FREEDOM OF CHOICE IN A WORLD OF BOUNDEDLY RATIONAL AGENTS

Remarks about the light paternalistic policy implications of behavioral economics

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Abstract: Behavioral economics discussion of light or libertarian paternalism advocates it is possible to improve decision making without attempting to freedom of choice. In the present paper we scrutinize arguments in favor and against light paternalistic interventions in savings and retirement domains in order to weight costs and benefits outlined in the debate. We move forward with the notion that boundedly rational agents do not make an indisputable case for intervention and argue that further debate and research has yet to be developed so as to prevent policies from being mistakenly calibrated.

Key-words: Light Paternalism; bounded rationality; freedom; welfare; behavioral economics.

1. Introduction

There is a long-standing methodological tradition stating that economics is a positive science that remains silent about policy issues and the complex determinants of human ends, values and motives. Yet many challenges posed to mainstream neoclassical economics have inspired contemporary behavioral economists to develop alternative models of choice that better explain why and in what contexts individuals might select courses of action or consumption alternatives, which are regarded as biased or not fully rational.

Some empirically grounded sources of suboptimal behavior such as biased probabilistic judgments and conflicting (time, risk and social) preferences suggest that there is room for improving the quality of individual choices and eventually reforming mainstream welfare economics. Accordingly, the behavioral economist's proposal of *light paternalism* draws on the idea that it is possible (and desirable) to influence people's decision-making so as to make them better off without any harm to their freedom of choice and autonomy (Thaler and Sunstein 2003, Thaler and Benartzi 2004, Loewenstein and Haisley 2008).

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The departure point of this article is the conjecture that economic analysis informed by insights from psychology and sociology is changing the face of current economics to a systematic body of knowledge that necessarily comprises science and art (economic policy). Based on experimental evidence that framing effects, status quo bias, default rules, self-control problems, and loss aversion shape actual choice outcomes in systematic and predictable manners, the current paper presents and scrutinizes the behavioral economists' arguments for and against light or libertarian paternalism. This is because we aim to weigh out its outlined costs and benefits.

More specifically, this paper attempts to challenge the increasingly popular view among behavioral economists that boundedly rational agents, who sometimes fail to make choices that are in their best interests, make an indisputable case for soft paternalistic policies. Rather, it advances the thesis that bounded rationality sheds extra light on the problems associated with design and implementation of paternalistic policies removed from cognitive biases (Glaeser 2006). In order to accomplish this task, the remainder of the article is organized as follows.

Section 2 is devoted to addressing two important conceptual (normative) issues related to freedom (of choice) and bounded rationality. Our hunch is that this is a necessary step to a thorough analysis of paternalism and its relationship with the instrumental value of freedom as well as with its intrinsic one. In section 3, pro-light-paternalism arguments are introduced and scrutinized. Section 4 discusses, in turn, some objections and worries constituting the debate over paternalistic policies. Section 5 analyzes existing welfare measures that inspire evaluations of (paternalistic) interventions and goes on to propose a diversified measure set to assess the normative implications of light paternalistic policies within the domain of intertemporal consumption, such as self-binding commitment saving for tomorrow's schemes. Section 6 wraps the overall argument up and concludes.

2. Freedom of Choice and Bounded Rationality

Freedom of choice is highly valued among economists and other social scientists. Not only does it provide the means to achieve many human ends like happiness and well-being, but also seems to be an end in its own right (i.e. it has an intrinsic value). It is no exaggeration to suggest that the very idea of making rational choices depends on freedom. This is because it is thought to give individuals the opportunity to pursue (and reveal) their goals, values and objectives (Sen, 1988). In his famous essay entitled 'On Liberty', John Stuart Mill suggests that "most of our human faculties of perception, judgment, discriminative feeling, mental activity,

and even moral preference, are fully exercised in making a choice" (1859, chapter 3, paragraph 3).

