to take on board very important issues of human welfare. Instead, his main concern is with the promotion of capabilities and freedom of individuals and societies (see Sen (1999) and also section 3.3 below).

⁷⁷ Two more names can be cited with relevant work on this issue: Luigino Bruni (mostly with historical analysis) and Ruut Veenhoven (who has been studying happiness for a long time but as a sociologist).

(2004), several econometrically relevant issues for the economic analysis of happiness are discussed⁷⁸. It is the most important econometric contribution to this field to date.

Bruno Frey is a Swiss political/public economist, with an institutionalist inclination, who has used data on happiness to compute several regressions relating happiness to various economic, social and institutional variables. One of his main contributions was to show the positive correlation between democratic environment and happiness. The more direct the democratic system is, the happier is society and its individuals. Even more, the very *process* of democratic participation contributes positively to happiness, whatever the outcome of that process is⁷⁹.

Another prominent participant is the labour economist *Andrew Oswald*. In his studies on happiness he uses self-rated happiness or satisfaction with life as the dependent variables to run empirical regressions with unemployment, inflation and several demographic and economic variables as independent variables. His main conclusions are that both unemployment and inflation correlate negatively with happiness⁸⁰ and that variables such as one's civil status, age and educational level are vital to happiness, indeed frequently more important than income⁸¹ (e.g. married and highly educated persons are happier than divorced and poorly educated ones).

Robert Frank and Amartya Sen (along with others) are economists who also show some concern with the happiness issue, although not as directly as those mentioned above.

Robert Frank is an Ethics and Public Policy economist who has analyzed the relativity aspect of consumption and income, discovering that the satisfaction with such items is mostly a relative problem, see Frank (1997, 2005).

Amartya Sen is an economist long concerned with the welfare of individuals (in particular with poverty⁸²) and one who has always been alert to the non-economic side

⁷⁸ This book is also a result of some previously published work in reviews such as the *Economic Journal*, *Journal of Public Economics* and *Review of Economic and Statistics*. See Van Praag and Ferrer-I-Carbonell (2004) for details.

⁷⁹ See Frey and Stutzer (2000, 2002a, 2002b, 2006).

⁸⁰ On unemployment being more important to happiness than inflation, see Di Tella et al. (2001).

⁸¹ See Oswald (1997), Di Tella et al. (2001, 2003), Di Tella and MacCulloch (2005, 2006, 2008), Clark and Oswald (1994, 1996), Blanchflower and Oswald (2004a).

⁸² See Sen (1982).

of welfare (such as education, capabilities and liberty)⁸³. Nevertheless, Sen is not in line with the happiness literature as it clearly endorses a departure from every form of utilitarianism in WE. For him, happiness should be framed within the capabilities theory as a capability, amongst others, to be promoted⁸⁴.

The early authors also found in this appraisal of happiness in economics an opportunity to return to their early ideas, and are presently publishing new works.

Yew-Kwang Ng is again actively working on the field (Ng (1996, 1997, 1999a, 1999b, 2001, 2002b, 2002a, 2003, 2006, 2008)) and Easterlin, alongside with the edition of the *Critical Writings on Happiness in Economics*, is publishing articles on happiness (see Easterlin (2001a, 2001b, 2002a, 2003, 2005, 2006)). Richard Layard is also currently interested on the issue of economics of happiness. Layard (2005a) is a book entirely devoted to happiness and Layard (2006) an article analyzing the main consequences of happiness research for economic modelling, theory and policy conclusions. Stressing out the problems of rivalry and habituation in consumption (that do not appear, or do it in a considerably lower proportion, in the case of leisure) he proposes a tax policy that discourages consumption and encourages leisure. Such policy would promote the welfare (happiness) of society⁸⁵.

Once again, we may look at what links all these economists now working consistently on happiness in economics. If we do so, we will reach a similar conclusion to the one before: they are all economists who are, to some extent, dissatisfied with the main conclusions of economics regarding the welfare of societies and are specialists in fields of economics where that dissatisfaction is more likely to be felt⁸⁶. If one is a labour economist (dealing with unemployment, working conditions, and so forth), a

⁸³ It is not by accident that Sen's work served as theoretical inspiration for the creation and development of the United Nations Human Development Index (HDI). This index is a clear attempt to provide a more accurate measure, and ranking, of nations' welfare. Including life expectancy and school enrolments along with GDP pc, this index tries to encapsulate some non-economic issues of welfare.

⁸⁴ See Sen (1999) and also section 3.3 below.

⁸⁵ See Layard (2005a, 2005b).

⁸⁶ I have also asked these economists, by email, why they have become interested in happiness. The two answers that I received were very prosaic. I quote: "I got interested in the field because it seemed sensible for economists to ask themselves what people really care about", A. Oswald; "I am an economist and I got into the field because economic activity should produce happiness for people, and not just produce output", B. Frey. Although these answers may seem vacuous they at least say one thing about these authors: they are economists who think that happiness is the ultimate goal of humans (which is not a consensual position amongst economists (Sen is an example)). Given that, it is not surprising that they try to incorporate happiness directly into their welfare analysis.

welfare economist (trying to work out what really enhances human welfare) or even a public/political economist (concentrating on analyzing what policies best serve individuals' and society's interests) the assumption that happiness is what really matters might conflict with mainstream economic conclusions.

Economics has long been dominated by a materialistic bias, neglecting the subjective sides of life. Nevertheless, in reality, human welfare depends a lot on the subjective sides of life: unemployment is much more painful than the income loss it involves, not all equally paid jobs offer the same satisfaction and rising consumption might be associated with welfare losses.

So if one is an economist and thinks that what guides human action and should be promoted is happiness, one faces a dilemma: happiness being intrinsically subjective, apparently there is no way by which economics could incorporate that reality. Either one abandons happiness or economics or one transforms economics. This last option is the one that these economists are pursuing. Standing up for the importance of happiness in people's lives, they urge the need for transformations within economics that allow the incorporation of happiness as one of its core variables (at least in WE).

As in the 1970s, this new wave of enthusiasm regarding happiness in economics is also characterized by interdisciplinarity, namely with sociology, psychology and even with neurology (some new neurological studies conclude that pleasant and unpleasant feelings have well defined and structured brain waves profiles, which is something that may reinforce the idea of tractability and consistency of happiness as an object for economic study (see Layard (2005a)).

From all that has been said in the two previous subsections, we may conclude that the internalization of happiness within economics is an ongoing process guided by the following main forces:

A) Internal forces: within economics, mainly in fields such as Welfare, Labour, Political or Public Economics there was always room for some economists who thought the models and tools they were provided with were insufficient properly to address the fundamental questions they should be able to fully understand (such as unemployment, democracy, welfare, etc.). Those fields are amongst the most complex in economics and the ones where traditional economic analysis most conflicts with reality (it is very hard

to rigorously study the welfare problems of a society while ignoring the interrelations between the subjective and objective sides of welfare, between economic and non-economic factors affecting welfare). Furthermore, the recognition that the relation between economic growth and happiness (welfare) was not as simple as economists previously thought (the so called “paradox of happiness”) further forced economists to realize that something was wrong in WE (economics was lacking some crucial tools and theories).

All these new insights and facts led economists to think about alternative theories and techniques tending towards a more complete WE (both as regards measurement, theory and applied techniques/policy issues). The incorporation of happiness within economics might serve that purpose well.

B) External forces: the other forces that contributed to the incorporation of happiness within economics came from outside: namely the works on neurology, psychology and sociology, which covered the very same issue of happiness made the task of economists easier. Psychological and sociological studies proved the reliability of the questionnaires on happiness (assuring that self-rated happiness was a reliable indicator of the actual wellbeing of individuals) and lent strength to the economic (and econometric) analysis of happiness. The neurological proofs that individuals’ feelings (namely of satisfaction) had physical expression (brain waves and neural patterns) also promoted the credibility of happiness as a scientific object (we might be able, after all, to measure and compare an agent’s feelings and directly access agents’ welfare). All these studies also enlarged the data availability. That fact also facilitates further economic analysis.

2.5. In short...

From all that has been discussed regarding happiness and economics throughout this section, it is possible to summarize some main ideas regarding the relation between happiness and economics:

Happiness has been a long lasting concern of economists either more or less explicitly: throughout this section we have noticed that the issue of happiness has

always been somewhat connected to economics. Either as the ultimate goal economics should promote (through its capacity of enhancing economic welfare (material well-being)) or as the underlying reality that has always been present in choice decisions, economics has been linked to happiness. Nevertheless, happiness was not at the core of economics and was mainly treated indirectly (see the minor use of the word happiness in older economic papers)⁸⁷. Only recently has happiness become a direct and explicit subject for economics.

Happiness in Economics is a response to some economists' dissatisfaction with the economic analysis of welfare and wellbeing: by means of this section we have also come to realize that there were some similarities amongst those economists who directly incorporated happiness into economics. They are all specialists in applied fields of economics in which the conflict between economic theory predictions and actual reality is especially noteworthy, namely as regards welfare economics, public economics and labour economics. The incapacity to properly address the problems of unemployment, work quality, welfare measures or individual and public choices (amongst others) opened the doors to allowing happiness to enter into economics (and attempt to rectify such incapacity).

Happiness in Economics is a very recent field of analysis: another factor worth noticing is the fact that the increased usage of happiness within economic analysis is a very recent phenomenon. Most contributions started during the mid 1990s. Although some authors grew interested in this subject during the 1970s, the majority of them have only very recently directly used happiness within their economic analysis.

If an Economics of Happiness is to be established, it will appear to be heterodox: despite the increasing number of economists working in this field, it is still hard to establish a branch such as the economics of happiness. Nevertheless, the number of works is consistently growing and a continuous flow of information between economists engaged in the study of happiness already exists (with specialized

⁸⁷ If we conduct a search (as in March 2009) of economic articles with the word “happiness” using the Jstor repository, we get 2945 hits. Nevertheless, in most cases, that word is only used once throughout each article. That is, the word is used informally, not with scientific intent.

conferences increasing in regularity and quality, creating a network of knowledge). Moreover, in 2000, there was created the Journal of Happiness Studies⁸⁸, which is specifically devoted to the scientific analysis of happiness. This is a multidisciplinary review in which psychologists and sociologists dominate. But economists also participate and therein have a specific channel for developing their analyses. This may lead to a higher profile and greater respectability for the economic analysis of happiness.

It may be easier to talk about the establishment of happiness studies rather than the economics of happiness. Maybe when a review such as “The Economics of Happiness Review” appears (with an ISI impact factor and recognized credibility) we can call for the official recognition of this new branch of economic theory. Until then it is more correct to talk about happiness within economics and to recognize the heterodox character⁸⁹ of the analysis, given the challenges facing neoclassical theory, both concerning rationality assumptions, the endorsement of interdisciplinarity, and policy advice (namely questioning the welfare gains of economic growth and liberal economic policies). Finally we can stress that if the economics of happiness is to be established it will probably appear as a sub-branch of WE.

2.6. Conclusion

All sciences evolve through time, according to changes in reality and in theoretical fashions. That same process also takes place in economics.

In this section we have tried to portray the evolution of economics as far as its relation with happiness is concerned. We have found that happiness entered economics due to the dissatisfaction felt by some economists (mostly working in specific applied fields) regarding the way economic theory was treating their specific subject matter. We also found that the majority of economists interested in this issue are those who are ready to accept happiness as the final goal for human beings and societies (which is in line with a kind of utilitarian Benthamite position). By introducing the study of happiness into economics they are accomplishing two goals: pressuring the economic

⁸⁸ On Ruut Veenhoven’s initiative.

⁸⁹ Nevertheless, some papers on this subject are being published in top ranking orthodox reviews. Kahneman et al. (1997), Di Tella et al. (2001) and Frey and Stutzer (2002b) are perfect examples.

profession to effect transformations in the direction of analyzing subjective and immaterial aspects of economic life, and putting happiness on the economic policy agenda.

3. Why should happiness have a role in welfare economics? Happiness versus Capabilities and Orthodoxy

3.1. Introduction

The main purpose of welfare economics (WE) is to assess the welfare consequences of different policy proposals (market vs. central planning, different tax systems, subsidy policies, laws on international trade, etc.). WE is a specific branch of economic analysis where the normative problems are more salient: beginning with a positive analysis (based on economic models), ends with policy advice (e.g. using a specific economic model, WE states that the economic policy x is better, in terms of welfare, than economic policy y). In the words of Per-Olov Johansson (1991):

“A distinction is usually made between analyzing the consequences of a change and making judgments concerning the desirability of particular changes or policies. The former kind of analysis is called positive economics, while the latter is referred to as normative economics. We can use tools such as supply and demand curves to describe the effects of a policy change, such as a proposed tax on cigarettes...”, “These are examples of the kind of questions positive economics is concerned with. On the other hand, normative or welfare economics is concerned with evaluating the various consequences of the proposed tax and coming to a judgment concerning the desirability of the tax. Thus, the basic aim of welfare economics is to provide us with criteria according to which various policy proposals can be ranked.”

Johansson (1991), p.1

Simple as this might seem (from the viewpoint of logic) the step from positive to normative reasoning (from positive economics towards normative economics) is not always easy: even if one accepts the validity of the underlying “positive” model there are always conceptual and value issues to be solved before some normative consensus

can appear¹. As already stated in section 2 of this thesis, for Robbins (1981) this is a critical issue, one that could even discredit WE as a science. He believes WE should be relabelled as Political Economy, at the same time it would become clear that it is a subjective domain of analysis. For him, it becomes imperative to make the choice about “what good is” transparent. Welfare economists must first reveal their conception of good (which is mostly a subjective issue), and only then use economic models to perform welfare analysis. In his own words:

“As regards the subject matter of Economic Science, I adhere to its description in terms of behaviour conditioned by scarcity. As regards its status as a science, I see no reason to deny its susceptibility to the usual logical requirements of a science, though I have emphasized the peculiar nature of its subject as concerned with conscious beings capable of choice and learning. I see no reason why we should be terrified into thinking that such analysis necessarily involves ideological bias. But beyond that, in the application of Economic Science to problems of policy, I urge that we must acknowledge the introduction of assumptions of value essentially incapable of scientific proof. For this reason, while not denying the value of some thought going under that name, I have urged that the claims of Welfare Economics to be scientific are highly dubious; and I go on to argue the lack of realism which is involved by some of the inferences which may be drawn from its assumptions. Instead I recommend what I call Political Economy which, at each relevant point, declares all relevant non-scientific assumptions; and I furnish some indications of the leading criteria and fields of speculation which should underlie this branch of intellectual activity.”

Robbins (1981), p.9

Even if one disagrees with Robbins on the need for WE relabeling, it is clear that the definition of welfare is critical to building an approach to WE: is it material

¹ Note that it can be argued that a normative consensus will never appear (which is Lionel Robbins’ position on WE, shown later): dealing with normative and axiomatic issues (such as the definition of welfare or of the “good”) one might be forced to accept the impossibility of a unanimously supported definition. In fact, the very aim of the political process is to try to solve disagreements regarding normative options.

progress, psychological well-being, freedom (political, economic or social) or enlargement of consumption options? The answer to this question will not only determine one's approach to WE, but also the type and direction of policy advice.

The concept of welfare within the discipline of economics has a long history and has been subject to various paradigm changes over time. Classical utilitarianism held that the welfare of the society was conceived as the sum of the welfare of all the individuals, and the welfare of individuals as the utility they obtained from the goods they had at their disposal. Later, its welfarist version asserted that utility could only be inferred from the choice behaviour of rational agents and was assumed to be ordinal, interpersonally incomparable and the sole valid informational base for WE². Meanwhile there was the max-min principle, a neoclassical interpretation of the work of Rawls on justice as fairness, where the welfare of society was to be determined through the utility of the most disadvantaged. Furthermore, there are alternatives proposed by Amartya Sen and John Rawls (capabilities and primary goods, respectively, as competing informational bases for welfare assessments, opposing utility) and the more recent analysis of subjective assessments of utility (Happiness, Subjective Well-Being (SWB), Life Satisfaction, etc.). All this demonstrates how WE has been struggling without having reached a "stable equilibrium"³.

In practice, welfare has been alternatively associated with material things (wealth, GDP, income, consumption bundles, basic goods), with psychological phenomena (happiness, good emotions or, more broadly, utility as a subjective concept), with utility as an abstract and psychologically empty concept, inferred from preference orderings from objective and observable choice behaviour, or with freedom and

² This is the dominant rhetoric about utility amongst economists and is considered the standard for MWE. Nevertheless it is easy to find discrepancies between the rhetoric and practice: in many papers where welfare analysis is done an additive social welfare function (as objective function of maximization) is used (see Laffont and Tirole (1986) as an example). That implies a cardinal conception of utility even if it is not explicitly admitted. Furthermore, the Arrow Impossibility Theorem, Arrow (1951b), has shown all ordinal interpretations of utility as unable to generate a solid social decision rule (and hence, any Social Welfare Function). Even so, many mainstream welfare economists try to avoid SWF and use other tools of WE which they believe to be valid within the ordinal utility framework (see Just et al. (2004) where this line of reasoning is supported within the public policy context) or claim that ordinalism does not destroy SWF (see Fleurbaey and Mongin (2005)).

³ For a more detailed analysis on the evolution of welfare concepts throughout the history of economics see Bruni (2004a, 2004b), Chipman and Moore (1978), Cooter and Rappoport (1984), Viner (1925), Wolfe (1931), Bharadwaj (1972) and Stigler (1950).

capabilities. Each alternative has brought a specific framework of analysis and domain of application (not always compatible or complementary with each other)⁴.

Eventually out of the myriad of alternatives some get more credit than others, some are more widely used than others, some are labelled orthodox, others heterodox.

In this section we will analyze three different contemporary approaches to WE (the orthodox and two heterodox). We will make the case that the three different approaches in contrast have different conceptions of welfare, methods and philosophical backgrounds, and most of the time, different policy conclusions.

As the label suggests, mainstream welfare economics (MWE) is the dominant view in economics, and so are its respective methods and conceptions. Nevertheless, it is frequently attacked (on its theoretical fragilities and ambiguities) by new alternatives that constantly spring up. This puts MWE under pressure to adapt or respond with new ideas and models. Sen's capabilities (SC) approach and the happiness literature (HL) are two of the strongest alternatives.

We will be particularly focused on trying to understand how HL, a new approach competing with MWE, challenges the latter and implies revisions on the policy advice WE usually produces. We will also contrast HL with SC, as this is an already established alternative to MWE and it shares several concerns and results with HL (namely policy advice, conclusions and criticisms of MWE). Furthermore, HL (by its rapid growth and interdisciplinary nature) and SC (by its internal coherence and established reliability) can be regarded as competing approaches which are the most threatening to MWE. The final goal of this section is to show that HL has established a place within WE.

This section has six sub-sections. Sections 3.2, 3.3 and 3.4 will be devoted to briefly framing and contrasting each theoretical view on WE: MWE, SC and HL respectively. Section 3.5 will analyze the policy implications each theoretical background brings about. In particular we will investigate those implications on two main areas of human welfare: freedom (section 3.5.1) and income (section 3.5.2). Section 3.6 presents the main conclusions.

⁴ Note that classifying WE evolution as scientific progress might not be correct. Frequently, changes in WE are such that only new and different questions can be answered, not the old ones. Such changes are not scientific progress but rather, evidence of interests refocusing. See Coote and Rappoport (1984) on the ordinalist revolution as an example.

3.2. Mainstream Welfare Economics

There are numerous forms of welfare analysis in economics, not all compatible or even complementary to each other. Nevertheless, it is possible to find a core analysis which is sufficiently integrated and standardized that we may call it mainstream WE.