Most economists focus attention on the instrumental value of freedom of choice and often accounts for it in terms of the number of options or alternative courses of action (consumption bundles) over which an individual can choose or command. Amartya Sen (2004) dubs the standard interpretation of freedom, which depends on the number of choice alternatives - a 'cardinal perspective'. He goes on to call it into question. This is because it implies that the degree of freedom a person has depends only on the number of choice options he or she faces. If this is so, freedom associated with the choice over a set X of three difficult alternatives ('to be tortured till death', 'to be burned alive' and 'to be put in a gas chamber') is just the same as that involving another set Y containing three good options ('to win in the lottery', 'to receive a wonderful flat', 'to be given a very expensive car'). It seems rather intuitive that our assessment of freedom will also be shaped by what each option in sets X and Y means to individual's values and potential well-being. With this in mind, we are led to suggest that we need to go beyond the observation of alternatives within choice set.

An improved account of freedom of choice might address the questions of whether and what diverse agents in terms of natural, social and personal features can actually choose (Sen 1988, p.278). We might start by exploring Isaiah Berlin's (1969) conceptual treatment of freedom. In the philosopher's perspective, people often concentrate efforts on the 'negative' dimension of freedom rather than its 'positive' one.

Negative freedom refers to absence of a class of constraints, obstacles or prohibitions that an individual or state can impose on another. Positive freedom of choice, in turn, has to do with the extent to which a person has the chance to fulfill her potential or opportunity to achieve whatever she values highly. In a few words, negative freedom amounts to 'freedom from', whereas positive freedom means 'freedom to'. To our minds, the vision of 'negative freedom' is more widespread and investigated in the economic literature. Yet 'positive freedom' sheds much light on the essence of what freedom of choice is truly about. This idea gives extra plausibility when we remember that freedom of choice is also related to the individual's capabilities for pursuing some basic liberties (e.g. being well nourished, avoiding mortality, being able to move freely, having time for education and leisure). If this is so, better nourished and educated individuals are 'freer to make better choices' than starving, fearful, unhealthy,

and illiterate ones.[1] The above remarks accompanied by a discussion of the broad concept of bounded rationality will guide our assessment of the debate over the pros and cons of paternalism in a world of boundedly rational agents.

Behavioral economists follow Herbert Simon's broad usage of the concept of bounded rationality (henceforth: BR). The latter is often contrasted with the neoclassical economic approach to choice behavior, which is in turn built on the (expected) utility maximization hypothesis.[2] This allowed for at least three important interpretations: (a) maximization under constraints; (b) irrationality; and (c) toolbox of heuristics shaped by individual cognitive facilities and structure of environment.

Most economists seem to interpret BR as synonymous of constrained optimization or irrationality. The first interpretation is based on the idea that individual choices differ from the model of perfect rationality because they are made under time constraints, actual agent's computational facilities, limited knowledge and costly information (Gigerenzer and Selten, 2002). In his writings of the late 1980s and early 1990s, Simon seems to reject this vision of BR because it is still committed to an Olympian picture of individual rationality. A second popular account of BR is in terms of experimental evidence against Bayesian probabilistic judgments and expected utility maximization hypothesis (Kahneman, Slovic and Tversky 1982, Thaler 1991). Although, a broad notion of BR accommodates the empirical fact that individuals' usage of heuristics can lead to biased or suboptimal behavior, we are more inclined to view BR in terms of Simon's metaphor of pair of scissors (1990, p. 7). In this third interpretation of BR, behavior is shaped by agent's computational facilities as well as by the structure of the environment (Gigerenzer et al 1999). One of us wrote elsewhere about what this account implies:

> One interesting implication… concerns the evaluation of two complementary routes to the study of (human) bounded rationality. On the one hand examining the mind's architecture with the hope of capturing the principles that govern decisions in the real world; on the other hand, studying what lies outside the mind – the environmental blade – that exert influence on proximate mechanisms for behavior (Muramatsu and Hanoch, 2005, p. 210)

The relative advantage of the third version of bounded rationality is that it recognizes that individuals try hard to economize on their limited computational (cognitive) capabilities by relying on various heuristics and rules of thumb to make judgments and decisions. These

[1] For further details about the interconnections between freedom, rationality and capabilities, we strongly suggest Sen's (2004) book.

[2] Even Simon recognized that the concept of BR is used in an ambiguous manner (1992, p. 18)

theoretical ideas are in tune with empirical evidence that under some contexts individual probability inferences deviate from Bayesian rules and (expected) utility theory. Behavioral economists offer compelling evidence that boundedly rational agents' choices are influenced by small changes in context, default rules, legal and organizational rules and sensitive to framing effects and inertia (Thaler 1992, Thaler and Sunstein, 2003).