For the purpose of this work, and to mark a sharp contrast with both HL and SC, we assume MWE to be characterized by the use of certain tools of analysis, two theorems and the acceptance of some traditional assumptions of mainstream economics. Specifically, we argue that MWE uses the first and second welfare theorems (1st and 2nd WT), consumer/producer surplus (CS/PS), compensating and equivalent variations (CV/EV), the Pareto criterion (PC), the compensation principle (CP), cost-benefit analysis (CBA and other tools for applied WE, like survey data, the Clark-Groves mechanism, travel costs and hedonic prices) and social welfare functions (SWF) as the main tools of its welfare analysis⁵. Furthermore, it subscribes to methodological individualism, consequentialism, rationality principle (perfectly rational, utility maximizing agents), modelization and mathematical formalization as fundamentals for these tools. The majority of these tools also rely on the validity of the price system as a mechanism for value assessment (in a competitive framework) and on the idea of utility as a subjective, directly non-measurable and interpersonally incomparable reality⁶.

The above-mentioned list is large and encompasses different kinds of tools, with different domains of application and analytical power.

In order to establish how MWE is considered in this section and how HL and SC are different and challenge the MWE (in following sections), a brief but detailed description of each tool is necessary.

The first thing to notice is that these tools can be grouped into four different classes: theorems (1st and 2nd WT), tools for applied WE (CBA and the others), social decision rules (SWF) and tools based on the rhetoric of ordinal utility (PC, CP, CV/EV and CS/PS). Secondly, although these four classes refer to mainstream techniques some incompatibilities might be found between them, particularly between SWF and the other

⁵ This list is not exhaustive but it is representative of MWE's main tools of analysis, as a quick look at contemporary WE textbooks will confirm.

⁶ Again remember the usual disparities between the rhetoric and the practice of many economists on their welfare analysis (ordinal rhetoric with cardinal practice).

tools of analysis in MWE (as will be made clear later). A description of each tool mentioned above is necessary to properly frame HL as a critique to MWE. We start with a description of the tools based on the rhetoric of ordinal utility and finish with SWF.

*Tools based on the rhetoric of ordinal utility*⁷

PC: this concept is credited to the Italian 19th century economist Vilfredo Pareto who proposed that in evaluating different social states we could only say that one state is preferred to another if in the latter all individuals (or at least one) are better (without anyone being worse off) than in the former.

This concept has great potential for acceptance because it is very restricting in making value comparisons. It could be said that this criterion is obvious and intuitively correct. It seems hard to see what could be wrong for a state where all individuals are better off to not be preferable to one where all or some are worse off.⁸

This concept entered the core of WE in the form of Paretian Efficiency, according to which a state is only considered efficient when there is no possible resources reallocation that can improve the welfare of some without harming the welfare of others. Appealing as this may be, this can be a very restrictive and limited criterion. It has no power whatsoever to help WE in analyzing situations in which we deal with welfare gains for some and welfare losses for others (which is frequently the case in public policy and other applied areas of WE).

CS/PS: the concept of surplus can be traced back to A. Marshal, and it tries to capture the utility gain that individuals obtain from acquiring (selling) the goods they want in the market at a lower (higher) price than that they were willing to pay (accept).

To obtain these surpluses all we need is the demand and supply curves and the market prices. Using this device as a tool for analyzing the welfare impacts of some economic change, all we have to do is to calculate these surpluses before and after the change and see what the sign of its variation is. If it is positive, we have a welfare gain,

⁷ The tools analyzed here are usually conceived of as operational under ordinal utility. Nevertheless, it can be argued that is not the case for some of those tools, as some form of cardinality is often implicit (even if not recognized by those who use the tools). If that is the case, these tools might be biased towards some conceptions of welfare that many might deem unfair or unreasonable. For that not to happen an explicit assumption of cardinality is required. Also note that the same problem happens with the tools for applied WE (discussed later). For more on this see Sen (2000).

⁸ Although, see Sen (1970), for surprising results on this issue.

if it is negative, we have a welfare loss. According to CS/PS, social welfare is maximized when the sum of consumer and producer surplus is maximized⁹.

CV/EV: These two concepts were first introduced by J. Hicks (1940, 1943), and can be defined as follows: in the face of a possible economic change we can calculate the amount that is necessary to transfer from or to the consumer in order to make him stay at the same level of utility as before the change – this is the CV; we can also calculate the amount that is necessary to transfer from or to the consumer in order to let him enjoy the new utility level (post-change) if the change does not occur – this is the EV.

CP: this analysis device was first proposed by Kaldor (1939) and Hicks (1939). Their idea was to allow potential income transfers amongst individuals in a way that gainers from some economic changes could compensate the losers so that all agents will gain from the change.

For Kaldor, if after some change there is some hypothetically appropriate income redistribution so that all individuals of society are better off, then that change is supported, even if the compensation is not actually carried out.

Hicks proposed a somewhat different approach. Using his criterion, the change is only desirable if there is no potential income redistribution in the pre-change state that can leave individuals as well-off as they become after the change. That is, a change is desirable only if doing the reverse change does not respect the Kaldor CP.

The most interesting point about these CPs is that they have deepened the focus of analysis towards efficiency issues¹⁰. In trying to enlarge the scope of the Pareto criterion to situations where someone would lose from change and not demand compensation, these CPs made the focus on efficiency spread to a situation where previously nothing could have been said. Hicks and Kaldor state their advice using only potential compensations. The step of actually compensating the losers is understood as a separate thing. If the change can respect the CP it should be supported, even if the compensation is never done. So, CP can support a change that actually violates the PC.

⁹ In the framework of neoclassical Economics (perfect rationality, perfect information and inexistence of public goods and externalities), this happens in a perfectly competitive market economy.

¹⁰ Nevertheless, see Sen (2000) to understand how that can be reinterpreted (CPs are not purely efficient measures as they imply some form of cardinality and interpersonal comparison of utility).

Theorems

From the combination of various tools and principles described above and basic assumptions of neoclassical economics (perfect rationality, non-convexities in production and utility functions, competitive markets, perfect and symmetric information and non-existence of externalities and public goods) two theorems appear as benchmarks of MWE.

They can be described as:

1st WT: any competitive market allocation is Pareto efficient. That is, if we have rational consumers and producers left alone in a perfectly competitive market environment, the final allocation will be such that no possible trade among the agents could improve the welfare of some without harming the welfare of others. In brief, all competitive market allocations are Pareto efficient.

2nd WT: under some reasonable hypotheses, all the Pareto efficient allocations can be attained through competitive markets given appropriate initial endowment redistribution. That is, all Pareto efficient allocations are competitive equilibria for some endowment distribution. Any feasible and optimal resource allocation can be obtained via market mechanism, after appropriate initial endowment redistribution.

These theorems show that market allocations can be superior (in terms of efficiency) to other alternative resource allocations (such as dictatorships, social plans, etc.)¹¹. Nevertheless these theorems are silent when a decision is needed between two different resource allocations (e.g. one more evenly distributed than other) but both Pareto efficient. That is why tools such as SWF are needed to “close” the analysis of WE.

Social decision rules

Within MWE, the Social Welfare Function (SWF) is a device used to create a social decision rule over any set of relevant alternative social states. It was first created by A. Bergson (1938), and has been used with the intent of producing a complete social ordering over all the possible social states a society might face.

¹¹ Note, however, that this is different to saying that the market mechanism is the only mechanism that should exist to perform the production and distribution of resources. The 2nd WT clearly opens space for State intervention in determining which final state is desirable after an initial endowment redistribution operation. Only after that redistribution, markets will operate and bring the system to the desired and efficient final state.

The basis for an SWF is a Social Welfare Ordering (SWO) that can be represented by a function if it is continuous. This function aggregates the utility of individuals in such a way that higher values of this function indicate a social preference for the social state to which that higher value is imputed (higher is better than lower).

MWE assumes that SWFs obey some basic characteristics that prompt their usefulness: welfarism (SWF depends only on the individual utility valuations of social states), a positive derivative¹² in each individual utility level (assumes the strong PC criterion¹³) and convex to the origin indifference curves (assumption of diminishing marginal utility).

With this theoretical device, the definition of the point (the social state) that maximizes the social welfare becomes possible: it will be the tangency point between the social welfare indifference curve and the utility possibilities frontier. Given that, the main problem that remains is the definition of a specific SWF.

According to the ideology and the preferences of each welfare economist, it is possible to create a particular SWF that reflects those options. So welfare economists are forced to define their assumptions on the type of Moral Philosophy that should be used to carry out the welfare analysis.

Using a utilitarian ordinal conception of SWF, the problem of finding a consistent way of ranking social states becomes a puzzle. Arrow's Impossibility Theorem, Arrow (1951b), shows that there is no SWF that can fulfil some very basic desirable properties (namely, unrestricted domain, PC, non-dictatorship and independence of irrelevant alternatives). That is, in this ordinal utilitarian framework, we cannot get a consistent ranking of social states (even if we use any democratic rule such as majority voting), unless we use some individual ordering as society's representative ordering. But that would not be correct because it would correspond to a social dictatorship¹⁴. If, on the other hand, we allow SWF to be cardinal and fully measurable (which implies some form of interpersonal comparison of utilities) we will face the reverse problem: there will be a large number of possible SWFs that we can

¹² Allowing for null derivative is necessary if one wants to include Rawlsian SWF. Nevertheless, that kind of SWF might be considered out of MWE.

¹³ The notion that state A is only preferable to state B if in B at least one person is better off than in A and no one is worse off.

¹⁴ The hypothesis of an elected benevolent dictator could diminish the undesirability of such social dictatorship but is, nevertheless, of very little practical interest (due to the implausibility of a benevolent dictator due to incentive problems).

construct based on individual utilities. It will be then crucial to specify the ethical assumption we want to use in order to be able to choose from that wide range of possible SWFs.

Simplifying the problem, we can say that mainly two different kinds of ethical assumptions are usually made. Of these, the most popular is Utilitarianism. According to this view the welfare of the society is measured by the sum of the welfare of individuals. Benthamite utilitarianism assumes that each individual's welfare has the same weight, which implies negatively sloped straight lines as social welfare indifference curves¹⁵. Instead, if we weigh individuals' welfare differently (giving more weight to the ones with less utility) we will obtain strictly convex social welfare indifference curves. In both cases, social welfare can be improved by a redistribution of income from those who have higher utility to those with less utility¹⁶.

The other approach is Rawlsianism. Inspired in the concepts of justice postulated by J. Rawls in his Theory of Justice, Rawls (1971), some welfare economists think that SWF must be defined in such a way that we can only improve social welfare by increasing the welfare of the poorest in the economy. This implies Leontieff-type social welfare indifference curves. With that, one can advocate an increase in income inequality only if it contributes to the improvement of the poorest individuals' welfare.

It is interesting to note that if we assume diminishing marginal utility of income and equal utility functions across individuals, Benthamite SWF declares the egalitarian income distribution as the one that maximizes social welfare. Although it is indifferent between the *utilities* of individuals, the way to maximize the sum of their utilities is to put forward the egalitarian *income* distribution. In this context, economic changes that prompt income equality are advisable. Nevertheless, it is still possible to assume that individuals have different utility functions (more realistic). If that is the case, the

¹⁵ A social indifference curve is a mapping of points that return the same level of social utility for each level of individual utilities.

¹⁶ Here, a distinction between the impacts of the sign of the derivative of the marginal utility of income (or other goods) and the assumption about the aggregation of individuals' welfare is important to make. The sign of the derivative of the marginal utility of income will determine the shape of the utility possibilities frontier (straight line if zero, concave if negative, convex if positive) while the form of aggregation of individual utilities will determine the shape of the SWF indifference curves (with $SW = \sum \alpha_i U_i$, straight lines if α_i constant, convex lines if α_i bigger for smaller U_i). With α_i bigger for smaller U_i we will have higher SW with more equal distribution of income for both negative and null derivatives of the marginal utility of income.

income distribution that will leave all individuals with the same marginal utility of income (Pareto efficiency condition) will not be the egalitarian distribution.

We can summarize all that has been said about SWF by stating that if we stick to the utilitarian ordinal view of utility, SWF will be impossible¹⁷. On the other hand, if we allow for measurability and comparability of utilities amongst individuals we are forced to make ethical assumptions about what social welfare is. From that position we can use SWF to rank different social states, but those rankings will always be dependent on moral values and so, in some way, subjective.

Tools for applied WE

As the name indicates, applied WE is the branch of WE that uses its theoretical apparatus to proceed with analysis of actual and practical policy issues (like deciding the amount of a tax, the construction of a new road or bridge, etc.). It is by using the tools of applied WE that economists can advise policy makers in devising their strategy.

Not surprisingly, problems of public goods are what decision-makers most usually deal with. Consequently, most tools developed by applied WE intend to assess the welfare consequences of decisions over public goods¹⁸. A brief description of CBA and other practical approaches to applied WE (namely to public goods) follows.

The *CBA* is widely-used as an instrument for assessing the social welfare consequences of medium and small public projects¹⁹. It is an attempt to know what the social benefits and social costs of the implementation of some public project will be.

When a government decides to implement some public project it must be aware of the welfare consequences that project will have on society. It has to analyze the impacts of the project on consumer social welfare (the aggregate consumers'

¹⁷ However, see Fleurbaey and Mongin (2005), Little (1952), Bergson (1954), Samuelson (1977).

¹⁸ Remember that whenever a well-established market for a good exists, welfare economists think that the most accurate and efficient form of collecting information about the welfare of agents and their willingness to pay for or accept some economic change is through observation of their market behaviour, their choices and the actual market prices. It is assumed that agents' preferences are revealed by their choice behaviour and actual market prices. Consequently, we can assess welfare changes through the variations on those variables. Nevertheless, applied WE frequently wants to analyze economic changes that occur within contexts where markets are incipient or fail to exist. That is the case of many public goods where we know markets fail to be efficient. In such situations we cannot rely on market information (agents' market behaviour and market prices) to build our welfare analysis.

¹⁹ In theory this tool should be used to assess all the social welfare consequences of all kinds of public projects, no matter how big they are and how large their influence on the economy. In practice that is never done due to the huge degree of complexity and consequent inefficiency.

willingness to pay for the changes that will occur), on the social cost (namely the consumers' valuation of the production losses due to the move of some inputs from private to the public project), their own governmental gains from that project and the impact of alternative distributions of the gains on households. The CBA is and endeavour to provide some practical rules that can allow governments to control these areas of impact of a public project by trying to accurately predict and measure its consequences on social welfare.

The other most often used practical methods are: Survey data, Clark-Groves Mechanism, Travel costs and Hedonic Prices.

The *Survey method* is simply the use of survey information to gauge the agents' willingness to pay for or accept some economic change. In a very direct way, agents are asked how much they are willing to pay for change to take place (CV) or how much they would require to be paid (how much they accept) for change not to happen (EV). If those amounts compensate the costs of implementation, then the project should be approved.

The *Clark-Groves mechanism* is a device devised by Clarke (1971) and Groves (1973) that induces individuals to reveal their actual preferences over a public good. This scheme is thought to be incentive-compatible and works in the following way: for a project to be approved we impose a share of its cost on all individuals. Then we ask about their willingness to pay and tell them that the project will only be undertaken if the total willingness to pay exceeds the total cost. Finally, every pivotal individual (i.e., every individual that might change the decision of implementing the project or not according to his willingness to pay) is required to pay a tax (equal to the absolute value of the sum of each of the remaining individuals' willingness to pay less their total cost share of supplying the good). With this we hope to obtain the true welfare values of the economic change but we impose a non-Pareto efficient allocation: the collected tax must disappear from the economy (in order for agents not to behave strategically and corrupt this scheme) so we face a resource waste. Besides, some agents will lose and others gain with the changes supported by this scheme.

The *Travel Costs*²⁰ method uses the idea that even for a free-of-charge service or public good, agents who actually use it will face some costs. One of them is the travel cost. For instance, an agent wanting to go to a public park has to actually go there. In doing so, he/she faces travel costs. Therefore, in trying to evaluate a public good of this kind we can add the travel costs that agents accept in order to utilize it, and calculate an approximated welfare value of that good (again using the idea of surplus). It is worth noting that for many types of public goods (like National Defence) this method is not applicable.

The last method we mention here is *Hedonic Prices*²¹. The idea behind this method is to try to capture the value of some public goods through the prices of some private goods (for instance, houses). Using econometric techniques it is possible to isolate the contribution of the different characteristics of some goods to their price. If some of those characteristics are a public good (such as air pollution) we can assess the value of that public good by finding the difference between the prices of two private goods (similar in all but the public good characteristic). Again this method is not perfect and it has a limited scope of application within the framework of public goods.

The preceding analysis allows us to draw some conclusion: MWE is a vast discipline, encompassing the utilization of different applied techniques and relatively different theoretical models; it shows a good level of coherence between the tools for applied WE and the theoretical analysis based on ordinal utility²² (coherent with mainstream economics assumptions); PC is structural to MWE, making it biased towards efficiency issues and away from equity ones²³; MWE determines the supremacy of market outcomes (market efficiency in terms of Pareto), that is, the best social welfare can be achieved through free markets, free agent interactions²⁴; SWF is

²⁰ See Timmins and Murdock (2007), Shrestha et al. (2002), Hailu et al. (2005), Clarke (1998) for contemporary applications.

²¹ See Sengupta and Osgood (2003), Wang (2003), Dickie et al. (1997), Arimah (1992), Tse (2002), Hamilton (2007), Pope (2008) for contemporary applications.

²² Not forgetting the difficulties that might arise once we start to deepen the methodological analysis and find that there is a tension between the rhetoric of economists (advocating ordinalism) and the reality of their practices (such as using additive SWF which implies cardinality).

²³ Nevertheless, remember that PC is of very little use when it comes to practical issues (someone is always worsened as a consequence of policy implementation).

²⁴ Even when markets face some difficulties (like externalities, natural monopoly or asymmetry of information) the best way to overcome those problems (so that the market interaction recovers its “natural” efficiency) is through interventions on agents’ incentive schemes, not through state planning.

the most controversial part of MWE because the ordinal utility paradigm does not fit (due to AIT) and there is no consensus over the alternatives (which is why it is also disregarded in most applied works²⁵).

In conclusion we can state that there is a core of well-defined techniques that characterize MWE but there are still some disputes and unsolved issues within it. Furthermore, those disputes are more visible at the theoretical level (choosing between different SWFs²⁶ and discerning the role of cardinality and ordinality) than at the applied one (where CP dominates).

Nevertheless, many applied and theoretical welfare economists are aware of those difficulties and find MWE too narrow to encompass the real problems of social welfare²⁷. It is mostly amongst economists who are more interested in social welfare issues such as unemployment, poverty, equality of opportunities, freedom, growth, etc.²⁸, that we readily find support for alternative theories of welfare, precisely because it is on those issues that the major weakness and flaws of MWE techniques show up²⁹.

That is why, in wanting to enrich the scope and power of WE many economists criticize the WE state of the art and propose alternatives. From myriad authors and alternatives, there are two that deserve our special attention: Sen's Capabilities and the Happiness Literature approach³⁰.

For Sen (see next section for details) MWE is quite limited, primarily because it uses a very limited source of information when conducting welfare analysis: utility derived from observed choice behaviour. Instead, information about capabilities (the

Nevertheless, this does not imply the abolishment of the State. The State might still have a role in determining the social optimum.

²⁵ See, for instance, Just et al. (2004). Even so, SWF is a central issue for social choice theorists (most of them explicitly assuming cardinal SWF). Many economists also use SWF as arguments of maximization problems (even though no explicit reasoning is made about which conception of utility is being used).

²⁶ It is worth noticing that it is in the context of SWF discussions that most criticism to MWE appears. For the critics of MWE it cannot neglect SWF just because it doesn't fit the revealed preferences/ordinalism framework. Quite the opposite, that incapacity of ordinalism to define a reasonable SWF is a good reason why the ordinalist paradigm should be abandoned, because not explicitly defining the ethical background hidden behind ordinalism doesn't eliminate the fact that some choices have been made implicitly.

²⁷ Knowing the practical nature of MWE, heterodox welfare economists urge building new and reliable alternatives: if MWE were to be wrong, so would the policy advice (and consequently the actual policies, whenever economists are consulted as advisers).

²⁸ These are core issues of branches of economics such as Labour, Growth or Development.

²⁹ When facing real-life facts, those economists realize there is a huge discrepancy between the expected welfare consequences of MWE policies and their actual consequences on the populations.

³⁰ Sen is a long-time development economist and is very preoccupied with poverty. Within HL, Richard Layard and Andrew Oswald are long-time Labour economists. This fits well with our previous statement.

actual possibilities humans have to lead the life they want or have reason to value) should be the answer³¹.

For the HL (see section 3.4 for details) the main problem with MWE lays in its incapacity to accept cardinal and subjective assessments of utility and to admit that not all is revealed through choice behaviour (as when people fail to predict the interpersonal and intrapersonal comparison effects, that is, when there is imperfect rationality).

Another possible weakness of MWE is the already-cited reliance on methodological individualism and individual rationality principle: criticism might focus on the need to escape the “homo economicus” paradigm reverting to more empirical versions of economic agents (with reasoning influenced by emotions, habits, myopia, and a more realistic conception of welfare as a psychological phenomenon, etc.) and to more relational notions of welfare (escaping the individualistic paradigm where all kinds of welfare can be reduced to individual experience³²). The methodological individualism is by itself a long and complex line of criticism to MWE, but one that we will not be paying special attention to here, unless related to SC’s or HL’s main criticisms. On the other hand, the reliance on the perfect rationality principle is a major criticism that both SC and HL direct against MWE. We will therefore analyze it more carefully.

3.3. The Capabilities Critique

If one wants to understand the role HL might have on WE it is important to examine what the SC approach is, and its place in WE. There is only room for HL in WE if it adds something to MWE that SC has not already been able to put forward³³.

Nowadays, the SC approach is a well-established form of dealing with welfare problems within Economics³⁴ (not only within WE but also in Development Economics).

³¹ This is also a big difference (and, at the same time, a linking point between HL and MWE) between SC and HL: SC is a non-welfarist approach to WE whereas HL remains within the welfarist tradition (that is, SC stresses the need to use extra-utility information to proceed with welfare analysis while HL (in comparison with MWE) only demands new forms of measuring and new conceptions of utility). See Duclos and Araar (2006) for a distinction between welfarist and non-welfarist approaches.

³² See Zamagni (2005) for a detailed analysis on this subject.

³³ On the similarities and differences between SC and HL see Comim (2005).

³⁴ This can be witnessed by the penetration this approach has on both economic journals and international institutions (such as the World Bank and United Nations).

As the name indicates, Amartya Sen is the founder and the main developer of SC theory³⁵. Sen was not content with the answers MWE gave: for him, there was a vast list of important issues that orthodoxy could not deal with. So he proposed other methods, and mainly that the capability set should be the informational base welfare economists ought to use in their analyses (their welfare assessments). For Sen, MWE basically relies on the idea of utilitarianism (and an especially restricted one), one that accepts only ordinal utility inferred from choice behaviour as a reliable source of information for welfare analysis (restricted welfarism). Even considering the most powerful version of utilitarianism (the cardinal one), Sen argues for its demerits: the persistency of some extension of the AIT and incompatibilities between Pareto criterion and liberal values (which imply that even the most-used and supposedly uncontroversial welfare criterion of MWE is useless when one imposes private spheres of freedom³⁶) are just two examples of the weaknesses utilitarianism suffers from Sen's viewpoint³⁷. Consequently, Sen believes it is crucial to employ extra-utility information in order to produce more solid welfare analysis³⁸. Using extra-utility information (capabilities deprivation, for instance), Sen believes one can escape the impossibility results and analyze distributional issues of welfare (equity problems).

Sen is very concerned with the subjective nature of utility (even when revealed from its "objective" facet of choice behaviour) because he finds agents too prone to adaptation³⁹ in order for utility to stand as a good welfare criterion (not to mention as the only one). He identifies the capability set as the true objective information that welfare analysts should look at. From this, one could objectively assess where agents stand in welfare: whether they are undernourished, ill, under-educated, relatively poor, isolated from social life, have a chance for long life, have access to health care, have a

³⁵ A detailed analysis of what this theory is and how it can be applied can be found on Sen (1999).

³⁶ See Sen (1979b, 1979a).

³⁷ See Sen (1983) for a closer analysis.

³⁸ And to reconcile welfare analysis with some notions of justice and values such as freedom: Sen claims that on utilitarian grounds all sorts of barbarities (like slavery, hunger, genocide, etc.) can be theoretically justified.

³⁹ Sen is very concerned with the possibility of a person acquiescing (because the person was raised that way, has an acquiescent personality, etc.) to very bad and degrading situations (in India, when asked about their own condition, some individuals of the poorest and degraded casts, stated that they were not that bad, some times even saying they were ok, Sen (1999)). Note that this very process of adaptation also undermines perfect rationality. So, not only is the concept of utility poor, the conception of the individual used by MWE in its models (perfectly rational agent) is unrealistic. As a result, MWE conclusions and policy advice can be misleading.

chance to actively participate in social life and flourish, etc. All these questions can be answered objectively without the need of utility assessments⁴⁰ (that is, independently of what people think or feel about it). For him, the possibility of feeling well (having high levels of subjective well-being and reported happiness) is just one capability that should be taken into account. Yet there are also different capabilities which are just as valuable that cannot be reduced to their consequences on psychological well-being: life-expectancy at birth, equality of opportunities amongst gender, race and social class, political and economic freedoms, etc. These are just few examples of capabilities that Sen deems to be crucial for every human society and which cannot be reduced (or judged by their importance) to their impact on happiness.

Furthermore, Sen is also concerned with the procedural facet of welfare: not only are the consequences and results valuable, but also the number of options (possible results) and the very process by which one obtains certain results⁴¹. For example, having a dictator implementing a presumably good set of policies or having the same policies put forward by a democratically elected government can imply the same results but the process is different. The capability of freedom to choose the government is available in the second case, not in the former⁴².

By introducing SC one can enlarge the power of analysis of WE and rank situations which could not be ranked before (when only using MWE techniques). Processes, relational problems and absolute and relative deprivations can be judge. Yet there is a new problem: if neither agents' behaviour nor their subjective assessments are crucial to welfare judgments, what is the criterion to define welfare?

Some uncertainty is inherent in Sen's definition of capabilities (his chosen informational base to produce welfare judgments): capabilities are everything humans value or have reasons to value. From there he makes a list of things that people normally tend to value (like health, income, subjective well-being, freedom, etc.). Nevertheless, he gives us no definite criterion to classify something as a capability or not, opening the way to discussion, confusion, ambiguity and, interestingly enough,

⁴⁰ One can construct indexes of deprivation or satiation on all the referred items, obtaining a number that states the welfare situation of individuals and groups.

⁴¹ This departure from a pure consequentialist framework contrasts with MWE (and with the standard versions of Utilitarianism).

⁴² Note that using the mainstream utilitarianism, consequentialist though it is, the two setups could not be distinguished in terms of welfare. Using the SC approach, they can.

subjectivity (each person can determine what is, or is not a capability⁴³). At the end of the day, the desired objectivity remains unattainable⁴⁴.

In this respect it is worth noting that SC cannot be fully understood without a reference to the Rawlsian Theory of Justice as Fairness expressed on “A Theory of Justice”, Rawls (1971). The ideas developed by Rawls, namely his concept of primary goods, can be regarded as the inspiration for Sen’s Capabilities.

Rawls was concerned with the definition of basic principles that should govern the foundations of the basic structure of a fair society. He defined two principles of justice⁴⁵ that served this purpose, and proposed that those principles would be chosen by reasonable human beings put in an ideally original position under the *veil of ignorance*. The society then constructed would be *well-ordered*.

Throughout the process of choosing those principles Rawls declared primary goods as the informational base for welfare judgments. Primary goods, he stated, are all things that a rational human being supposedly desires and that are normally valuable, independently of the course one wants to give to ones’ life. Examples of primary goods are: rights, liberties, opportunities, income, wealth and the basis for self-respect⁴⁶. It is with respect to the individuals’ possessions of these goods that welfare statements should be made. Also, when deciding about the fairness of some principle or situation, the impact on the expectations individuals’ have about their claims to primary goods is the appropriate space of judgment. This notion is very close to that of capabilities, and can be interpreted as Sen’s inspiration for his work on WE.

Interesting enough, Rawls has also served as an inspiration for some mainstream welfare economists who tried to incorporate his ideas within the welfarist framework (with the max-min principle and the Leontieff-type social indifference curves already mentioned in section 3.2). Nevertheless, that incorporation has to be seen as misleading:

⁴³ One mild restriction Sen imposes is the necessity of an ideally long period of open, public and democratic discussion so the concept of capability might emerge. See Sen (1999).

⁴⁴ Later on this section (sub-section 3.5) we will return to this issue more carefully.

⁴⁵ Those principles are: first - all people should have equal rights to the most enlarged and complete system of basic liberties possible, compatible with an identical system of liberties for all; second – social and economic inequalities should be distributed such that simultaneously: a) the less advantaged get the larger possible benefits compatible with the principle of fair savings; b) those inequalities are the consequence of being in charge of certain positions and functions open to all in conditions of equally fair opportunities.

⁴⁶ These are examples of social primary goods. Health, intelligence and imagination can also be counted as primary goods, but as natural ones.

Rawls clearly departs from both welfarism and utilitarianism (cornerstones of MWE that Sen also rejects). He builds his theory within the *social contract theory* (where Locke, Rousseau and Kant are prominent authors, all disagreeing with utilitarianism) and defines primary goods as the informational base one should look at when evaluating the welfare of individuals, not utility (thus rejecting welfarism). So, Rawls is clearly closer to Sen (or Sen is closer to Rawls) and his work has opened the way to the capabilities approach within WE.

One last remark serves the purpose of highlighting a difference between Rawls' and Sen's ideas. As a welfare economist who is very concerned with poverty and underdevelopment issues, Sen has a strong practical inclination which is reflected in his conception of capabilities where the word *actual* is essential: capabilities are the *actual* possibilities an individual possesses to lead the life he/she wants. Formal, constitutional possibilities alone are not enough to be counted as capabilities. Contrarily, Rawls (as a philosopher) was more concerned with the design of a fair society and gave primary goods a more formal/constitutional flavour, stressing the importance of constitutional fair rules that generate fair expectations about primary goods, and not so much to the actual fair opportunities in accessing those primary goods (as he was dealing with the construction of the basic structure of a society, not with any particular real society).

3.4. Is There Room for Happiness?: (re)introducing subjective approaches into Welfare Economics

Happiness is a vast concept: one of the main concerns of philosophers and of great dispute about its content. It is also one of the most important values for humans (for some, the defining goal of human existence).

One could think that economics, as social science which studies the society and the individual, would give a relevant place to happiness, at least in welfare analysis. In fact, this is not the case (or at least not in a straight-forward narrative).

MWE, as we have already noted, uses a very abstract notion of utility, one that clearly does not need to have any connection with a notion of happiness. In MWE, utility is empty of psychological meaning (in a sense it is just a theoretical artefact) as it

is assumed that all one needs is the observation of choice behaviour (and the consequent revealed preferences).

Nevertheless, this has not always been the case in economics⁴⁷ and recent research on subjective indicators of welfare has put happiness back on the track of many economists' research agenda. In particular, data on Subjective Well-Being (SWB) has given rise to some interesting and puzzling findings for the economic profession: Easterlin's Paradox⁴⁸, Easterlin (1974), is probably the most widely used finding to demonstrate that something is wrong with MWE.

MWE seems to look at income growth as an objective way of increasing welfare: if mean income rises and no one's falls, then welfare ought to rise (as the Pareto criterion would corroborate). Easterlin's Paradox clearly shows such a correlation is not always present, and that the reason why MWE fails to see it lays in its utility conceptions and rationality assumptions.

For HL there are new, stylized facts that are incompatible with MWE assumptions. For HL, agents are myopic and systematically so. For instance, agents fail to perceive that consumption⁴⁹ only produces happiness if one's consumption is greater than the reference group's average (comparison effect), greater than what it was in the past (adaptation effect), and close to one's expectations. As a consequence agents over-invest in consumption (and because of that, in work) gaining less happiness than what they had thought. Furthermore, subjective assessments of welfare are counted as reliable, comparable and scientifically rigorous⁵⁰. Utility is understood as a psychological reality that might have a cardinal nature (comparable interpersonally and across countries) and that can be grasped, namely through questionnaires. In fact, within the framework of HL, Easterlin's Paradox tends to vanish at the same time as new areas of analysis become tractable by WE.

HL can be understood as a return to the early days of neoclassicism, and to the ideas of J. Bentham (who conceived of agents as pleasures seekers and pain evaders) of

⁴⁷ See Bruni (2004a, 2004b).

⁴⁸ The finding that, although within a country the richer are happier than the poorer, throughout time (for the same country), and despite huge increases in per capita income, the mean happiness remains almost the same (at least in the richest countries).

⁴⁹ Mainly conspicuous consumption, see Frank (2005).

⁵⁰ See Veenhoven (2002) for a detailed analysis why subjective measures are important in welfare assessments.

cardinal and measurable utility⁵¹. But HL uses new findings and techniques (from economics, and also from psychology, neuroscience and sociology), empowering its analysis such that the old criticisms early neoclassicism faced are overcome⁵².

HL also challenges MWE in several ways: not only with respect to the techniques employed but also on the basic assumptions about rationality and utility. As already stated, HL disputes perfect rationality, revealed ordinal utility, classical preference axioms, surplus analysis, the role of GDP in orthodox welfare policy, etc., but offers comparison and adaptation effects analysis (hedonic treadmill), SWB and survey data.

Nevertheless, many authors within HL still retain the utilitarian and individualistic paradigms, typical of MWE⁵³. And that is what stands HL apart from SC, as this last approach is clearly non-utilitarian and anti-methodological individualism. In a way, HL could be understood as standing between MWE and SC (or as the closest version of utilitarianism to SC approach): both HL and SC reject restrict utilitarianism, ordinalism, perfect rationality, and choice behaviour paradigm (fundamentals of MWE) but where SC places demands for capabilities (non-utility information, a radical cut with utilitarianism), HL stands for happiness (new interpretation and measures of utility, new versions of utilitarianism). The supporters of SC consider happiness as just one capability amongst others of equal or higher importance (such as freedom) while HL regards capabilities as explanatory variables on happiness equations (well-nourished, free and rich persons will be happier). Thus, HL is not equivalent to MWE as it uses types of information and methods that were rejected by the latter (although sharing utilitarian philosophy) and is not equivalent to SC approach since it accepts utilitarianism while SC approach proposes capabilities (although sharing some techniques, data and policy conclusions). More, HL might be closer to SC from an applied/political point of view, but from a philosophical point of view HL is closer to

⁵¹ Although not necessarily endorsing the Benthamite moral theory (which states that “good” is everything that prompts human pleasure and “bad” is all that dooms it).

⁵² More and more evidence, see Layard (2005a), from psychology and neurology shows that the sensation of well-being can be assessed (via brain scans and electroencephalographs) and that it has a physical and chemical nature. That strengthens the idea that utility is something real and objective (also strengthening the hypotheses that it can be grasped objectively via questionnaires).

⁵³ Of course some reject utilitarianism (most of those being closer to SC approach than to HL) and others the methodological individualism, see Zamagni (2005), Sugden (2005) and Bruni and Stanca (2006), claiming the need for relational views on economics if happiness is to be properly incorporated.

MWE⁵⁴. Ultimately, there is justification for HL to stand out as an alternative approach to WE, from both MWE and SC⁵⁵.

Although HL is still a recent line of work and continues to deal with some internal incoherencies and disputes it is gaining prominence (both in scientific forums and the media) and it is growing in credibility, attracting more and more economists to its milieu, which can be witnessed by the increasing number of papers published on this issue in top-rated journals⁵⁶.

At the end of the day HL proves it cannot be neglected when making an economic analysis of welfare.

3.5. Happiness, Capabilities and Orthodoxy: the same policy conclusions?

After all that has been said in the previous sections, some fundamental questions remain to be answered (or clarified): do these theoretical and conceptual disputes have practical consequences? Does the chosen theoretical framework give rise to different policy advice? The answer is yes, and for three main reasons: first, different conceptual frameworks allow economists to analyze different problems; second, even for the same problems, the different theoretical setups may imply different policy conclusions; third, even if for the same problems different theories imply similar policies the justification for such policies will be different, grounded in different concepts and values⁵⁷.

Over the previous sections we have analyzed the main characteristics of three approaches to WE: SC, HL and MWE. We have noted that each has its specific set of

⁵⁴ Which proximity is more important might be subject to discussion. Nevertheless, from a fundamental point of view, the distinction between utilitarian (MWE and HL) and non-utilitarian (SC) analysis appears as the most relevant.

⁵⁵ Even if there is the temptation of MWE to incorporate HL main findings and assumptions (as HL remains utilitarian and as the imperialism of economics would predict) that is not a problem to HL's relevance: quite the contrary, that would mean that MWE has recognized validity and robustness in this new line of work.

⁵⁶ Di Tella et al. (2001) in the American Economic Review, Clark and Oswald (1994) in the Economic Journal, and Blanchflower and Oswald (2004a) in the Journal of Public Economics are just a few examples.

⁵⁷ Important as this "justification"/philosophical issue might be, the relevance of new approaches in WE springs mostly from the different policy conclusions and enlarged domain of analysis (the first and second reasons).

assumptions and tools. Now we need to clarify which policy consequences each brings about.

MWE, SC and HL differ in many ways: theoretical, philosophical and methodologically. Therefore it is not surprising that each approach advocates different kinds of policies for welfare enhancement (both individual and societal).

Using methodological individualism, consequentialism and behaviourism (the revealed preference and ordinal utility framework), most MWE models end up with liberal policy advice: free individual interaction through markets is the best way for society to reach welfare (once the basic rules of law and justice are guaranteed). The welfare analyst can support market liberalization policies since those same policies generally promote Pareto movements (in the Kaldor-Hicks sense). Besides that, he/she has very little space of action: cannot judge non-Pareto movements, cannot judge distributional issues of welfare (if both states A and B are efficient from Pareto's viewpoint, but A is extremely unequal whereas B is equal, A and B have to be classified as equal using MWE) and (extremely important⁵⁸) cannot judge welfare variations not grasped through observed behaviour (for instance, cannot qualify between different situations in terms of the actual range of choices, processes and freedoms). All these are lacunas that can be overcome with a paradigm change⁵⁹.

That's exactly what SC and HL try to do, even if using different strategies.

SC marks a clear change in most assumptions and structures of welfare analysis: it departs from consequentialism (as it puts great emphasis on the processes through which every final state might be achieved, ranking those states accordingly), from ordinal utility (as it deems all forms of utilitarianism poor in terms of the used informational base⁶⁰), from hedonism (advocating a more eudemonistic conception of welfare where happiness can only emerge through human flourishing and relinquishing happiness as the ultimate goal of human existence), from methodological individualism (as it considers that many welfare phenomena can only be understood when using a

⁵⁸ Since agents might not be (are not) perfectly rational, not always doing the best moves.

⁵⁹ Of course some of these difficulties could be overcome if a cardinal SWF was chosen. Nevertheless, as noted in section 3.2, that is not usually done by mainstream welfare economists.

⁶⁰ Capability set being the alternative informational base to be used.

relational approach⁶¹) and from perfect rationality (agents are conceived as complex psychological entities). With all this it is not surprising that its welfare analyses differ from those of MWE (the same goes for the policy conclusions).

For Sen, the core of welfare lays in the actual possibilities individuals have to lead the life they want or have reasons to value. For that end, issues like access to food, healthcare, education, political activity, income, work and protection from abuse, tyranny and discrimination (sexual, religious, racial, etc.) figure high on the list of welfare essentials.

In terms of policy, it becomes easy to understand that the promotion of healthcare, education, democracy, markets and the rule of law are top priorities.