As a result, we can conclude that boundedly rational individuals sometimes fail to make choices that are in their best interests. This gives room for attempts to overcome suboptimal behavior by means of paternalistic measures. The latter are thought to help individuals to improve the quality of individual choice by 'debiasing' individual's perception of the decision-making task.

3. Economists as therapists: arguments for soft paternalism

According to the philosopher Gerald Dworkin, paternalism can be defined as "interference with a person's liberty of action justified by reasons referring exclusively to the welfare, good, happiness, interests or values of the person" (1972, p. 65). In a sense, paternalism can be regarded as an affront to agent's autonomy and freedom of choice because it prohibits people from doing what they opted for or at least shape the ways in which individuals arrive at their decisions. We can think of two versions of paternalism, a weak or soft version and a hard one.

Soft paternalistic measures are justified in terms of the view that the person towards whom we act paternalistically is not competent due to ignorance, irrational propensities, deficiencies in cognition and emotional dispositions. Hard paternalism involves the view that interferences with individual's freedom of choice are legitimate even when individual action is reflected, deliberate and voluntary (Dworkin 1995). Behavioral economists might be inspired by the concepts of positive freedom as well as bounded rationality so as to endorse only a light version of paternalistic policies. In his already cited essay, Mill offers a good example to stress the difference between acceptance of soft paternalism and denial of a strong type. In his own words,

> If either a public officer or anyone else saw a person attempting to cross a bridge which has been ascertained to be unsafe, and there were no time to warn him of his danger, they might seize him and turn him back, without any real infringement of his liberty; for liberty consists in doing what one desires, and he does not desire to fall into the river (…) Nevertheless… no one but the person himself can judge of the sufficiency of the motive which may prompt him to incur the risk: in this case, therefore… he ought, I conceive, to be only warned of the danger; not forcibly prevented from exposing himself to it (On Liberty, chapter 5, paragraph 5).

Similarly to Mill's above ideas, behavioral economists' defense of soft paternalism seems to be based on the premise that people sometimes need a little help in the economic decision making process in order to approximate their behavior to maximizing standards. Loewenstein and Haisley (2008, p. 213) maintain that it is possible to improve decision making without restricting it. In other words, behavioral economists try to influence some people's decision-making without prohibiting people to do whatever they value or damaging their autonomy. To them, interferences serve to provide information or to point out defects or biases in agents' rational judgments.

In a nutshell, the light paternalistic psychological economist's goal is to use behavioral conceptual tools to overcome individual cognitive limitations and/or emotional and affective dispositions that sometimes lead to distorted and even self-destructive patterns of behavior (Camerer et al, 2003; O´Donoughe and Rabin, 2003; Loewenstein and Haisley, 2008). We now turn to presentation and scrutiny of the arguments for soft paternalistic interferences within the economic domain of intertemporal comsumption.

We summarize the main pro-light-paternalism arguments: (a) sub-optimal choices are recurrent and economically relevant; (b) agents are aware of their cognitive limitations and accept self-binding commitment strategies; (c) the argument of the planners´ cold visceral states and doers' hot state; (d) choices are sensitive to framing and inevitably rely on default rules; (e) interferences are conducive to lower transaction costs ; (f) the argument of economical policy design; (g) individuals are free to opt out; (h) validation and verification requests.[3]

It is possible to observe a number of questionable (sub-optimal) savings decisions. A general phenomenon of low individual savings rates has been detected in various important countries. The decreasing savings rates over time threaten many economies' potential for investment, technological innovations and sustainable growth (Thaler, 1994; World Bank, 1999). Bernheim (1993) estimated that the baby boom generation was saving only a third of what is necessary to maintain their consumption in retirement. To complicate matters, important financial innovations and expansion of credit markets enhanced the complexity of intertemporal

[3] Some of the listed arguments were extracted from recent literature (Thaler, 1994; Camerer et al, 2003; O´Donoughe and Rabin, 2003; Thaler and Sunstein, 2003; Ashraf et al 2003; Loewenstein and Haisley, 2008) and some of them were raised by the authors.

consumption choice task, gave rise to self-control problems and provided new incentives for overindebtedness (Kennickell et al, 1997; Bucks et al, 2006; Akerlof and Schiller 2009). [4]

Empirical findings suggest that many people prefer to improve over time their intertemporal consumption trajectories (Loewenstein and Sicherman, 1991; Frank and Hutchens, 1993). Such results might reveal that individuals' low savings decision profiles result from cognitive limitations like hyperbolic discounting, bounded willpower, fallacious statistical reasoning and an undervaluation of future wants and tastes.