Using SC approach it is crucial to grasp the situation societies are facing in respect to capabilities and attack (using the proper policy schemes) the weakened areas. If the policy maker finds out that in society A people are getting richer and richer but there is no democracy, then there is plenty of room for policy intervention in order to promote democracy, so augmenting welfare (capabilities)⁶².

SC as a framework of analysis is used more and more to ground and conduct welfare analysis and policy⁶³ and marks a clear departure from MWE ideals.

HL is a recent research track, and is not yet as established as MWE and SC. Because of that it is still facing some problems of unity (different kinds of methods, models and techniques employed, different results and policy conclusions⁶⁴).

⁶¹ Considering that some aspects of human welfare are intrinsically relational (for instance, the welfare of a friendship, if conceived as the relationship with a friend, cannot be reduced to the SWB it generates on the individuals).

⁶² Note that if one has used MWE it would be very hard to support any kind of intervention: agents were acting in a way that income was rising so that they were probably facing a Pareto movement. Also, actions were silent in respect to the lack of democracy. Nevertheless, they could prefer democracy. So, if agents are only allowed to “speak” through their actions, a lot can be left to be “heard”.

⁶³ When the United Nations’ Human Development Index (HDI) was created it was embodied with SC approach ideas: the introduction of life expectancy at birth and literacy in combination with GDPpc (per capita) in a development index is a concession to the idea that not everything can be translated into money (each capability is autonomous and cannot be transformed/translated into another).

⁶⁴ Some (mostly economists and sociologists) prefer to use subjective notions of happiness (with underlying utilitarianism, hedonism and methodological individualism), adopt an empirical route and believe that life events (demographic, economic, social, etc.) can have a large and permanent impact over happiness (see Blanchflower and Oswald (2004a), Clark and Oswald (1994), Frey and Stutzer (2002b), etc.) while others prefer to rely on objective happiness (Kahneman and Tversky (2000a)), proceed with theoretical analysis, use relational approaches, adopt procedural views and support eudemonism (see Zamagni (2005), Bruni and Stanca (2006)), or even support (mostly psychologists) the set point theory (where SWB appears as stable over time for every individual, like a personality trait that can only be temporarily affected by life events (see Diener and Diener (1996))).

Nevertheless it is now possible to identify a set of core assumptions, ideas and main conclusions (also in respect to policy) that almost all researchers agree with. Within that core we can put forward the *comparison effect*, the *adaptation effect*, the *expectation effect*, the *diminishing marginal utility of money*, the difference between *decision and experienced utility*, Kahneman et al. (1997), and the importance of the different impact each *life domain* has on happiness⁶⁵.

All these facts have strong policy implications in directions that clearly diverge from those of MWE.

Once we accept that agents compare what they have in the present with what they had in the past and adapt (more or less quickly) to the new standard, compare what others have (from one's reference group), compare this with their expectations of what they should have (again, these expectations depend on the society and group culture, norms and values) and do all this differently for each life domain (like work, family, leisure, income, etc.), we are forced to regard MWE as unreliable and mistaken. After all, in this context, agents are not perfectly rational (they make repeated mistakes and show signs of addictive behaviour⁶⁶), information doesn't flow fluently, and markets become imperfect.

One stylized fact of HL is the diminishing marginal utility of GDP per capita: after a certain level, continuous increases in GDP cannot push happiness levels any further. That is, despite agents (through markets and governments) moving (behaving) in line with increasing income, that becomes unproductive in terms of welfare augmentation. The so-called Pareto movements are, after all (if we take SWB as a good measure of welfare), not efficient in terms of welfare (they are Pareto efficient in income, not in welfare). If what WE tries to analyze (and promote) is real welfare then HL shows that it has to do much more than stick to agent's behaviour, to income and monetary evaluations.

If markets were perfect (as is usually assumed in MWE), if there were no externalities and information was perfectly available, MWE's main postulates (such as

⁶⁵ Each life domain contributes a share to our feeling of happiness. One cannot be happy with the fulfillment of just one life domain. Furthermore, the prevalence and strength of comparison, adaptation and expectation effects (that are crucial to the sensation of happiness) differ across life domains. For instance, the financial side of life is much more prone to adaptation than the family side.

⁶⁶ It is the same to say that their behaviour is contrary to what it should be in terms of welfare maximization. So, using that behaviour to reveal utility becomes a wrong theoretical choice.

the first and second welfare theorems) would be correct and little would be left to discuss: market clearance would bring about the maximum possible societal welfare. With that, policy advice would have to be in the direction of market promotion (even if after an initial endowment redistribution implemented by the State). Yet, if some (or all) of the above conditions fail to be present not only will the welfare analysis be wrong, but also the policy advice.

We have seen that both SC and HL criticize the purity of markets and agents and consequently the validity of MWE. They try to build new evidence, tools and theories. In the end, they advocate different policies for welfare.

In the rest of this section we will focus our attention on two major areas of human welfare and understand how our previously-discussed approaches deal with them: freedom and income.

Freedom and income are basic goods⁶⁷ that are generally considered crucial to human welfare. In WE that is also the case (although more the case for income than for freedom).

Income is the most well-studied issue within economics (and consequently, in MWE) and is normally regarded as a benchmark of economic well-being and as an objective scale through which most types of welfare can be analyzed⁶⁸.

Freedom is a more controversial issue since it is a more vague concept. It can assume a political nature (democracy versus dictatorship), an economic nature (free entrepreneurship versus planned economy), a societal nature (closed versus open societies), an individual nature (individuals with private spheres of freedom versus totally controlled individuals), etc. In WE, freedom is usually analyzed as economic freedom (also as freedom of choice over consumption goods) and is integrated into policy advice by the idea that more freedom leads to enhanced market efficiency.

Given their significance, we should analyze both of these issues more carefully.

⁶⁷ Or primary goods as in Rawls (1971).

⁶⁸ This is a consequence of the admitted objectivity of income in comparison with other proxies of welfare and the conviction that most relevant economic welfare issues can be translated into monetary figures. Nevertheless, economists have long realized that these income measures of welfare have several problems (see, for instance, Samuelson (1974)).

3.5.1. Freedom

As previously said, freedom is a vast concept, prone to confusion and disagreement. Nevertheless, it is normally regarded as highly important for human welfare.

Within MWE analysis freedom usually enters as freedom of choice over various options: more choices mean greater opportunity for maximization (in a constrained maximization framework, relaxation of constraints normally means higher levels of maximum utility) and hence, higher levels of welfare⁶⁹. More fundamentally, freedom is only regarded as a precondition for maximization: agents must be free to maximize their utility. Freedom also means the liberty to participate in markets through buying, selling and producing goods.

For Sen (and also for supporters of SC) this is a clearly poor way of dealing with (and defining) freedom when performing welfare analysis. For him, freedom deserves the highest position when thinking about welfare. After all, the freedom to live the life one wants or has reason to value is the core of his capability concept. Hence, freedom deserves close scrutiny (both theoretically and empirically) if one wants to proceed with a reliable welfare analysis.

Freedom can be thought of as the concept Sen most approximates with the ultimate goal of human existence⁷⁰: life expectancy at birth, school education, access to food and health, civil and political rights, etc. are all conceived of as important to welfare, since all contribute to enhancing the freedom individuals have to choose a path for their lives. Sen goes as far as to state that what really matters is the *actual* freedoms individuals enjoy, not the potential or legal ones (if women in a certain society have a legal right to education but are systematically turned away from school (for cultural issues) then they lack the actual freedom to study). Freedom is conceived of as valuable per se, even if the results are not affected by its presence or absence, let those results be measured in terms of wealth, health or happiness.

⁶⁹ Note, however, that in the standard pure competition model freedom of choice is restricted to quantities, since the product is homogeneous (which is a very limited conception of freedom). Only in more sophisticated models (such as those of monopolistic competition), freedom to choose over quality issues becomes relevant.

⁷⁰ It is not by accident that Sen wrote a book entitled “Development as Freedom” where he tries to put forward the idea that true development consists of enlarging individuals’ actual freedoms. Sen postulates freedom as a definite value, as an objective value, independent of whatever judgment (either social or individual) might be made about it.

Enhancing freedoms is the major political concern of SC, an importance clearly not shared by the policies of MWE.

As we have already mentioned, HL might be thought of as an intermediate position between MWE and SC since it considers freedom a very important welfare issue (giving relevance to different forms of freedom), not because it thinks of it as an objective value but rather because freedom usually enhances SWB. Political freedoms and civil rights, freedom to participate in economic and social life, and so on, usually show high levels of correlation with reported happiness⁷¹. That is why there is room for policy intervention in the direction of increasing freedoms even in situations where MWE would recommend no action (because agents were supposedly maximizing their welfare and the lack of freedom was not grasped through their behaviour).

Nevertheless, HL's stance on freedom only as instrumental and not as a fundamental of welfare marks a sharp difference with SC. For instance, Schwartz et al. (2002) show that more options are not always on par with more satisfaction. Instead, the gains of having more options to choose from might be annulled by the increased cost of selecting the right option. The increased opportunity cost, the anguish of not knowing if we've made the best choice and the very cost of processing the information might lead us to a worse situation after an option enlargement. Within SC such a conflict would hardly be understood.

From all we have said so far, it becomes clear that the choice of framework will impinge on the policy conclusion a welfare analyst will make. Whether we consider freedom as a precondition for market operation, as instrumental for happiness or as a fundamental of welfare, different policies will emerge as to what is best for welfare enhancement.

3.5.2. Income

Income might be seen as the core of WE. Income has been the main concern of economics since the early ages of political economics (Smith, Ricardo, etc.). Trying to understand what could promote the enlargement of national wealth was probably the first research question in the history of economics.

⁷¹ See, for instance, Frey and Stutzer (2002b).

From those early days until today different paths have been followed concerning assumptions, models and tools of analysis. Nonetheless, income has remained at the core of what economic welfare should be/was⁷².

As a result, welfare policy has long been biased towards income enlargement, neglecting all sorts of other possibly relevant issues (like environment, family life, freedom, etc.).

MWE is on a par with these ideals as it sees income as the main source of welfare and the benchmark against which all can be compared (the same as saying that everything can be translated into a monetary figure). Forgetting the old lessons of early Neoclassic on the diminishing marginal utility of money, most modern welfare policies regard GDP per capita enhancement as the sole objective and uncontroversial means of increasing welfare: if I can raise the income of one person and not lower the income of any other then that income raise is good in terms of global welfare (a Pareto movement). As might be intuitively perceived, this analysis neglects countless effects that income growth policies might have on various domains of social and individual life. Those effects might be detrimental to welfare. If so, then a global effect of an income raising policy might be diminished welfare. Exactly because many welfare economists think that is the case, new approaches have appeared.

The advocates of HL point out four main reasons why an income raise might not be always good: *comparison effect*, *adaptation effect*, *expectations effect* and *life domains specificities*.

Comparison effect refers to the fact that people tend to compare their income with that of others (relevant others) so that their welfare level will mostly depend on their position relative to others, and not on an absolute level. With that, there cannot be an increase in welfare (happiness) through an increase in average income: if my income rises by the same proportion as that of others then my satisfaction level will remain constant.

⁷² Interestingly, during the classical period income was regarded as very important to welfare, but not as the welfare itself. So, understanding the way through which income could be raised was important, as long as income itself could be transformed into welfare. Later, this “transformation problem” was forgotten as the non-monetary part of welfare (ophelimity) was deemed unscientific and behind the scope of WE, see Robbins (1945). With that it became implicitly assumed that income would go hand-in-hand with welfare, since rational agents (who always maximize utility) with higher incomes would have the opportunity to increase their utility (welfare). So, the “transformation problem” disappeared. See Bruni (2004a, 2004b).

Adaptation effect refers to the fact that people tend to adapt to their current level of income, reverting to some baseline level of welfare after awhile (hedonic treadmill). Again people compare themselves, now with their past, and tend to gain happiness right after an increase on their income but quickly adapt and return to their previous level of satisfaction⁷³. Again, an incremental income policy might be extremely short-lived in terms of welfare gains.

Expectations also play a crucial role in SWB. The *expectation effect* states that our satisfaction with any income level will be a function of the difference between our expectation and the actual level of income. So, we can only increase our welfare if our actual income level moves in the direction of our expectations. The problem is that normally our expectations will move along with our income level: for a rising income, rising expectations (in fact, this is one way of explaining the adaptation effect). If that's the case, our income oriented policy fails again⁷⁴.

Finally, *life domains specificities* are crucial to complete the picture of HL in respect to income: the above-cited effects are not equally present in each life domain. Specifically, satisfaction with income is the life domain which is the most prone to adaptation and comparison: we adapt much quicker to a bigger salary than to an extended period of vacations; we compare the size of our house with those of the neighbours much more than the time we have for leisure; we adapt our expectations in term of income as it grows while our expectations of what a good number of children is doesn't change with the actual number of children we have⁷⁵.

Knowing this it becomes simple to understand that left to themselves (via market interactions), agents will over-invest in work, production and consumption (as they fail to anticipate adaptation and comparison effects⁷⁶ and behave as if they are addicted to consumption⁷⁷) in a way that markets become inefficient in producing welfare: there are

⁷³ There is evidence of this effect even from a sample of lottery winners who quickly lost their initial euphoria and remained as happy as (or little more than) before their lucky day (see Brickman et al. (1978)).

⁷⁴ See Stutzer (2004) for empirical evidence on that.

⁷⁵ See Frank (2005).

⁷⁶ Note that comparison effect might be anticipated but, nevertheless, agents might be forced to act accordingly: in some situations what others have affects us directly even if one wants to stop comparing oneself with others. For instance, a student without a computer is thrown into such a deprived situation that he/she is forced to keep on the road of continuous technology adaptation, which implies continuous consumption.

⁷⁷ That is why decision and experienced utility diverge, and a total reliance on the former causes policy mistakes.

externalities (like the income of others affecting me) and imperfect rationality that destroy market efficiency.

Furthermore there are “standard” market imperfections (like environmental issues (pollution, etc.) and monopolies) that further condemn the market to be inefficient in welfare production. Nevertheless, these four effects are key contributions of HL.

In HL, income is important as long as it is instrumental for happiness⁷⁸. The policies for income must be those that promote the greater enhancement over SWB, not those that maximize income (since those are different things, as noted earlier).

For SC, income is also a very relevant issue⁷⁹. Welfare is impossible without income and its augmentation and distribution are deep concerns of this line of work. However, we have found in SC approach sharp criticism to the dogmatic importance MWE gives to income and a repositioning of income within the framework of capabilities: income is important because it is instrumental to the development of capabilities. In order to survive, to participate in society and to flourish, every human being needs some sort of income. If he/she does not have that endowment, any welfare achievement becomes impossible. Income is a sine qua non for welfare, but it is not welfare itself. In fact, what is important is the power income brings to people so that they can transform it into capabilities⁸⁰.

As in the HL case, for SC approach the relationship between income and welfare is not linear or straight and clear: more income might not generate more capabilities and so more income might not always be the best outcome there is⁸¹.

Policies that enhance GDPpc but do nothing (or do harm) to capabilities must be discarded and replaced by others which are more effective in enhancing capabilities. In this context, a poor but democratic country might be preferable to a wealthy dictatorship.

⁷⁸ The graph of GDPpc over happiness (showing the diminishing marginal utility of income) might be seen as the leitmotiv for all this recent appraisal of happiness in economics.

⁷⁹ Sen himself has always been very concerned with poverty and deprivation, and therefore, with access to income.

⁸⁰ That is also why poverty, for instance, is seen as capability deprivation, not as income deprivation.

⁸¹ In Brazil the GDPpc is much higher than in India. Nevertheless, life expectancy is greater in the latter. If this was our sole data and we were using SC approach, we would be facing a dilemma when trying to rank India and Brazil in terms of welfare: both income and life expectancy are important to welfare. Using MWE, however, Brazil would be ranked first since income would be all that mattered.

From all that has been said in this section (and in our two closely analyzed examples) it becomes clear why HL stands as an alternative for a welfare analysis that cannot be reduced to either MWE nor SC. HL can even be seen as a “third way” of complementing capabilities and orthodoxy: it shares and rejects some principles of both capabilities and orthodoxy approaches but stands as an autonomous alternative. It postulates a specific set of policies and is an operational approach to WE.

3.6. Conclusion

Throughout this section we have analyzed three different forms of looking at WE and have endeavoured to examine and compare main postulates, assumptions and policy conclusions of each. We have been able to determine that MWE, SC and HL are all different and stand as alternative and autonomous ways of performing WE analysis. In fact, although we might find some similarities between them (MWE and HL share a utilitarian, hedonistic, individualistic and consequentialist background, SC and HL share concern with freedoms and processes and are critical of MWE’s support of ordinal utility), their core of assumptions differs and many policy conclusions vary (mostly from MWE to SC and HL).

We have also shown that HL, being the more recent approach, suffers relatively more from internal inconsistencies and disputes. Nevertheless, it is gaining consistency, reliability (much because it is a very interdisciplinary field, accepting contributions of psychology, neurology, sociology, anthropology, etc. and grounding some of their assumptions in those contributions) and recognition (as more and more papers are accepted in top-ranked journals). In a word, HL is becoming a reliable approach to WE.

We have also made clear that all three approaches have different conceptions of what welfare is (due to different philosophical backgrounds). Consequently, the policy differences among them are not just a product of disagreements over which techniques are more suitable for reaching a certain and common goal, but a result of different conceptions on which goal is to be achieved: that is, the paths (policies) are different because the final destination (welfare conception) is not the same.

Retaining the ideas of Robbins (1981) all of the three approaches analyzed in this section might be considered scientifically valid, after one first decides (making a moral, non-scientific choice) which conception of welfare is to be used.

4. Happiness, Economic Well-being, Social Capital and the Quality of Institutions

4.1. Introduction

Early utilitarians, like Jeremy Bentham (1789), put the concept of happiness at the core of his analysis. Utility is merely the manifestation of “benefit, advantage, pleasure, good or happiness (all this in the present case comes to the same thing)”. Classical utilitarianism is *subjectivist* (individual welfare is the subjective perception of it), *welfarist* (social welfare is the sum of individual welfare), *consequentialist* (the value of an action is to be judged by its consequences), and *hedonist* (the ultimate good is to maximize pleasure or happiness). It is no accident that economists have been emphasizing economic growth as an important aim of public policy. Higher material well-being, e.g. higher incomes, allow each person to pursue his or her perception of a lifestyle that brings more personal happiness and, under certain conditions, maximizes social welfare. Having made the theoretical connection between income (the instrumental observable variable) and happiness (the non-observed maximand), social philosophers first, and economists later on, have focused the analysis on the “wealth of nations” following the path of one of Adam Smith’s major works.

A second strand of literature follows the “justice as fairness” approach of John Rawls (1971), which is contractarian and non consequentialist. Rawls’s analysis departs dramatically from the utilitarian tradition on at least three important issues. Firstly, the distinct aim of the analysis. It is not social welfare that Rawls is looking for, but principles to implement a just and well ordered society. “Among individuals with disparate aims and purposes a shared conception of justice establishes the bonds of civic friendship;...One may think of a public conception of justice as constituting the fundamental charter of a well-ordered human association” (p.5, 1971). Secondly, Rawls’s conception of happiness departs from utilitarianism. He considers that happiness is not necessarily pursued by individuals with a rational plan of life, and it is not a central concept in his theory. Thirdly, individuals have two moral capacities: *for a sense of justice* and *for a conception of the good*. Thus, we may argue that it is consistent with Rawls’s approach that, apart from the intrinsic value of just institutions,

living in a well ordered society also impinges on the individuals' perception of happiness because it is in accordance with their sense of justice. Therefore, the quality of institutions must also be an ingredient of life satisfaction.

A third strand of literature is mainly empirical (Putnam et al. (1993), Fukuyama (1995), La Porta and et al. (1997), Putnam (2000), Beugelsdijk (2006), Slemrod and Katuscak (2005)) and has been analyzing the relationship between trust or social capital on the one hand and the performance of institutions on the other hand. Empirical evidence shows that social ties and trust are positively correlated with the performance of institutions.

Finally, there is a fast growing empirical literature on the economics of happiness (among many others see Frey and Stutzer (2000, 2002b), Layard (2005a), Blanchflower and Oswald (2004b, 2004a), Clark and Oswald (1994), Easterlin (2001a), Helliwell (2003, 2006, 2007), Helliwell and Huang (2008), Di Tella et al. (2001), and Veenhoven (1999). This literature has addressed the determinants of life satisfaction and typically has considered socio-demographic characteristics (age, gender, and education), the role of income and other material and non material sources of subjective perception of well being. Some results seem robust: women are happier than men, age seems to have a U-shaped relation with happiness (after controlling for other variables, namely health), and income is one source of happiness (even with diminishing returns). However, there are still controversies and open issues. Is education positively related with happiness or does it not affect it? What is the relevance of the quality of institutions, namely the quality of government? Does this quality have dominance over income in explaining life satisfaction or is it the reverse? A further open issue is the marginal effects of several variables (e.g. income, education) on happiness.

The main aim of this section is to contribute to the empirical literature on the determinants of happiness and therefore to give some additional empirical evidence related to the issues still in debate in the literature. We will analyze whether social ties and the quality of public institutions - apart from their direct impact on economic performance (and so indirectly on happiness) - have a direct impact on perceived happiness. In brief, we will try to isolate three possible determinants of happiness: economic well being, the quality of institutions and the quantity of "social capital" (measured by individuals' belonging to certain associations). The hypothesis underlying

our research is that people are more satisfied with life not just because they are better off in material terms, but also because they live in a “better-ordered” society and have more social ties.

A secondary aim of the section is to clarify the interest of well-being research not only for public policy but also to reinforce a theory of justice, as developed by John Rawls.

In sub-section 4.2, we develop our theoretical argument and the relevance of well-being analysis for public policy. In sub-section 4.3 we discuss the advantages and shortcomings of using World Values Survey data, with an emphasis on methodological issues and the selection of relevant variables. We also compute and interpret a country specific measure of happiness. In section 4.4 using cross section individual data, we analyze the determinants of life satisfaction taking into consideration three types of variables: material well-being (e.g. scale incomes), social capital variables (e.g. participation in civic, political or religious associations) and subjective perception of the quality of institutions (e.g. the subjective perception of corruption). In section 4.5 using cross section country data, we analyze the same issue for a sample of OECD countries. The dependent variable is similar (average life satisfaction) but with fewer independent variables. Here we combine macroeconomic variables (log GDP, unemployment, inflation), with alternative measures of governments’ quality and a “social capital” variable. Section 4.6 concludes, showing the connection between the utilitarian based well-being research, and the contractarian grounded theory of justice.

4.2. Well-Being, Life Satisfaction and Public Policies

According to welfare economists the goal of public policy should be to maximize some sort of social welfare function (SWF), which has two main characteristics: it is *only* a function of individual utilities U^i , and it is a monotonic function of each individuals’ utility.¹ For reasons of simplicity and the sake of our

¹ In analytical terms $W = W(U^1, U^2, \dots, U^n)$ and $\partial W / \partial U^i \geq 0$. The equal sign in the inequality relation is to cover a particular cases, e.g.: *i*) within the so-called Rawlsian Social Welfare Function (RSWF) when the well-off individuals in society get better-off, and social welfare does not change, given the *maximin* principle; *ii*) within a utilitarian (weighted-sum-of-utilities) welfare function when the weight to the very well-off is zero. In this section we will bear in mind only utilitarian social welfare functions. Rawls belongs to a different intellectual tradition, contractarianism, so that the typical microeconomist’s

argument, let us interchangeably use the words “utility” and “happiness”. If individual utility is a monotonous and non satiated function of its own income, and utility functions are not interdependent, i.e. if the happiness of each individual depends on his/her absolute income, and not the relative income with relation to some other individual, any increase in individual income, *ceteris paribus*, should increase individual and overall happiness. Given the ambiguity and subjective nature of “happiness” and “utility”, over the last two centuries economists have shifted their attention to measuring material well-being (individual incomes or countries’ GDP). In theory, we should expect that as individual income increases or as a country’s GDP per capita increases, the individual or average happiness should increase as well. This hypothesis can be tested if there is a reliable measure of “happiness”.

Although initially seen with suspicion by economists, subjective measures of well-being are now more accepted within the profession, as shown by papers published in most major economic journals using subjective indicators.² The robustness of some empirical results and the fact that the same variables that seem to explain subjective happiness also explain objective acts of suicide (Helliwell (2007)) provide additional support for the reliability of subjective information.³ Two main types of methods have been used to measure subjective well-being. The first one results from a survey where individuals are asked how satisfied they are with their lives: the “survey life satisfaction” method. The other, is based on individual time allocation to several activities weighted by the subjective experiences (“net affect” or “unpleasant” experiences) associated with each. Both have advantages and shortcomings. In this section we follow the “survey life satisfaction”. The fact that there are reliable measures of “happiness” solves a problem. It is now possible to analyze the determinants of “happiness”, namely income but also other non material causes, and see their relative importance. However, it does create a different problem: what should the indicator for measuring the effectiveness of public policy be: an indicator of subjective well-being (SWB) or an indicator of material well-being (MWB)? Should we have a national well-

approach to Rawls is reductionist. In sub-section 4.6 we will come back to Rawls when discussing the implications of the type of research done in this section.

² For a discussion of the issue raised by the use of subjective indicators see Veenhoven (2002), Kahneman and Krueger (2006), and Diener and Suh (1997).

³ Note that in cognitive psychology and sociology subjective information taken from surveys has been used for many decades. However, in economics it is a quite recent phenomenon.

being index and accounts, or should we concentrate on GDP growth, national accounts, and income distribution?

Most economists are engaged in studying economic growth and income distribution, therefore giving priority to MWB. However, among economists doing “well-being” research, the degree of support for building SWB indexes and accounts⁴ as a support for public policy differs. We may distinguish a prudent approach and a more enthusiastic approach. Frey and Stutzer (2002b) and Kahneman et al. (2004) are examples of a prudent approach. They believe SWB measures do not overcome all the problems faced by traditional notions and measures of utility in order to construct a social welfare function: SWB still faces the preference aggregation problem (having a cardinal utility does not solve all the Arrow type impossibility results) and the problem of missing incentives (governments may not have the correct incentives to maximize social happiness). Furthermore, SWB might be too prone to manipulation once people became aware that SWB is a goal of public policy (time allocation corrected happiness might be an alternative measure).

On the other hand, Layard (1980, 2005a, 2005b), Frank (1997, 2005) and Ng (1978, 1980a, 1980b, 1996, 1997, 1999a, 1999b, 2001, 2002b, 2003, 2006, 2008) clearly support the usage of SWB as a target for public policy⁵. They all believe traditional economic measures of well-being (such as GDP per capita, productivity, unemployment, inflation, access to goods and services), or even other objective measures of welfare (such as life-expectancy and literacy rates, etc.) are incomplete and might lead to erroneous public policies. They think happiness should be considered as the ultimate measure against which everything else ought to be compared. For instance given the trade-off between inflation and unemployment, public policy should give more weight to the variable that is more relevant to happiness. Results in Di Tella et al. (2001), corroborated by results from this section, suggest that it is employment that has a greater impact on subjective well-being. The tax schemes proposed by these authors (penalizing consumption and income, as income and consumption suffer from

⁴ For a debate on the possibilities and limits of using SWB to inform public policy, see Dolan and White (2007).

⁵ We have chosen these authors as they are amongst those who more clearly and explicitly support the implementation of SWB accounts as a tool for public policy guidance. Nevertheless, most economists engaged in happiness research would have a position close to this.

adaptation and comparison effects⁶) are also examples of public policies guided by SWB.

In this context, it is also important to analyze the relevance of “social capital” on happiness.⁷ People with more “social capital” interact more with others in a multiple of associations and groups, and therefore they develop trust relationships with each other. Trust relations reduce transaction costs, improve the quality of public institutions and contribute to economic performance. Additionally, “social capital” may have a positive direct impact on happiness when the other factors are controlled for⁸. If such a relationship exists, we may derive implications for public policy. There is some argument to support measures that increase social interaction, social contacts and some form of communitarian life.

Last, but not least we may consider the direct effect of government institutional quality on happiness. There is already some empirical evidence that “just institutions” matter (see Helliwell (2006) and Helliwell and Huang (2008)). Assuming that individuals have a sense of fairness with respect to institutions (Rawls (1996)), it is predictable that if they perceive the institutions as just, this will improve their happiness.

To summarize, in this section we use subjective well-being (SWB) as the indicator of welfare: we analyze the relevance of material well-being, quality of institutions and degree of development of social ties (“social capital”) by their impact on life satisfaction. We consider that results from happiness research should be taken into account when formulating public policies, although we do not consider it as the “ultimate good” for reasons that we will make clear in the conclusions.

4.3. Methodological issues and the dataset

In order to evaluate perceived happiness, or more properly life satisfaction, we use the answer to the question “How satisfied are you with your life?” of the World

⁶ The adaptation effect means that the individual compares his present income or consumption with past income and he is happier if the difference is greater. The comparison effect means that each individual has a reference group and happiness is a function of the difference between his income and the one from the reference group.

⁷ Classic and more recent papers on social capital can be found in Ostrom and Ahn (2003).

⁸ See Konow and Earley (2008).

Values Survey (WVS) dataset. In the survey, individuals choose an integer from 1 (dissatisfied) to 10 (satisfied) to answer that question.

The WVS is a widely used database within social sciences (namely sociology and political science).⁹ Researchers such as Ronald Inglehart (who is behind the construction of this dataset), John Helliwell, Robert McCulloch, Max Haller, Markus Hadler and Ruut Veenhoven have been using this data set. Also La Porta and et al. (1997), Guiso et al. (2003), Knack and Keefer (1997), and Torgler (2005) use the WVS as a data source in their studies on trust, social capital and religion.

Economists have been more reluctant to use subjective data collected through surveys. However, there has been an increasing number of scholars publishing in economic journals using either the WVS or the United States General Social Survey (see Di Tella et al. (2001), Frey and Stutzer (2000, 2002b), Oswald (1997), and Easterlin (2006)).

There has been some defence of subjective variables (Kahneman and Krueger (2006), Ng (1997), and Veenhoven (2002)). In particular, given the correlation between “happiness” questions and “life satisfaction”, a choice must be made to select the endogenous variable. The “life satisfaction” (*SL*) wording has been considered more appropriate to measure “happiness” than questions using the word “happy” or “happiness”, since in very different cultural backgrounds these words have different interpretations. Moreover, the scale used has been enlarged from three grades (in 1975) to a ten point scale, making it a more accurate measure (in the 1999-2004 survey).

The strategy used to define our data set is first, to use mainly objective variables from the WVS (e.g. sex, age, belonging to such-or-such organization), and second, to use data from different sources: WVS, the Annual Macroeconomic Database (AMECO from the European Commission) and the Worldwide Governance Indicators (WGI) project. Therefore, we do not relate reported life satisfaction with other subjective

⁹ The World Values Survey is a wide dataset containing information about individuals from 81 different nations worldwide. It is a micro data set as it contains personalized information for each individual for different moments in time (without being a panel though). It has information about values (social, religious, ethical, political, etc), socio-economic and demographic conditions of the respondents, attitudes on various domains and some questions addressing subjective perceptions of well-being. It has information on approximately 970 variables and 267870 individuals, is collected on a country base and has now data from five different waves (years): the first wave including years from 1981 to 1984, the second from 1989 to 1993, the third from 1994 to 1999, the fourth from 1999 to 2004 and the fifth from 2005 to 2006. Here we use the European and World Values Survey four-wave integrated data file, 1981-2004, v.20060423, 2006.

variables (individual perceptions of corruption or of their perceived quality of social ties) because they could be proxies of one another.¹⁰ In order to obtain coherence between the three datasets and work with a relevant and meaningful sample we restricted our analysis to 32 OECD countries.¹¹

The aim of this section is to analyze whether material well-being (MWB), levels of social capital (SC) and the perceived quality of institutions (QI) have an influence on life satisfaction (*SL*). As mentioned in the introduction, we will use a happiness measure as the dependent variable and economic well-being, quality of institutions and social capital variables as independent ones (alongside with socio-demographic controls). The analysis is developed at an individual level (micro) and country level (macro). The micro estimation will use the individual data from the WVS and will focus on finding the importance that individual economic well-being, subjective perception of the quality of institutions and the degree of social capital have on the individual level of satisfaction with life as a whole. By contrast, the macro estimation will try to understand how objective measures of institutions' quality, country economic environment and average social capital can explain a country's level of happiness (here we also use data from AMECO and from the Worldwide Governance Indicators).

4.4. Analysis with Individual Data

The individual data analysis tries to capture the effect of individuals' perception of institutions' quality, social capital and economic wellbeing (here only at an individual level) on self-reported satisfaction with life.

In order to specify the independent variables as proxies for individual level of social capital, economic wellbeing and perceived quality of institutions, we have chosen those with greater conceptual proximity to the reality under consideration and greater availability within the dataset. Social capital variables are objective measures of whether individuals belong to social welfare services for the elderly organizations (*BSWSE*), religious organizations (*BRO*), youth work organizations (*BYW*), sports or recreation associations (*BSR*), women's groups (*BWG*), or other groups (*BOG*). The

¹⁰ A similar argument was developed by Di Tella et al. (2001) to use data from different sources.

¹¹ See Table 4 on annexes for country details.

quality of institutions is measured by confidence in the police (*Cpo_QI*) and the perception of respect for individual human rights (*RHR_QI*). The personal economic well-being is indicated by income scales (*ISr*) to which the individual belongs. Finally, the socio-demographic variables considered are the usual ones: gender (*gender*), age (*Age*), highest educational level attained (*HEAr*), employment status (*ESr*) and number of children (*Nchild*)¹². To allow for nonlinear effects on age we squared age (*Age2*). We have also decomposed *ISr* (see *ISr_D*), *HEAr* (see *HEAr_D*) and *ESr* (see *ISr_D*) in dummies for each respective level in order to grasp possible changes on the marginal effects (non-linear effects)¹³.

We used the ordinal least squares estimation method since we take the dependent variable, satisfaction with life (*SL*) measured within a ten point scale (where 10 is the highest and 1 is the lowest level), to be cardinal¹⁴. Therefore, we run the following model with micro data:

$$\begin{aligned}
 SL_i = & b_0 + b_1 Age_i + b_2 Age_i^2 + b_3 Gender_i + b_4 Nchild_i + b_5 ESr_D2_i + b_6 ESr_D3_i + b_7 ESr_D4_i + \\
 & b_8 HEAr_D2_i + b_9 HEAr_D3_i + b_{10} HEAr_D4_i + b_{11} HEAr_D5_i + \\
 & b_{12} ISr_D2_i + b_{13} ISr_D3_i + b_{14} ISr_D4_i + b_{15} ISr_D5_i + \\
 & b_{16} BSWSE_i + b_{17} BRO_i + b_{18} BYW_i + b_{19} BSR_i + b_{20} BWG_i + b_{21} BOG \\
 & b_{22} Cpo_QI_i + b_{23} RHR_QI_i + b_{CD} + u_i
 \end{aligned}$$

¹² The belonging variables are dummies that take the value 1 when the individual belongs to the respective organization. *Cpo_QI* and *RHR_QI* vary between 1 and 4 where 1 stands for the maximum level of confidence and respect, respectively. *ISr* is a reduction to 5 levels of the 10 point scale of incomes presented in the WVS, where 5 is the highest scale of income. *HEAr* is also a reorganization of HEA of the WVS. Here, 1 stands for inadequately completed elementary education and 5 for some university without obtaining degree (for more details see table 5 in the annexes). *ESr* is also reorganized so that 1 is full-time employed, 2 unemployed, 3 housewife and 4 a collection of other statuses (see table 5 in annexes for details). In brackets the chosen abbreviation used with the package Stata. The WVS 4th wave for the 31 countries analyzed (in this Micro analysis Portugal had to be omitted due to lack of data) covers the years of 1999 or 2000. The same years were used when choosing variables from AMECO (*GDPpc_PPS*, *Unem*) and from the World Bank (*GovDo*) for the Macro model.

¹³ The omitted dummy (the reference point) is always 1 (the first income scale, having not completed elementary education and being full-time employed, for *ISr*, *HEAr* and *ESr*, respectively). One can calculate the marginal effect of having more education or moving up on the income scale by comparison of consecutive dummies.

¹⁴ It can be argued that a probabilistic model (as ordinal logit or probit) should be used instead of OLS as all we have is the sequential ten point observation of a latent continuous variable (the real satisfaction with life). Nevertheless, when the sample is large and the range of the variable is also large the gains from using those methodologies are minor while the computational burden (namely to calculate and interpret marginal effects) is large. We followed Gardner and Oswald (2006), Helliwell and Huang (2008), Van Praag and Ferrer-I-Carbonell (2004) and others within the literature of happiness in economics who take the same route. In any case we run an ordered logit on this equation with results consistent with the OLS estimation. Descriptive statistics of the variables and results from ordered logit are available on the annexes (see tables 7 and 8).

where b are the parameters to be estimated, CD are the country dummies (introduced in the analysis to get rid of possible country fixed effects)¹⁵, and u is the error term assumed to be normally distributed with zero mean and uncorrelated with independent variables.

With OLS, parameters' estimations directly give information about the magnitude of the impact that each variable has on life satisfaction (SL). Statistic significance tests for each variable are also included in the table below.

Table 1

Source	SS	df	MS	Number of obs = 31904		
Model	40472.1859	53	763.626149	F(53, 31850) =	182.21	
Residual	133478.523	31850	4.19084844	Prob > F =	0.0000	
				R-squared =	0.2327	
				Adj R-squared =	0.2314	
Total	173950.709	31903	5.4524875	Root MSE =	2.0472	

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Age	-.0588809	.0042573	-13.83	0.000***	-.0672254	-.0505365
Age2	.0005766	.0000442	13.05	0.000***	.00049	.0006632
gender	.0566317	.0250839	2.26	0.024**	.0074664	.105797
Nchil	.0566444	.0090143	6.28	0.000***	.038976	.0743129
ESr_D2	-.975161	.0492167	-19.81	0.000***	-1.071628	-.8786943
ESr_D3	.1204712	.0460891	2.61	0.009***	.0301347	.2108077
ESr_D4	-.0343442	.0292349	-1.17	0.240	-.0916458	.0229574
HEAr_D2	.0624945	.0559265	1.12	0.264	-.0471236	.1721127
HEAr_D3	.1443056	.0569474	2.53	0.011**	.0326865	.2559247
HEAr_D4	.1514641	.0567856	2.67	0.008***	.0401622	.2627661
HEAr_D5	.2653921	.0595417	4.46	0.000***	.1486881	.3820961
Sir_D2	.4598833	.0341998	13.45	0.000***	.3928503	.5269163
Sir_D3	.6854193	.0370454	18.50	0.000***	.6128089	.7580296
Sir_D4	.8464046	.0414685	20.41	0.000***	.7651247	.9276846
Sir_D5	1.00311	.0477053	21.03	0.000***	.9096058	1.096614
BSWSE	.0924316	.0457209	2.02	0.043**	.002817	.1820462
BRO	.2014645	.0347978	5.79	0.000***	.1332595	.2696695
BYW	.1492432	.054574	2.73	0.006***	.0422761	.2562103
BSR	.15403	.0323931	4.76	0.000***	.0905383	.2175218
BWG	.2121456	.0632958	3.35	0.001***	.0880834	.3362079
BOG	.1233263	.0460167	2.68	0.007***	.0331319	.2135207
Cpo_QI	-.2289291	.0151108	-15.15	0.000***	-.2585467	-.1993114
RHR_QI	-.2646146	.0159523	-16.59	0.000***	-.2958817	-.2333476

Statistically significant at 95% (**), and 99% (***).

```
regress SL Age Age2 gender Nchil ESr_D* HEAr_D* Sir_D* BSWSE BRO BYW BSR BWG BOG
Cpo_QI RHR_QI count*
```

From the results in Table 1 we can conclude that only educational level “2” and employment status “4” are not statistically significant meaning that, *ceteris paribus*, having completed elementary education does not add (statistically speaking, and even

¹⁵ The complete results (with the coefficients for country dummies) can be seen in the annexes, table 6.

with the positive sign on *HEAr_D2*) to one's satisfaction with life (in comparison with not having completed that educational level). Having "other employment" status, rather than being employed full-time, (when one is neither unemployed nor a housewife) is statistically irrelevant in changing one's satisfaction with life (although the sign is negative).