In the specific case of retirement choices, suboptimal outcomes are observed when considering that many people do not take advantage of the employers´ match in the company´s retirement programs. After age 60 take-up rates of the employers´ match are decreasing (Choi et al, 2005), despite the fact that people face no penalties for IRA withdrawals from that point. As many economists say, money is practically left on the table. Duflo et al (2005, p.23) affirms that in general people are "very far from taking full advantage of what could have been perceived as a "free lunch" opportunity".

Paternalistic policies related to savings decisions might be also legitimized by the fact that "people make better choices in contexts which they have experience and good information" (Thaler and Sunstein, 2003, p. 5). Yet people do not have the opportunity of experiencing over and over retirement and savings decisions. Neither are they able to make optimal estimates about probabilities and utilities of future outcomes. They tend to draw inferences about their future values, goals and utilities based on their current visceral states.[5]

Many people acknowledge that they should be saving more for retirement than they actually do. Systematic patterns of dynamically inconsistent behaviors are perceived by light paternalists as a motive to intervene. Loewenstein and Haisley (2008) advocate that just like a psychotherapist who regards his client professed desire as useful information, economists should also take into consideration agents´ preferences over a wealthier future. Since individuals know that their choices are distorted by myopia, inertia, weakness of will, they will probably be ready to agree on (and even appreciate) credible commitment devices and interventions to help them choose in their long run best interests. These ideas yields support

[4] The average American household has approximately $8,400 worth of credit card debt. (Loewenstein and Haisle, 2008, p. 3). And according to Meier and Sprenger (2007, p. 2) "in the last decade, the median debt burden for credit card borrowers increased by 100 percent in nominal terms, rising from $1,100 in 1995 to $2,200 in 2004…in line with this growth is an increase in the number of people seeking credit counseling—a possible indication that many individuals see their own level of debt as suboptimal".

[5] "When people have a hard time predicting how their choices will end up their lives, they have less to gain by numerous options and perhaps even by choosing for themselves." (Thaler and Sunstein, 2003, p.38)

by studies showing that many clients desire a savings plan with built-in illiquidity (Wright, 1998; Vonderlack and Schreiner, 2001; Matin, 2002; Ashraf et al, 2003) so that they can engage in intertemporally consistent patterns of behavior.[6]

The planner`s cold state and his assessment to information processing resources are another argument in favor of light paternalism when it comes to complex and important decisions as retirement ones. People seem not to enjoy the process of choice in technical areas and tend to appeal to thumb rules and heuristics in order to facilitate the decision process. The doer´s hot state prompts the agent to overestimate current gratification disturbing the already difficult attempt to foresee future outcomes and especially future preferences. Once the planner is not under such visceral influences he may at least better outline possible outcomes of different courses of action.

The idea that boundedly rational agents' choice are inevitably shaped by default and framing options also makes a case for soft interventions. Thaler and Sunstein (2003) go on to claim that legal definitions make some kind of paternalism inevitable. Consumers, workers, and citizens rights ought to be defined, and the default rules implicit in these legal agreements will interfere in decision making in a non negligible fashion. Indeed, experiments highlight that the default rule exerts a dominance effect on agents´ decisions, which can inspire paternalistic policies. As soon as the design of savings programs is concerned, simple changes in the default rules from "opt-in" to "opt-out" made enrollments jump from 49% to 86% (Madrian and Shea, 2001). Others studies like Choi et al (2001) and the Save More Tomorrow Program found similar results. The default contribution rates established in the plan were also somehow sticky, which is congruent with the power of suggestion. If default options in many contexts cannot be avoided, and if they play major roles in production of choice behavior, then light paternalists defend this should be explored in order to benefit individuals.