All other variables are statistically significant at 99% of confidence (only *BSWSE*, *HEAr_D3* and gender are statistically significant at 95% of confidence) and all present the expected sign according to our hypothesis and the literature¹⁶.

Trying to grasp now the relative importance of the independent variables (and grouping them by their type: economic domain, social capital, quality of institutions and socio-demographics) in explaining *SL*, the main results are the following:

The results for the controls (the socio-demographic variables) are in line with the robust results in the literature: *SL* is U-shaped in age¹⁷, women are slightly happier than men (more 0.057 satisfaction points)¹⁸ and being unemployed (in contrast with having a full-time job) drastically diminishes one's satisfaction with life (a 0.98 points drop). Concerning education, our results show that having higher education contributes to one's satisfaction (having attended university in comparison with not having completed elementary education adds 0.27 point on our satisfaction)¹⁹.

With regard to the other broad determinants of happiness (social capital and quality of institutions in comparison with economic wellbeing), the economic domain (*Sir*) seems to have a similar impact on one's satisfaction with life as that of the perception of institutions' quality, and its impact is only a little bit greater than that of social capital levels. Belonging to the 5th level of the scale of incomes (in comparison with being at the bottom of that scale) adds roughly 1 point in our satisfaction with life. That means that (on average) for each jump on the *Sir* we get approximately 0.25

¹⁶ Note that *Cpo_QI* assumes the value 1 for "a great deal" and 4 for "none at all" and *RHR_QI* assumes 1 for "there is a lot of respect for human rights" and 4 for "there is no respect at all" which explains the negative coefficients.

¹⁷ Although this is an expected result it should be pointed out that a cross section analysis is not the ideal way to analyze the life cycle evolution of happiness. A better analysis of the life cycle evolution of happiness was done by Easterlin (2006).

¹⁸ This is also in line with some earlier empirical literature, e.g. Di Tella et al. (2001).

¹⁹ We also got the result that being a house-wife adds to one's satisfaction in comparison with being full-employed (which can be comprehended if most of these housewives have made a free choice and have achieved a greater life satisfaction being committed to family life rather than to a job) and that having more children also increases satisfaction.

satisfaction points. That is also the impact of the quality of institutions (0.23 satisfaction points for each point in confidence gain for the police and 0.26 for each point more on the perception of respect for human rights) and similar to that of social capital variables (minimum for *BSWSE* with 0.09 satisfaction points gain and maximum for *BWG* with 0.21).

This means that besides the already expected importance of money on ones' satisfaction with life, participating in social organizations (that is, displaying a higher level of social capital) and having a perception of living in a fair and safe society are as important for one's well-being.

Having proceeded with the *HEAr* and *ISr* decomposition into dummies, we can now evaluate the change in the marginal effects of these two variables: by subtracting consecutively the dummies' coefficients, we can access the impact of changing from one level to the next on both income and education. Table 2 reports these results:

Table 2

variable		coefficient	marginal effect
HEAr	D2	0.06249	0.06249
	D3	0.1443	0.08181
	D4	0.1515	0.0072
	D5	0.2654	0.1139
S _{Ir}	D2	0.4599	0.4599
	D3	0.6854	0.2255
	D4	0.8464	0.161
	D5	1.0031	0.1567

We can see that the changes in the marginal effects are different for education and income. While income presents a clear pattern of diminishing marginal effect (moving from income level 1 to 2 adds much more to one's *SL* than moving from level 4 to 5)²⁰, education exhibits a somewhat irregular pattern with the step from having completed secondary education to having university frequency (from 4 to 5) being the most relevant step of all. On the other hand, completing secondary education or not completing it (from 3 to 4) is almost irrelevant from a *SL* point of view.

²⁰ This is consistent with the idea of diminishing marginal utility of income.

Overall we may conclude that material well-being is an important determinant of happiness (though with diminishing marginal utility), but the perception of the quality of institutions has a similar relevance and social ties come third in relevance. This implies that they should be taken into account when evaluating individuals' welfare and policies to improve it.

4.5. Analysis with country-level data

In the previous section we only took account of countries to get rid of possible countries' fixed effects and not to derive country specific conclusions. This section fills the gap, and we address the determinants of average life satisfaction (SL) across countries.

Our aim is also to study the impact of social capital, quality of institutions and the economic environment on happiness. We want to test the same relations as those previously tested in the Micro model using fewer and slightly different variables because we have fewer degrees of freedom²¹. The unemployment rate ($Unem$), inflation (Inf) and the logarithm of Gross Domestic Product per capita and at purchasing power parity ($lnGDP$) are the alternative indicators of the economic environment.²² Average confidence in police (Cpo_QI) and a compilation of governance quality ($GovDo$)²³ are the indicators of institutions' quality. Finally, the social capital variable ($belong$) is the simple average of fifteen dummies concerning belonging (or not) to the fifteen different organizations displayed on the WVS dataset.²⁴

Since SL_i is the average satisfaction with life for country i , we are dealing with a continuous variable in the interval $[0,10]$. Therefore, we can also use ordinary least squares for estimation of the following equations:

²¹ The equations are grouped according to the type of variables used. To be parsimonious (because now with only 32 data points (countries) we are working with much fewer degrees of freedom), we have only selected three variables for economic environment, two for the quality of institutions and one for social capital.

²² Previous literature has found a nonlinear relationship between GDP and happiness (e.g. Helliwell and Huang (2008)).

²³ $GovDo$ is the simple average of the percentile rank of each country on four dimensions of governance quality as measured by the Worldwide Governance Indicators project (Kaufmann (2008)), to wit, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption.

²⁴ In brackets the chosen abbreviation used in Stata. These variables are aggregations for each country. For the variables from the WVS, the country's average is used.

Economic Well-Being:

$$\text{MaM1: } SL_i = b_0 + b_1 \ln GDP_i + u_i$$

$$\text{MaM2: } SL_i = b_0 + b_1 \ln GDP_i + b_2 Unem_i + b_3 Inf_i + u_i$$

Quality of Institutions:

$$\text{MaM3: } SL_i = b_0 + b_1 Cpo_QI_i + u_i$$

$$\text{MaM4: } SL_i = b_0 + b_1 GovDo_i + u_i$$

$$\text{MaM5: } SL_i = b_0 + b_1 Cpo_QI_i + b_2 GovDo_i + u_i$$

Social Capital:

$$\text{MaM6: } SL_i = b_0 + b_1 belong_i + u_i$$

Global Model:

$$\text{MaM7: } SL_i = b_0 + b_1 Unem_i + b_2 Inf_i + b_3 Cpo_QI_i + b_4 belong_i + u_i$$

Once more, b stands for parameters to be estimated and u for the random error term with the desirable proprieties.

The OLS estimation results are shown in Table 3²⁵.

Table 3

SL	MaM1		MaM2		MaM3		MaM4		MaM5		MaM6		MaM7	
	coef	p > t	coef	p > t	coef	p > t	Coef	p > t	coef	p > t	coef	p > t	Coef	p > t
InGDP	1.3347	0.00***	0.9765	0.002***										
Unem			-0.0732	0.038**									-0.0985	0.002***
Inf			-0.0085	0.649									-0.0417	0.004***
Cpo_QI					-1.8359	0.00***			-0.731	0.169			-0.8785	0.015**
GovDo							4.293	0.00***	3.2586	0.005***				
belong											0.7251	0.00***	0.2393	0.089*
R-squared	0.6765		0.728		0.3853		0.5049		0.5366		0.4417		0.7465	
Obs.	32		32		32		32		32		32		32	

Statistically significant at 90% (*), 95% (**), and 99% (***).

²⁵ The complete results for regressions MaM1 to MaM7 can be found on table 11 in the annexes.

From the analysis of the results we can reinforce the conclusions of our micro analysis: the effect of both social capital and the quality of institutions is significant alongside the relevance of economic factors: *lnGDP*, *Cpo_QI*, *GovDo* or *belong*. All are highly significant when they are regressed alone over *SL*. Also the idea that income is the best proxy for satisfaction with life (once the curvilinear relationship is taken into account by the usage of the logarithm of income), followed by institutions' quality and social capital, can be witnessed by the diminishing R-square once one moves from regression MaM1 (for income) to MaM3 and MaM4 (for institutions) and to MaM6 (for social capital).

Finally, the global model (MaM7) returns the expected results: unemployment and inflation contribute negatively to *SL*, and social capital and the quality of institutions have a positive impact, with the economic variables ranking higher on statistical significance, followed by the quality of institutions and the level of social capital.

Using the sample's standard deviations of each variable as a reference for a typical movement of that variable, we can compare the impacts of the different variables on *SL*. Thus we find that economic variables have a greater impact on *SL* (for one SD of unemployment there is a 0,4 point reduction in *SL*, for one SD of inflation there is a 0,313 point reduction²⁶). The institutional variables come next: for a SD increase in confidence in police (that is, lower *Cpo_QI*), there is a 0,287 gain in *SL*, and lastly the social capital variable (a SD increase in *belong* boosts *SL* by 0,212 points). This is in line with the results previously found in the micro analysis, which adds robustness to the present analysis.

4.6. Conclusions

The empirical evidence presented in this section seems to support the hypothesis that life satisfaction is related not only to personal characteristics related to material well-being (e.g. income scale) and the usual socio-demographic characteristics (women are happier than men and young people are happier than old people), but also to the perceived fairness of institutions. Respect for human rights and confidence in the police

²⁶ The effect of the former is heavier than the latter, as already shown in the literature (Clark and Oswald (1994), Di Tella et al. (2001)).

are related to individual life satisfaction. This is a further empirical argument in support of a theory of justice. Just institutions are valuable for the functioning of a “well ordered society”, and citizens in fact seem to value them and relate better institutions with enhanced life satisfaction. Of lesser importance, but still relevant, is the density of social networks that the individuals belong to. The higher the participation in social organizations, the higher the levels of life satisfaction.

These conclusions at the individual level become somewhat blurred at the country level since variance of country average life satisfaction is much less than intra country variance of individual life satisfaction. Nevertheless, we still observe that low levels of unemployment and inflation, high levels of civic participation and high confidence in the police are positively associated with life satisfaction.

When comparing our results with those in the literature we find some consistency among results, since it is not just material well-being that counts for happiness. However, it seems that material well-being is more important than some papers have suggested, particularly when we take into account that our sample comprised relatively rich countries.

Results from happiness research should be taken into account for public policy, because they add information for decision-makers on the impact of their policies. However, caution is advised for several reasons. First, even for a utilitarian decision-maker, the subjective perception of well-being can only be a rough indicator of happiness. In this case it should be complemented by other approaches such as time allocation on different activities and the subjective perception of these experiences. Second, if we depart from the utilitarian approach and join a Rawlsian approach, what really matters are just institutions. As stated in this section, they may go hand in hand, in the sense that fairer institutions seem to bring more happiness overall. But in case of conflict, a Rawlsian approach gives a clear priority to justice.

5. Conclusion

Throughout this thesis we have looked at the literature on economics and happiness, framed the analysis within economic thought and drove policy conclusions (also contrasting happiness with capabilities). We have also added new empirical evidence supporting some results of that literature.

We concluded (as a corollary of the three main sections (sections 2 to 4) of the thesis) that both theoretical and empirically, happiness' inclusion within WE can be justifiable as it constitutes an autonomous and scientifically reliable approach which increases WE's explanatory power and scope of analysis.

In section 2 we were able to frame happiness within the history of economic thought noticing that the acceptance and availability of a subjective measure of welfare (self-rated happiness) as a standard indicator of WE is new¹ (early contributions date from the 1970s but extensive research only started during the 1990s) and that the majority of those who pursue such line of work can be grouped by their similarities in which economic fields, advocated moral philosophy and criticism towards MWE is concerned: the typical happiness economists is a welfare, labour or social/psychological economist, supports some version of utilitarianism, shows an interdisciplinary tendency and discards MWE (or more broadly, mainstream economic analysis of welfare) as a complete tool of welfare analysis. The discontentment with mainstream economic analysis of welfare (with its ambiguity on the kind of utilitarianism being used – ordinal rhetoric with cardinal models and poor informational basis) and a belief that happiness (whatever it might represent for each person) is the ultimate goal of individuals and society drove these economists to use SWB on economics as a standard indicator of welfare and as an answer for some WE open questions.

Section 3 served the purpose of showing the autonomy and reliability of happiness literature in economics when put in comparison with MWE and the SC approach. Although HL might be similar to MWE in what utilitarianism (and frequently in methodological individualism) is concerned and similar to SC in what policy conclusions and criticism towards MWE is concerned, it cannot be reduced to any of

¹ The idea of measuring utility (or happiness) can be traced back to Bentham and later to the marginalists. Nevertheless, back then, economists have never put such ideas into practice nor used self-rated utility questionnaires to collect data.

them. HL is mostly cardinal utilitarian and relies on subjective data, something which cannot be found jointly on MWE (objective observable choice or market behaviour as the sole informational basis) or SC (non-utilitarian background). Using the examples of income and freedom, we proved that using the HL approach represents an autonomous way to perform welfare analysis in economics.

Section 4 has been devoted to empirically test some of the advanced hypotheses on the previous sections (and on the HL) paying particular attention to the impact social capital and the quality of institutions (justice being one of the most important issues) could have on well-being (after the economic well-being effect has been controlled). We concluded that at both individual and country levels, the variables used as proxies for social capital and quality of institutions systematically had a statistically significant positive impact on welfare (here assessed with self-rated satisfaction with life).

This thesis allows us to conclude that once economics incorporates data from self-rated happiness the fact that not only traditional economic variables (like GDP, inflation or unemployment) matter for individual and social welfare becomes clear. The quality and quantity of institutions, processes, social capital, positional and relational goods, etc., are all relevant for welfare (some even more relevant than income and wealth), even after its impact on economic variables has been accounted for. Furthermore, phenomena like adaptation, comparison and expectation effects, personally interdependent utility, diminishing marginal returns of money and life domains specificities can be counted as characteristic contributions of happiness research to welfare analysis in economics, all with deep implications for WE theories and policy design.

Despite the argumentation presented throughout this thesis, and as always is the case in scientific research, we can point out some lacunas and shortcomings of happiness in economics. We think the most relevant are all related with the happiness “part”: the definition of the concept, its measurement (with the subjective nature of SWB) and its incorporation within economics is far from being simple and uncontroversial. For the sceptics, happiness is culturally, personality and even mood dependent. It is subject to vast adaptation, presents erratic fluctuations and might be

genetically determined (endangering interpersonal, inter-temporal and international comparability of SWB data). It might also be consistent with very different moral philosophies that are not compatible with each other (e.g. hedonism and eudemonism).

Even if the reliability of SWB was accepted it is very difficult to overcome the causation/correlation issue: all econometric analysis proves is correlation, not causation.

Furthermore, the normative side of HL might be deemed useless as there is always an incentive problem for the politicians to implement happiness enhancing policies, even if they agreed happiness was the variable to be maximized.

Most research to date on happiness and economics is either empirical or rhetorical. The empirical one tends to concentrate on the determinants of happiness with happiness equations estimated with ordered or least squares models. The rhetorical tend to frame the analysis, crystallize concepts, compare alternative approaches and reach policy implications. These kinds of analyses must continue, trying to improve their accuracy and scope. At the same time, using more extensively the traditional tools and expertise of economics (formal mathematical models, simulation models and statistical analysis) to analyze happiness (updating traditional assumption concerning agent's rationality and expected behaviour, developing statistical tools to econometrically test the determinants of happiness and the direction of causality) are top priorities.

Also the interdisciplinary nature of HL which promotes the joint contributions of psychology, sociology, neurology, history, philosophy and economics should continue, get deeper, ensuring that the upcoming results from all these sciences are integrated within economics and happiness. That would facilitate pursuing new lines of investigation such as happiness in experimental economics (laboratorial collection of happiness data), happiness in behavioural economics models (new models with more realistic assumptions on rationality) and happiness in neuroeconomics (assessing what happens in the brain when one declares a certain level of happiness, enlightening the interpersonal and inter-temporal comparability issues), happiness in health economics (where happiness could be seen as an indicator of mental health), all potentially fruitful.

Also relevant is the policy implications' research. At that level, the investigation of new indexes for social welfare (in line with the human development index but where happiness could play some role), the construction of efficient incentive schemes for

politicians, and the diffusion of happiness research within political institutions are key elements to consolidate HL as an effective tool of analysis and promotion of welfare.

6. References

- Abramovitz, M. (1959), "The welfare interpretation of secular trends in national income and product", in *The Allocation of Economic resources: Essays in honor of Bernard Francis Haley*, M. Abramovitz et al. (eds.), Stanford, California: Stanford University Press.
- Allen, R. G. D. (1934), "The Nature of Indifference Curves", *The Review of Economic Studies*, Vol. 1, N° 2, pp. 110-121.
- Arimah, B. C. (1992), "Hedonic Prices and the Demand for Housing Attributes in a Third-World City - The Case of Ibadan, Nigeria", *Urban Studies*, Vol. 29, N° 5, pp. 639-651.
- Aristotle (350b.c.), *Nicomachean Ethics*.
- Arrow, K. J. (1951a), "An extension of the basic theorems of classical welfare economics", in *Second Berkeley Symposium on Mathematical Statistics and Probability*, J. Neyman (eds.), Berkeley: University of California Press.
- Arrow, K. J. (1951b), *Social Choices and Individual Values*, Edited by C. C. f. R. i. Economics, New York: John Wiley & Sons, Inc.
- Bentham, J. (1789), *The Principles of Morals and Legislation*, New York: Prometheus Books.
- Bergson, A. (1938), "A Reformulation of Certain Aspects of Welfare Economics", *The Quarterly Journal of Economics*, Vol. 52, N° 2, pp. 310-334.
- Bergson, A. (1954), "On the Concept of Social Welfare", *The Quarterly Journal of Economics*, Vol. 68, N° 2, pp. 233-252.
- Beugelsdijk, S. (2006), "A note on the theory and measurement of trust in explaining differences in economic growth", *Cambridge Journal of Economics*, Vol. 30, N° 3, pp. 371-387.
- Bharadwaj, K. (1972), "Marshall on Pigou's Wealth and Welfare", *Economica*, Vol. 39, N° 153, pp. 32-46.
- Binmore, K. (2005), *Natural Justice*, Oxford: Oxford University Press.
- Blanchflower, D. G. and A. J. Oswald (2004a), "Money, sex and happiness: An empirical study", *Scandinavian Journal of Economics*, Vol. 106, N° 3, pp. 393-415.