As well as default options, framing options cannot be easily avoided. This inevitability makes a case for justified intervention, once the interference may just alter and not produce an impact on choice. Several studies concluded that framing can significantly affect savings choices. Many individuals behave as if money (wealth) were not fungible and create mental accounts with different marginal propensities to save (Madrian and Shea, 2001; Ashraf et al, 2003; Thaler and Benartzi, 2004; Duflo et al, 2005; Bertrand et al, 2005). Thereby, the frame may lead a person

[6] Even in economies like United States with developed financial markets and low transaction costs these findings remain (Ashraf et al, 2003).

to conduct the money to a different mental account, interfering in the probability of that amount being saved rather than consumed.

As a result, the task of designing savings programs should therefore comprehend these mental accounting insights that shall contribute to increase the framing efficacy on improved intertemporal consumption decisions. If choice naturally presents a frame, knowing that it is easier to save (i.e.) from lump-sum payments or from predictable semi-annual bonuses than from regular income may help planners to increase savings rates (Ishikawa and Ueda, 1984; Ashraf et al, 2003).

In the particular case of savings commitment programs, soft paternalistic measures that serve to define effective default options might also contribute to a decrease in transaction costs to the extent that they enable planners to overcome cognitive limitations, inertia and procrastination dispositions, status quo bias and to improve the quality of their intertemporal consumption choices. Examples of features that decrease transaction costs for savings decisions can be seen in: automatic transfers to savings accounts; automatic reductions from paychecks to savings accounts; automatic increases in pension fund contribution levels; and the use of deposit collectors (Ashraf et al, 2003).[7]

In addition, some light paternalistic savings policies allows for considerable reduction in government expenditure. Proposals just like automatic enrollment in retirement plans and Save More Tomorrow program carry much more effective (and economical) incentives than tax cuts (Thaler and Sunstein, 2003). Likewise, inspired by a creative savings program, Laurence Kotlikoff (1992) argues that every American worker should receive annual reports from social security administration containing projected benefits of their retirement plans. This allows for the activation of a principle of salience, which would help individuals to estimate their future preferences.

The idea is that individuals will increase their contribution levels once they are informed that their current transfers are insufficient to yield a smooth consumption trajectory after retirement. Kotlikoff (1992) proposed that annual social security reports enable individual planners to anticipate future outcomes more effective and eventually to select the best possible way of achieving their future wellbeing. This sort of light initiatives based on psychological incentives and informational approaches are much more inexpensive than monetary incentives for government.

[7] The usage of deposit collectors does decrease transaction costs, although it increases financial costs.

Behavioral economists also justify paternalistic policies based on the idea that individual autonomy (i.e. capacity of individuals to define the kind of life they want to have and to pursue the goals their value) is not damaged when agents have the right to choose whether or not they commit themselves to a savings program. Putting it somewhat different, an individual's right to 'opt out' serves as a freedom of choice warranty. The idea is to preserve freedom of choice while helping boundedly rational individuals to improve the quality of their choices. Thaler and Bernatzi (2002) for example, perceived that when workers compared return distributions of three alternative retirement plan portfolios (one of which was their own) with a median portfolio of their co-workers, they preferred the median portfolio. And Thaler and Cronqvist (2003) found that individually chosen retirement plan portfolio had an inferior return rate compared to the default option. The foregoing empirical results suggest that freedom of choice not necessarily lead to satisfactory outcomes.

Finally, we can think of another related argument for light interferences. It concerns the possibility of using improved informational and feedback mechanisms to investigate the significance and impact of light paternalistic policies on actual individual savings decisions. Behavioral economics emphasize that designing proper savings (pilot) programs are important for long term results of such initiatives (Matin, 2002; Ashraf, 2003).

In what follows, we again appeal to a Millian perspective on human liberty and Dworkin's (1995) analysis of autonomy and paternalism so as to claim that bounded rationality and positive freedom do not make an indisputable and inevitable case for paternalism. We hope to challenge Thaler and Sunstein's view that criticisms of light paternalist are incoherent.