- Blanchflower, D. G. and A. J. Oswald (2004b), "Well-being over time in Britain and the USA", *Journal of Public Economics*, Vol. 88, N° 7-8, pp. 1359-1386.
- Brickman, P., D. Coates and R. Janoffbulman (1978), "Lottery Winner and Accident Victims - Is Happiness Relative?", *Journal of Personality and Social Psychology*, Vol. 36, N° 8, pp. 917-927.
- Bruni, L. (2004a), "The "Happiness Transformation Problem" in the Cambridge Tradition", *European Journal of the History of Economic Thought*, Vol. 11, N° 3, pp. 433-451.
- Bruni, L. (2004b), "The "Technology of Happiness" and the Tradition of Economic Science", *Journal of the History of Economic Thought*, Vol. 26, N° 1, pp. 19-44.
- Bruni, L. and P. L. Porta, eds. (2005), *Economics and Happiness: Framing the Analysis*. Oxford and New York: Oxford University Press.
- Bruni, L. and P. L. Porta, eds. (2007), *Handbook on the Economics of Happiness*. Cheltenham, U.K. and Northampton, Mass: Elgar.
- Bruni, L. and L. Stanca (2006), "Income aspirations, television and happiness: Evidence from the world values survey", *Kyklos*, Vol. 59, N° 2, pp. 209-225.
- Cantril, H. (1965), *The Pattern of Human Concerns*, New Brunswick, N.J.: Rutgers University Press.
- Chipman, J. S. and J. C. Moore (1978), "New Welfare Economics 1939-1974", *International Economic Review*, Vol. 19, N° 3, pp. 547-584.
- Clark, A. E. and A. J. Oswald (1994), "Unhappiness and Unemployment", *Economic Journal*, Vol. 104, N° 424, pp. 648-659.
- Clark, A. E. and A. J. Oswald (1996), "Satisfaction and comparison income", *Journal of Public Economics*, Vol. 61, N° 3, pp. 359-381.
- Clarke, E. H. (1971), "Multipart Pricing of Public Goods", *Public Choice*, Vol. 11, pp. 17-33.
- Clarke, P. M. (1998), "Cost-benefit analysis and mammographic screening: a travel cost approach", *Journal of Health Economics*, Vol. 17, N° 6, pp. 767-787.
- Comim, F. (2005), "Capabilities and Happiness: Potential Synergies", *Review of Social Economy*, Vol. 63, N° 2, pp. 161-176.

- Cooter, R. and P. Rappoport (1984), "Were the Ordinalists Wrong About Welfare Economics", *Journal of Economic Literature*, Vol. 22, N° 2, pp. 507-530.
- Di Tella, R. and R. MacCulloch (2005), "Partisan social happiness", *Review of Economic Studies*, Vol. 72, N° 2, pp. 367-393.
- Di Tella, R. and R. MacCulloch (2006), "Some uses of happiness data in economics", *Journal of Economic Perspectives*, Vol. 20, N° 1, pp. 25-46.
- Di Tella, R. and R. MacCulloch (2008), "Gross national happiness as an answer to the Easterlin Paradox?", *Journal of Development Economics*, Vol. 86, N° 1, pp. 22-42.
- Di Tella, R., R. J. MacCulloch and A. J. Oswald (2001), "Preferences over inflation and unemployment: Evidence from surveys of happiness", *American Economic Review*, Vol. 91, N° 1, pp. 335-341.
- Di Tella, R., R. J. MacCulloch and A. J. Oswald (2003), "The macroeconomics of happiness", *Review of Economics and Statistics*, Vol. 85, N° 4, pp. 809-827.
- Dickie, M., C. D. Delorme and J. M. Humphreys (1997), "Hedonic prices, goods-specific effects and functional form: Inferences from cross-section time series data", *Applied Economics*, Vol. 29, N° 2, pp. 239-249.
- Diener, E. and C. Diener (1996), "Most people are happy", *Psychological Science*, Vol. 7, N° 3, pp. 181-185.
- Diener, E. and E. Suh (1997), "Measuring quality of life: Economic, social, and subjective indicators", *Social Indicators Research*, Vol. 40, N° 1-2, pp. 189-216.
- Dolan, P. and M. P. White (2007), "How Can Measures of Subjective Well-Being Be Used to Inform Public Policy?", *Perspectives on Psychological Science*, Vol. 2, N° 1, pp. 71-85.
- Duclos, J.-Y. and A. Araar (2006), *Poverty and Equity: Measurement, Policy and Estimation with DAD*, *Economic Studies in Inequality, Social Exclusion and Well-Being*, vol. 2. New York: Springer; Ottawa: International Development Research Centre.
- Durlauf, S. N. and L. E. Blume, eds. (2008), *The New Palgrave Dictionary of Economics*. 2nd ed., Palgrave Macmillan.

- Easterlin, R. A. (1974), "Does Economic Growth Improve the Human Lot? Some Empirical Evidence", in Happiness in economics, R. Easterlin (eds.), Cheltenham, U.K. and Northampton, Mass.: Edward Elgar Publishing Limited.
- Easterlin, R. A. (2001a), "Income and happiness: Towards a unified theory", *Economic Journal*, Vol. 111, N° 473, pp. 465-484.
- Easterlin, R. A. (2001b), "Life Cycle Welfare: Trends and Differences", *Journal of Happiness Studies*, Vol. 2, N° 1, pp. 1-12.
- Easterlin, R. A. (2002a), "Is Reported Happiness Five Years Ago Comparable to Present Happiness? A Cautionary Note", *Journal of Happiness Studies*, Vol. 3, N° 2, pp. 193-198.
- Easterlin, R. A. (2003), "Explaining happiness", *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 100, N° 19, pp. 11176-11183.
- Easterlin, R. A. (2005), "Feeding the illusion of growth and happiness: A reply to Hagerty and Veenhoven", *Social Indicators Research*, Vol. 74, N° 3, pp. 429-443.
- Easterlin, R. A. (2006), "Life cycle happiness and its sources - Intersections of psychology, economics, and demography", *Journal of Economic Psychology*, Vol. 27, N° 4, pp. 463-482.
- Easterlin, R. A., ed. (2002b), *Happiness in economics*. Edited by E. R. Collection. Vol. 142. Cheltenham, U.K. and Northampton, Mass.: Edward Elgar Publishing.
- Edgeworth, F. Y. (1879), "The Hedonical Calculus", *Mind*, Vol. 4, N° 15, pp. 394-408.
- Edgeworth, F. Y. (1881), *Mathematical psychics: an essay on the application of mathematics to the moral science*, London: Paul Kegan.
- Edgeworth, F. Y. (1882), "Mr. Leslie Stephen on Utilitarianism", *Mind*, Vol. 7, N° 27, pp. 446-447.
- Edgeworth, F. Y. (1887), "The Method of Measuring Probability and Utility", *Mind*, Vol. 12, N° 47, pp. 484-488.
- Edgeworth, F. Y. (1889), "'On the Application of Mathematics to Political Economy.'" *The Address of the President of Section F--Economic Science and Statistics--of the British Association, at the Fifty-Ninth Meeting, Held at*

Newcastle-Upon-Tyne, in September, 1889", *Journal of the Royal Statistical Society*, Vol. 52, N° 4, pp. 538-576.

- Edwards, F. Y. (1979), *Pleasures and Pains: A Theory of Qualitative Hedonism*, Ithaca and London: Cornell University Press.
- Feldman, A. M. (2008), "Welfare economics", in *The New Palgrave Dictionary of Economics*, S. N. Durlauf and L. E. Blume (eds.), Palgrave Macmillan.
- Feldman, F. (2004), *Pleasure of the Good Life: Concerning the Nature, Varieties, and Plausibility of Hedonism*, Oxford: Clarendon Press.
- Fleurbaey, M. (2008), "Ethics and economics", in *The New Palgrave Dictionary of Economics*, S. N. Durlauf and L. E. Blume (eds.), Palgrave Macmillan.
- Fleurbaey, M. and P. Mongin (2005), "The news of the death of welfare economics is greatly exaggerated", *Social Choice and Welfare*, Vol. 25, N° 2-3, pp. 381-418.
- Frank, R. H. (1997), "The frame of reference as a public good", *Economic Journal*, Vol. 107, N° 445, pp. 1832-1847.
- Frank, R. H. (2005), "Does Absolute Income Matter?", in *Economics and Happiness: Framing the Analysis*, L. Bruni and P. L. Porta (eds.), Oxford: Oxford University Press.
- Frey, B. S. and A. Stutzer (2000), "Happiness, economy and institutions", *Economic Journal*, Vol. 110, N° 466, pp. 918-938.
- Frey, B. S. and A. Stutzer (2002a), *Happiness and economics: How the economy and institutions affect human well-being*, Princeton and Oxford: Princeton University Press.
- Frey, B. S. and A. Stutzer (2002b), "What can economists learn from happiness research?", *Journal of Economic Literature*, Vol. 40, N° 2, pp. 402-435.
- Frey, B. S. and A. Stutzer (2006), "Political participation and procedural utility: An empirical study", *European Journal of Political Research*, Vol. 45, pp. 391-418.
- Fukuyama, F. (1995), *Trust: Social Virtues and the Creation of Prosperity*, New York: Free Press.

- Gardner, J. and A. J. Oswald (2006), "Do divorcing couples become happier by breaking up?", *Journal of the Royal Statistical Society Series a-Statistics in Society*, Vol. 169, pp. 319-336.
- Gibbard, A. (1974), "Pareto-Consistent Libertarian Claim", *Journal of Economic Theory*, Vol. 7, N° 4, pp. 388-410.
- Groves, T. (1973), "Incentives in Teams", *Econometrica*, Vol. 41, N° 4, pp. 617-631.
- Groves, T. and M. Loeb (1975), "Incentives and Public Inputs", *Journal of Public Economics*, Vol. 4, N° 3, pp. 211-226.
- Guiso, L., P. Sapienza and L. Zingales (2003), "People's opium? Religion and economic attitudes", *Journal of Monetary Economics*, Vol. 50, N° 1, pp. 225-282.
- Hailu, G., P. C. Boxall and B. L. McFarlane (2005), "The influence of place attachment on recreation demand", *Journal of Economic Psychology*, Vol. 26, N° 4, pp. 581-598.
- Hamilton, J. M. (2007), "Coastal landscape and the hedonic price of accommodation", *Ecological Economics*, Vol. 62, N° 3-4, pp. 594-602.
- Harsanyi, J. C. (1953), "Cardinal Utility in Welfare Economics and in the Theory of Risk-taking", *The Journal of Political Economy*, Vol. 61, N° 5, pp. 434-435.
- Helliwell, J. F. (2003), "How's life? Combining individual and national variables to explain subjective well-being", *Economic Modelling*, Vol. 20, pp. 331-360.
- Helliwell, J. F. (2006), "Well-being, social capital and public policy: What's new?", *Economic Journal*, Vol. 116, N° 510, pp. C34-C45.
- Helliwell, J. F. (2007), "Well-being and social capital: Does suicide pose a puzzle?", *Social Indicators Research*, Vol. 81, N° 3, pp. 455-496.
- Helliwell, J. F. and H. F. Huang (2008), "How's your government? International evidence linking good government and well-being", *British Journal of Political Science*, Vol. 38, pp. 595-619.
- Hicks, J. R. (1939), "The Foundations of Welfare Economics", *The Economic Journal*, Vol. 49, N° 196, pp. 696-712.
- Hicks, J. R. (1940), "The Valuation of Social Income", *Economica*, Vol. 7, N° 26, pp. 105-124.

- Hicks, J. R. (1943), "The Four Consumer's Surpluses", *The Review of Economic Studies*, Vol. 11, N° 1, pp. 31-41.
- Jevons, W. S. (1871), *The Theory of Political Economy*, London: Macmillan and Co.
- Johansson, P.-O. (1991), *An introduction to modern welfare economics*, Cambridge; New York and Melbourne: Cambridge University Press.
- Just, R. E., D. L. Hueth and A. Schmitz (2004), *The Welfare Economics of Public Policy: A Practical Approach to Project and Policy Evaluation*, Cheltenham, U.K. and Northampton, Mass.: Elgar.
- Kahneman, D., E. Diener and N. Schwarz, eds. (1999), *Well-Being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation.
- Kahneman, D. and A. B. Krueger (2006), "Developments in the measurement of subjective well-being", *Journal of Economic Perspectives*, Vol. 20, N° 1, pp. 3-24.
- Kahneman, D., A. B. Krueger, D. Schkade, N. Schwarz and A. Stone (2004), "Toward national well-being accounts", *American Economic Review*, Vol. 94, N° 2, pp. 429-434.
- Kahneman, D. and A. Tversky (2000a), "Experienced Utility and Objective Happiness: A Moment-Based Approach", in *Choices, values, and frames*, (eds.), Cambridge; New York and Melbourne: Cambridge University Press and Russell Sage Foundation.
- Kahneman, D. and A. Tversky, eds. (2000b), *Choices, Values and Frames*. New York: Cambridge University Press and Russell Sage Foundation.
- Kahneman, D., P. P. Wakker and R. Sarin (1997), "Back to Bentham? - Explorations of experienced utility", *Quarterly Journal of Economics*, Vol. 112, N° 2, pp. 375-405.
- Kaldor, N. (1939), "Welfare Propositions of Economics and Interpersonal Comparisons of Utility", *The Economic Journal*, Vol. 49, N° 195, pp. 549-552.
- Knack, S. and P. Keefer (1997), "Does social capital have an economic payoff? A cross-country investigation", *Quarterly Journal of Economics*, Vol. 112, pp. 1251-1288.
- Kolm, S. (1972), *Justice and Equity*, Cambridge, MA: MIT Press.

- Konow, J. and J. Earley (2008), "The Hedonistic Paradox: Is homo economicus happier?", *Journal of Public Economics*, Vol. 92, N° 1-2, pp. 1-33.
- La Porta, R. and et al. (1997), "Trust in Large Organizations", *American Economic Review*, Vol. 87, N° 2, pp. 333-338.
- Laffont, J.-J. and J. Tirole (1986), "Using Cost Observation to Regulate Firms", *Journal of Political Economy*, Vol. 94, N° 3, pp. 614-641.
- Lange, O. (1942), "The Foundations of Welfare Economics", *Econometrica*, Vol. 10, N° 3/4, pp. 215-228.
- Layard, R. (1980), "Human Satisfaction and Public-Policy", *Economic Journal*, Vol. 90, N° 360, pp. 737-750.
- Layard, R. (2005a), *Happiness: Lessons from a New Science*, The Penguin Press, New York.
- Layard, R. (2005b), "Rethinking Public Economics: The Implications of Rivalry and Habit", in *Economics and Happiness: Framing the Analysis*, L. Bruni and P. L. Porta (eds.), New York: Oxford University Press.
- Layard, R. (2006), "Happiness and public policy: A challenge to the profession", *Economic Journal*, Vol. 116, N° 510, pp. C24-C33.
- Leite Mota, G. 2007. "Why should happiness have a role in welfare economics? Happiness versus orthodoxy and capabilities." FEP working papers 253.
- Lerner, A. P. (1934), "The Concept of Monopoly and the Measurement of Monopoly Power", *The Review of Economic Studies*, Vol. 1, N° 3, pp. 157-175.
- Little, I. M. D. (1952), "Social Choice and Individual Values", *The Journal of Political Economy*, Vol. 60, N° 5, pp. 422-432.
- Malthus, T. R. (1798), *An essay on the principle of population*, London: J. Johnson, in St. Paul's Church-yard.
- Marshall, A. (1890), *Principles of Economics*, London: Macmillan and Co., Ltd.
- Maskin, E. (1999), "Nash Equilibrium and Welfare Optimality", *Review of Economic Studies*, Vol. 66, N° 1, pp. 23-38.
- Mill, J. S. (1848), *Principles of Political Economy with some of their Applications to Social Philosophy*, London: Longmans, Green and Co.
- Mishan, E. J. (1977), "Plain Truth About Consumer Surplus", *Zeitschrift Fur Nationalokonomie-Journal of Economics*, Vol. 37, N° 1-2, pp. 1-24.

- Morawetz, D., E. Atia, G. Binnun, L. Felous, Y. Gariplerden, E. Harris, S. Soustiel, G. Tombros and Y. Zarfaty (1977), "Income-Distribution and Self-Rated Happiness - Some Empirical-Evidence", *Economic Journal*, Vol. 87, N° 347, pp. 511-522.
- Nash, J. F., Jr. (1950), "The Bargaining Problem", *Econometrica*, Vol. 18, N° 2, pp. 155-162.
- Ng, Y.-K. (1978), "Economic-Growth and Social-Welfare - Need for a Complete Study of Happiness", *Kyklos*, Vol. 32, N° 4, pp. 575-587.
- Ng, Y.-K. (1980a), "Money and Happiness - 1st Lesson in Eudaemonology", *Kyklos*, Vol. 33, N° 1, pp. 161-163.
- Ng, Y.-K. (1980b), "Toward Eudaimonology - Notes on a Quantitative Framework for the Study of Happiness", *Mathematical Social Sciences*, Vol. 1, N° 1, pp. 51-68.
- Ng, Y.-K. (1996), "Happiness surveys: Some comparability issues and an exploratory survey based on just perceivable increments", *Social Indicators Research*, Vol. 38, N° 1, pp. 1-27.
- Ng, Y.-K. (1997), "A case for happiness, cardinalism, and interpersonal comparability", *Economic Journal*, Vol. 107, N° 445, pp. 1848-1858.
- Ng, Y.-K. (1999a), "Can Money Buy Happiness? Why Should Public Spending Be Increased? (In Chinese. With English summary.)", *Taiwan Economic Review*, Vol. 27, N° 3, pp. 269-284.
- Ng, Y.-K. (1999b), "Utility, informed preference, or happiness: Following Harsanyi's argument to its logical conclusion", *Social Choice and Welfare*, Vol. 16, N° 2, pp. 197-216.
- Ng, Y.-K. (2001), "Is Public Spending Good for You?", *World Economics*, Vol. 2, N° 2, pp. 1-17.
- Ng, Y.-K. (2002a), "The East-Asian Happiness Gap: Speculating on Causes and Implications", *Pacific Economic Review*, Vol. 7, N° 1, pp. 51-63.
- Ng, Y.-K. (2002b), "Economic Policies in the Light of Happiness Studies with Reference to Singapore", *The Singapore Economic Review*, Vol. 47, N° 2, pp. 199-212.

- Ng, Y.-K. (2003), "From preference to happiness: Towards a more complete welfare economics", *Social Choice and Welfare*, Vol. 20, N° 2, pp. 307-350.
- Ng, Y.-K. (2006), "Some Policy Implications of Behavioral Economics and Happiness Studies for Singapore: With Special Reference to Casinos", *Singapore Economic Review*, Vol. 51, N° 1, pp. 1-18.
- Ng, Y.-K. (2008), "Happiness studies: Ways to improve comparability and some public policy implications", *Economic Record*, Vol. 84, N° 265, pp. 253-266.
- Ostrom, E. and T. K. e. Ahn (2003), *Foundations of social capital*, Elgar Reference Collection. *Critical Studies in Economic Institutions*, vol. 2. Cheltenham, U.K. and Northampton, Mass.: Elgar; distributed by American International Distribution Corporation, Williston, Vt.
- Oswald, A. J. (1997), "Happiness and economic performance", *Economic Journal*, Vol. 107, N° 445, pp. 1815-1831.
- Pigou, A. C. (1920), *The Economics of Welfare*, London: Macmillan and Co.
- Pope, J. C. (2008), "Buyer Information and the Hedonic: The Impact of a Seller Disclosure on the Implicit Price for Airport Noise", *Journal of Urban Economics*, Vol. 63, N° 2, pp. 498-516.
- Putnam, R. (2000), *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon and Schuster.
- Putnam, R., R. Leonardi and R. Y. Nanetti (1993), *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton University Press.
- Rawls, J. (1971), *A Theory of Justice*, Belknap Press.
- Rawls, J. (1996), *Political Liberalism*, New York Chichester, West Sussex: Columbia University Press.
- Ricardo, D. (1817), *On the Principles of Political Economy and Taxation*, London: John Murray.
- Riley, J. (1988), *Liberal Utilitarianism*, Cambridge: Cambridge University Press.
- Riley, J. (2006a), "Genes, memes and justice", *Analyse & Kritik*, Vol. 28, pp. 32-56.
- Riley, J. (2006b), "Liberal rights in a Pareto-optimal code", *Utilitas*, Vol. 18, N° 1, pp. 61-79.