4. Challenges to paternalistic proposals

Despite the growing popularity of expanding the scope of psychological economics toward design of policy devices that improve the quality of individual intertemporal choices, it is important to raise some difficulties that largely explain why some economists hesitate to deviate from the vision that the scientific scope of economics is positive economics. The latter amounts to a set of systematized knowledge concerning "what is" and as such it remains independent of any particular normative positions or judgments of individual ends. In our understanding this is due to a long liberal tradition that John Stuart Mill well represents. If we go back to his essay On Liberty, we can understand some of the arguments against paternalism as well as some exceptions calling for soft interferences with the freedom of choice of children and those with impaired judgment capabilities.

Mill just like other adherents of the liberal tradition of economics (Friedman, Hayek, among others) takes paternalism as an affront to individual autonomy and free will. His commitment to freedom of choice is premised on the idea that free choice offers the only credible means by which agents can have the chance to advance their faculties of judgment and decision-making. To his mind, interferences are only legitimate if they serve to correct mistakes about facts, not values. In this case, if a person still opts for a suboptimal course of action, her free will ought to be respected. Libertarian economists might accept interferences only to enable the person to figure out her decision task. For instance, if someone knows that a bridge is damaged and still wants to cross it (she wants to kill herself); she must be allowed to proceed. We doubt that this is exactly the same thing that Thaler and Sunstein (2008) are proposing to interfere with individual decision-making when autonomy and information do not suffice for production of good choices.

Critics of behavioral economic paternalistic policy implications also raise a similar line of reasoning. Sugden (2005) and Klick and Mitchell (2006) emphasize the inherent value of freedom of choice and autonomy.[8] People should have the right to make their own choices and learn from their previous mistakes. In response to that, behavioral economists draw attention to the fact that some important decisions like saving for tomorrow have far-reaching consequences (which cannot be easily anticipated by boundedly rational agents) and people cannot wait to learn from previously mistaken choices.

A second related source of objection to the prospects of paternalistic measures has to do with the very notion of bounded rationality. Opponents of paternalism properly emphasize that policy makers and experts are also boundedly rational agents. Therefore, there are no compelling grounds for suggesting that they might help people to make choices that are in their best interests. In a very eloquent manner, the Austrian economist Friederich Hayek argues that his strong defense of human autonomy and objection to paternalistic moves draws on his awareness that human knowledge is fragmented, limited and therefore fallible. He goes on to suggest that "*man on the spot* cannot decide solely on the basis of his limited but intimate knowledge of the facts of his immediate surroundings" (1945, p. 5).

Overly enthusiastic behavioral economists do not emphasize that many of interventions by boundedly rational experts, policy makers and planners might be conducive to inferior

[8] We borrow Gerald Dworkin's conceptualization of autonomy. The latter refers to the human ability to reflect and decide how to pursue her own good and eventually what it is best for herself.

outcomes because they are not free from cognitive biases and limitations. This poses a serious problem. Paternalistic attempts can give rise to behaviors biased not only by their own cognitive capabilities but by other people's biased judgments about what ought to be pursued or valued. With this in mind, Edward Glaeser (2006) claims that economic decision making inevitably deals with errors, due to psychological biases and cognitive restrictions.

As a result, paternalistic interferences can make individuals to be worse-off. This might be at least partly so because policy makers do not have the same incentives as individuals to select for the best possible course of action. Perhaps individuals have more incentives to make good savings choice for themselves than anyone else.[9] Remember that arguments for light paternalism rest on the premise that the interference will make people better off or shall even protect them from harm. Then, recognizing planners´ bounded rationality help raise doubts about interferences with individual freedom of choice and autonomy. In addition, people have more salient incentives to make good savings choices than others like voting. This leads us to consider the question of 'who the planner is' matters for assessment of final outcomes (Glaeser 2006). [10]

A third worry about paternalistic policies concerns the fact that experts and policy makers, willing to help individuals to make better choices, are not clearly disinterested parties. If this is so, interferences with individual freedom of choice might lead to unintended errors (due to bounded rationality) as well as intentional ones. We regard regulatory capture as a non-desirable consequence of paternalistic interventions (O´Donoughe and Rabin, 2003). The underlying idea is that well organized groups are particularly interested in pushing bureaucrats to select policy measures that suit their own interests (to the detriment of the common good and collective well-being). By bribing and financing political campaigns some pressure groups are able to influence the planners' decision-making in a rather effective way. Glaeser asserts that this possibility sheds light on the risks of paternalism "given how attractive it is to use persuasion for political advantage" (2002, p. 156).