- Riley, J. (2008), "Utilitarianism and economic theory", in *The New Palgrave Dictionary of Economics*, S. N. Durlauf and L. E. Blume (eds.), Palgrave Macmillan.
- Robbins, L. (1945), *An Essay on the Nature and Significance of Economic Science*, 2nd revised and extended ed., London: Macmillan and Co., Limited.
- Robbins, L. (1981), "Economics and Political-Economy - Richard-T-Ely-Lecture", *American Economic Review*, Vol. 71, N° 2, pp. 1-10.
- Samuelson, P. A. (1937), "A Note on Measurement of Utility", *The Review of Economic Studies*, Vol. 4, N° 2, pp. 155-161.
- Samuelson, P. A. (1938), "The Numerical Representation of Ordered Classifications and the Concept of Utility", *The Review of Economic Studies*, Vol. 6, N° 1, pp. 65-70.
- Samuelson, P. A. (1974), "Analytical Notes on International Real-Income Measures", *The Economic Journal*, Vol. 84, N° 335, pp. 595-608.
- Samuelson, P. A. (1977), "Reaffirming the Existence of "Reasonable" Bergson-Samuelson Social Welfare Functions", *Economica*, Vol. 44, N° 173, pp. 81-88.
- Schwartz, B., A. Ward, J. Monterosso, S. Lyubomirsky, K. White and D. R. Lehman (2002), "Maximizing versus satisficing: Happiness is a matter of choice", *Journal of Personality and Social Psychology*, Vol. 83, N° 5, pp. 1178-1197.
- Scitovsky, T. (1976a), "Income and Happiness", *Acta Oeconomica*, Vol. 15, N° 1, pp. 45-53.
- Scitovsky, T. (1976b), *The Joyless Economy: The Psychology of Human Satisfaction*, 1992 ed., New York: Oxford University Press.
- Sen, A. (1970), "Impossibility of a Paretian Liberal", *Journal of Political Economy*, Vol. 78, N° 1, pp. 152-157.
- Sen, A. (1976), "Liberty, Unanimity and Rights", *Economica*, Vol. 43, N° 171, pp. 217-245.
- Sen, A. (1979a), "Personal Utilities and Public Judgements - Or What's Wrong With Welfare Economics", *Economic Journal*, Vol. 89, N° 355, pp. 537-558.
- Sen, A. (1979b), "Utilitarianism and Welfarism", *Journal of Philosophy*, Vol. 76, N° 9, pp. 463-489.

- Sen, A. (1982), *Poverty and Famines: An Essay on Entitlements and Deprivation*, Oxford: Clarendon Press.
- Sen, A. (1983), "Liberty and Social Choice", *The Journal of Philosophy*, Vol. 80, N° 1, pp. 5-28.
- Sen, A. (1999), *Development as Freedom*, Oxford University Press.
- Sen, A. (2000), "The discipline of cost-benefit analysis", *Journal of Legal Studies*, Vol. 29, N° 2, pp. 931-952.
- Sen, A. and B. Williams, eds. (1982), *Utilitarianism and beyond*. Cambridge: Cambridge University Press.
- Sengupta, S. and D. E. Osgood (2003), "The value of remoteness: a hedonic estimation of ranchette prices", *Ecological Economics*, Vol. 44, pp. 91-103.
- Shapley, L. (1953), "A value for N-person games", in *Contribution to the Theory of Games*, H. K. Tucker and A (eds.), Princeton: Princeton University Press.
- Shrestha, R. K., A. F. Seidl and A. S. Moraes (2002), "Value of Recreational Fishing in the Brazilian Pantanal: A Travel Cost Analysis Using Count Data Models", *Ecological Economics*, Vol. 42, N° 1-2, pp. 289-299.
- Sidgwick, H. (1874), *The Method of Ethics*, London.
- Sidgwick, H. (1883), *The Principles of Political Economy*, London.
- Slemrod, J. and P. Katuscak (2005), "Do trust and trustworthiness pay off ?", *Journal of Human Resources*, Vol. 40, N° 3, pp. 621-646.
- Smith, A. (1759), *The theory of moral sentiments*, London: A. Miller.
- Smith, A. (1776), *An inquiry into the nature and causes of the wealth of nations*, Edited by E. Cannan, 5th ed., London: Methuen & Co., Ltd.
- Stigler, G. J. (1950), "The Development of Utility Theory. I", *The Journal of Political Economy*, Vol. 58, N° 4, pp. 307-327.
- Stutzer, A. (2004), "The role of income aspirations in individual happiness", *Journal of Economic Behavior & Organization*, Vol. 54, N° 1, pp. 89-109.
- Sugden, R. (2005), "Correspondence of Sentiments: An Explanation of the Pleasure of Social Interaction", in *Economics and Happiness: Framing the Analysis*, L. Bruni and P. L. Porta (eds.), Oxford: Oxford University Press.

- Timmins, C. and J. Murdock (2007), "A revealed preference approach to the measurement of congestion in travel cost models", *Journal of Environmental Economics and Management*, Vol. 53, pp. 230-249.
- Torgler, B. (2005), "Tax morale in Latin America", *Public Choice*, Vol. 122, N° 1-2, pp. 133-157.
- Tse, R. Y. C. (2002), "Estimating Neighborhood Effects in House Prices: Towards a New Hedonic Model Approach", *Urban Studies*, Vol. 39, N° 7, pp. 1165-1180.
- van de Stadt, H., A. Kapteyn and S. van de Geer (1985), "The Relativity of Utility: Evidence from Panel Data", *Review of Economics and Statistics*, Vol. 67, N° 2, pp. 179-187.
- Van Praag, B. and A. Ferrer-I-Carbonell (2004), *Happiness quantified: A satisfaction calculus approach*, Oxford and New York: Oxford University Press.
- Veenhoven, R. (1999), "Quality-of-life in individualistic society", *Social Indicators Research*, Vol. 48, N° 2, pp. 157-186.
- Veenhoven, R. (2002), "Why social policy needs subjective indicators", *Social Indicators Research*, Vol. 58, N° 1-3, pp. 33-45.
- Viner, J. (1925), "The Utility Concept in Value Theory and Its Critics", *The Journal of Political Economy*, Vol. 33, N° 6, pp. 638-659.
- Wang, Z. (2003), "Hedonic prices for crude oil", *Applied Economic Letters*, Vol. 10, pp. 857-861.
- Wolfe, A. B. (1931), "On the Content of Welfare", *The American Economic Review*, Vol. 21, N° 2, pp. 207-221.
- Zamagni, S. (2005), "Happiness and Individualism: A Very Difficult Union", in *Economics and Happiness: Framing the Analysis*, L. Bruni and P. L. Porta (eds.), Oxford: Oxford University Press.

7. Annexes

Table 4 (code on WVS in brackets)

Code	Country (s003)	Year (s020)	Wave
40	austria	1999	4
56	belgium	1999	4
100	bulgaria	1999	4
124	canada	2000	4
191	croatia	1999	4
203	czech republic	1999	4
208	denmark	1999	4
233	estonia	1999	4
246	finland	2000	4
250	france	1999	4
276	germany	1999	4
300	greece	1999	4
348	hungary	1999	4
352	iceland	1999	4
372	ireland	1999	4
380	italy	1999	4
392	japan	2000	4
428	latvia	1999	4
440	lithuania	1999	4
442	luxembourg	1999	4
484	mexico	2000	4
528	netherlands	1999	4
616	poland	1999	4
620	portugal	1999	4
642	romania	1999	4
703	slovakia	1999	4
705	slovenia	1999	4
724	spain	1999.5	4
752	sweden	1999	4
792	turkey	2001	4
826	great britain	1999	4
840	united states	1999	4

Table 5 – Description of HEAr and ESr:

HEAr - highest educational level attained recoded

Level - Meaning

-
- 1 - inadequately completed elementary education |
 - 2 - completed (compulsory) elementary education |
 - 3 - incomplete secondary school: technical/ incomplete secondary: university-preparatory |
 - 4 - complete secondary school: technical/vocational/ complete secondary: university-preparatory |
 - 5 - some university without degree/higher e university with degree/higher education |
-

ESr – employment status recoded

Number - Employment status |

-
- 1 - full time |
 - 2 - unemployed |
 - 3 - housewife |
 - 4 - other / part time / self employed / students / retired |
-

Table 6 - Table 1 including estimation results of country dummies:

regress SL Age Age2 gender Nchil ESr_D* HEAr_D* SIr_D* BSWSE BRO BYW BSR BWG BOG Cpo_QI
RHR_QI count*

Source	SS	df	MS	Number of obs =	31904
Model	40472.1859	53	763.626149	F(53, 31850) =	182.21
Residual	133478.523	31850	4.19084844	Prob > F =	0.0000
				R-squared =	0.2327
				Adj R-squared =	0.2314
Total	173950.709	31903	5.4524875	Root MSE =	2.0472

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Age	-.0588809	.0042573	-13.83	0.000	-.0672254 -.0505365
Age2	.0005766	.0000442	13.05	0.000	.00049 .0006632
gender	.0566317	.0250839	2.26	0.024	.0074664 .105797
Nchil	.0566444	.0090143	6.28	0.000	.038976 .0743129
ESr_D2	-.975161	.0492167	-19.81	0.000	-1.071628 -.8786943
ESr_D3	.1204712	.0460891	2.61	0.009	.0301347 .2108077
ESr_D4	-.0343442	.0292349	-1.17	0.240	-.0916458 .0229574
HEAr_D2	.0624945	.0559265	1.12	0.264	-.0471236 .1721127
HEAr_D3	.1443056	.0569474	2.53	0.011	.0326865 .2559247
HEAr_D4	.1514641	.0567856	2.67	0.008	.0401622 .2627661
HEAr_D5	.2653921	.0595417	4.46	0.000	.1486881 .3820961
SIr_D2	.4598833	.0341998	13.45	0.000	.3928503 .5269163
SIr_D3	.6854193	.0370454	18.50	0.000	.6128089 .7580296
SIr_D4	.8464046	.0414685	20.41	0.000	.7651247 .9276846
SIr_D5	1.00311	.0477053	21.03	0.000	.9096058 1.096614
BSWSE	.0924316	.0457209	2.02	0.043	.002817 .1820462
BRO	.2014645	.0347978	5.79	0.000	.1332595 .2696695
BYW	.1492432	.054574	2.73	0.006	.0422761 .2562103
BSR	.15403	.0323931	4.76	0.000	.0905383 .2175218
BWG	.2121456	.0632958	3.35	0.001	.0880834 .3362079
BOG	.1233263	.0460167	2.68	0.007	.0331319 .2135207
Cpo_QI	-.2289291	.0151108	-15.15	0.000	-.2585467 -.1993114
RHR_QI	-.2646146	.0159523	-16.59	0.000	-.2958817 -.2333476
count2	-.4384569	.0827192	-5.30	0.000	-.6005898 -.2763241
count3	-1.893923	.0955248	-19.83	0.000	-2.081155 -1.706691
count4	-.2586456	.0799663	-3.23	0.001	-.4153827 -.1019086
count5	-.9790697	.0918468	-10.66	0.000	-1.159093 -.7990464
count6	-.5979482	.0805458	-7.42	0.000	-.7558212 -.4400753
count7	.097823	.0945858	1.03	0.301	-.0875688 .2832149
count8	-1.692517	.0958665	-17.65	0.000	-1.88042 -1.504615
count9	-.2639639	.0951628	-2.77	0.006	-.4504868 -.0774411
count10	-.6965548	.0853822	-8.16	0.000	-.8639072 -.5292024
count11	-.3081027	.0821294	-3.75	0.000	-.4690796 -.1471258
count12	-1.215358	.0936234	-12.98	0.000	-1.398864 -1.031853
count13	-1.722136	.0926778	-18.58	0.000	-1.903788 -1.540484
count14	-.2402151	.0942475	-2.55	0.011	-.4249438 -.0554864
count15	-.0235299	.0963152	-0.24	0.807	-.2123115 .1652516
count16	-.644755	.0824813	-7.82	0.000	-.8064215 -.4830884
count17	-1.300432	.0906256	-14.35	0.000	-1.478062 -1.122803
count18	-2.053124	.0939478	-21.85	0.000	-2.237265 -1.868982
count19	-2.183646	.0987187	-22.12	0.000	-2.377139 -1.990154
count20	-.1405251	.1068799	-1.31	0.189	-.3500138 .0689636
count21	.3546066	.0890913	3.98	0.000	.1799841 .529229
count22	-.4619206	.0922566	-5.01	0.000	-.6427472 -.281094
count23	-1.355504	.0902316	-15.02	0.000	-1.532362 -1.178647
count24	-2.382085	.0929415	-25.63	0.000	-2.564254 -2.199917
count25	-1.731384	.0875976	-19.77	0.000	-1.903079 -1.559689
count26	-.4674643	.1022909	-4.57	0.000	-.6679585 -.2669701
count27	-.7432827	.0813043	-9.14	0.000	-.9026424 -.5839231
count28	-.5918729	.0921504	-6.42	0.000	-.7724912 -.4112546
count29	-2.269391	.0901764	-25.17	0.000	-2.44614 -2.092641
count30	-.5398033	.1044408	-5.17	0.000	-.7445114 -.3350953
count31	-.55448	.0890789	-6.22	0.000	-.7290782 -.3798819
_cons	9.4477	.1323504	71.38	0.000	9.188288 9.707111

Table 8 - Descriptive Statistics for the variables used in the Micro Model:

Variable	Obs	Mean	Std. Dev.	Min	Max
SL	31904	6.968186	2.335056	1	10
Age	31904	44.75135	16.66648	15	98
gender	31904	.5253573	.4993644	0	1
Nchil	31904	1.730943	1.551914	0	20
ESr_D2	31904	.0678912	.251563	0	1
ESr_D3	31904	.101492	.3019838	0	1
ESr_D4	31904	.4132397	.4924228	0	1
HEAr	31904	3.43098	1.195364	1	5
SIR	31904	2.686685	1.27571	1	5
BSWSE	31904	.0749122	.2632538	0	1
BRO	31904	.1785983	.3830216	0	1
BYW	31904	.0514042	.2208242	0	1
BSR	31904	.1805103	.3846179	0	1
BWG	31904	.03708	.1889608	0	1
BOG	31904	.0706494	.2562424	0	1
Cpo_QI	31904	2.372367	.8402523	1	4
RHR_QI	31904	2.313534	.8207859	1	4

Table 9 – Descriptive statistics for the variables used in the Macro Models:

Variable	Obs	Mean	Std. Dev.	Min	Max
SL	32	6.960625	.9650537	5.2	8.24
HLY	32	52.77038	8.902868	36.5031	63.69765
lnGDP	32	2.664687	.5947403	1.55	3.7
Unem	32	8.29425	4.057113	1.982	16.4
Inf	32	5.39875	7.505766	-1.76	33.29
Cpo_QI	32	2.375313	.3262987	1.81	2.98
GovDo	32	.8028516	.1597235	.50025	.98075
belong	32	1.155	.8844864	.12	3.24

Table 10 – Correlation matrix for the variables used in the Macro Models:

	SL	HLY	lnGDP	Unem	Inf	Cpo_QI	GovDo	belong
SL	1.0000							
HLY	0.9854	1.0000						
lnGDP	0.8225	0.8873	1.0000					
Unem	-0.6630	-0.6433	-0.5871	1.0000				
Inf	-0.4380	-0.5007	-0.6045	0.0263	1.0000			
Cpo_QI	-0.6208	-0.6360	-0.6468	0.4443	0.1151	1.0000		
GovDo	0.7105	0.7708	0.9136	-0.5319	-0.5887	-0.6927	1.0000	
belong	0.6646	0.6849	0.6303	-0.4946	-0.3139	-0.4673	0.5839	1.0000

Table 11 – Estimation results for the Macro Models:

OLS Estimation of MaM1

regress SL lnGDP

Source	SS	df	MS			
Model	19.5322182	1	19.5322182	Number of obs =	32	
Residual	9.33896873	30	.311298958	F(1, 30) =	62.74	
Total	28.8711869	31	.931328611	Prob > F =	0.0000	
				R-squared =	0.6765	
				Adj R-squared =	0.6657	
				Root MSE =	.55794	

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnGDP	1.334651	.1684925	7.92	0.000	.9905429	1.678758
_cons	3.404198	.4596858	7.41	0.000	2.465395	4.343002

OLS Estimation of MaM2

regress SL lnGDP Unem Inf

Source	SS	df	MS			
Model	21.0196626	3	7.00655421	Number of obs =	32	
Residual	7.85152433	28	.280411583	F(3, 28) =	24.99	
Total	28.8711869	31	.931328611	Prob > F =	0.0000	
				R-squared =	0.7280	
				Adj R-squared =	0.6989	
				Root MSE =	.52954	

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnGDP	.9764821	.2881311	3.39	0.002	.3862722	1.566692
Unem	-.0732401	.0336583	-2.18	0.038	-.1421859	-.0042942
Inf	-.0084971	.0184877	-0.46	0.649	-.0463674	.0293733
_cons	5.01195	1.06472	4.71	0.000	2.830971	7.19293

OLS Estimation of MaM3

regress SL Cpo

Source	SS	df	MS			
Model	11.1252703	1	11.1252703	Number of obs =	32	
Residual	17.7459167	30	.591530557	F(1, 30) =	18.81	
Total	28.8711869	31	.931328611	Prob > F =	0.0002	
				R-squared =	0.3853	
				Adj R-squared =	0.3649	
				Root MSE =	.76911	

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Cpo_QI	-1.835942	.423343	-4.34	0.000	-2.700524	-.9713607
_cons	11.32156	1.014722	11.16	0.000	9.249224	13.3939

OLS Estimation of MaM4

regress SL GovDo

Source	SS	df	MS			
Model	14.5756898	1	14.5756898	Number of obs =	32	
Residual	14.2954971	30	.476516571	F(1, 30) =	30.59	
Total	28.8711869	31	.931328611	Prob > F =	0.0000	
				R-squared =	0.5049	
				Adj R-squared =	0.4883	
				Root MSE =	.6903	

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
GovDo	4.293041	.7762282	5.53	0.000	2.707771	5.87831
_cons	3.513951	.6350311	5.53	0.000	2.217044	4.810857

OLS Estimation of MaM5

regress SL Cpo GovDo

Source	SS	df	MS	Number of obs = 32		
Model	15.4928806	2	7.7464403	F(2, 29)	=	16.79
Residual	13.3783063	29	.461320908	Prob > F	=	0.0000
				R-squared	=	0.5366
				Adj R-squared	=	0.5047
Total	28.8711869	31	.931328611	Root MSE	=	.67921

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Cpo_QI	-.7309542	.5183963	-1.41	0.169	-1.791194	.3292853
GovDo	3.258584	1.059031	3.08	0.005	1.092623	5.424545
_cons	6.08071	1.924606	3.16	0.004	2.144448	10.01697

OLS Estimation of MaM6

regress SL belong

Source	SS	df	MS	Number of obs = 32		
Model	12.7520569	1	12.7520569	F(1, 30)	=	23.73
Residual	16.11913	30	.537304335	Prob > F	=	0.0000
				R-squared	=	0.4417
				Adj R-squared	=	0.4231
Total	28.8711869	31	.931328611	Root MSE	=	.73301

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
belong	.7251338	.1488463	4.87	0.000	.421149	1.029119
_cons	6.123095	.2152821	28.44	0.000	5.683431	6.56276

OLS Estimation of MaM7

regress SL Unem Inf Cpo belong

Source	SS	df	MS	Number of obs = 32		
Model	21.5536215	4	5.38840538	F(4, 27)	=	19.88
Residual	7.31756542	27	.271020942	Prob > F	=	0.0000
				R-squared	=	0.7465
				Adj R-squared	=	0.7090
Total	28.8711869	31	.931328611	Root MSE	=	.5206

SL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Unem	-.0984832	.0279234	-3.53	0.002	-.1557773	-.0411891
Inf	-.0416637	.0132839	-3.14	0.004	-.06892	-.0144073
Cpo_QI	-.878517	.3373645	-2.60	0.015	-1.570732	-.1863022
belong	.2392798	.1358385	1.76	0.089	-.0394377	.5179973
_cons	9.812786	.8642275	11.35	0.000	8.039537	11.58603