Concerning paternalistic measures to improve the quality of savings decisions, some considerations are worth making. Thaler and Cronqvist (2003) designed a retirement plan that

[9] Note that we are not saying that they make the best saving decisions, but an individual *everything else hold constant* do have stronger incentives than a planner to approximate his choices to maximization standards once he is the one who is going to experience the pleasurable outcomes from his decisions.

[10] The authors avoid using the term *optimal paternalism* (O´Donoughe and Rabin, 2003), because faced with the planners bounded rationality, associating an optimality concept to paternalist policies seems not plausible.

allowed market competition for investment funds. Yet the critical reader ought to recognize that this can be an exception. It is very likely that once suppliers of savings products identify efforts to design and implement savings policies, they might be ready to compete for privileges and rent-seeking activities that follow regulatory capture. Moreover, there are countries where public retirement plans are offered by the government and the private sector. Under such institutional settings full of asymmetric information, regulatory capture is the rule and government can even impose compulsory savings schemes in order to finance their expenditures and unbalanced budgets.[11]

Thaler and Sunstein, (2003) acknowledge the risk of regulatory capture, yet they try to downplay this problem by suggesting that a libertarian check on bad plans would do the job. We are not convinced by that. Everything depends on features of the institutional environment and the incentives they offer to those designing, implementing and monitoring effectiveness of interventionist policies. To complicate matters, regulatory capture can happen as well through rather subtle ways. It might involve belief manipulation.

Individuals are extremely subject to social influence, information frames and suggestion (Asch, 1952; Thaler and Sunstein, 2003; Glaeser, 2006).[12] Firms and well organized groups may spend money to change public opinion, biasing decisions in their own interests (which need not be identical with most consumers'). Thaler and Cronqvist (2003) showed that the Sweden privatized social security system was successful in framing people's judgments and this shaped their portfolio towards an active choice. After massive advertising, 66.9% of the participants made actively their savings decisions. The empirical results were impressive considering that without advertising efforts only 10% or less chose their own portfolio (the others are allocated in the default plan) and shed light on the significant roles of inertia, status quo, and default rules in production of intertemporal behaviors.

Yet Thaler and Cronqvist admit that the plan turned out to be unsuccessful once the median return rates of the default option turn out to be higher than the median return rates of the actively chosen portfolio. In another experiment, Esther Duflo and collaborators (2005) suggest that a tax professional advice (a frame) also affected individual savings decisions. Given how

[11] Its true that not necessarily (and maybe for many cases not advisedly) the planner will be a governmental agent. Nevertheless large scale programs that change default and other rules by law definitions may need governmental political approval, opening the door for interferences, bargain and governmental regulatory capture.

[12] In Asch´s experiment (1952) one third of the participants changed their opinion about a simple comparison of "which line is shorter" in face of group pressures. This experiment has already been replicated throughout the world and found the similar result that peers can manipulate opinions.

interesting is for economic subgroups to use framing to manipulate beliefs these considerations insinuate the possibility of policies being mistakenly calibrated. One interesting implication is that experimental research sheds extra light on our favorite interpretation of boundedly rational behavior as a result of joint work of what lies within an individual's mind (information processing brain) and what is within the natural and social environments where decision tasks are perceived and occur (Gigerenzer and Selten, 2002).

We can also raise doubts about whether paternalistic interventions are able to decrease transaction costs by offering more benefits than costs to decision makers. Not only does this amount to an empirical question, but also depends on what we take as a benefit or good to people. Behavioral economists often emphasize as gains things like a wealthy retirement, long life, healthy conditions that outweigh the cost of short time autonomy loss. However, what people understand to be "good" might vary. Some may value highly items neglected by paternalists, such as "being respected as independent and responsible agents that have the right to decide for themselves" (Dworkin 2005). With regard to the design of savings and retirement programs, procedural and substantive constraints just like withdrawal amount, period and fee are thought to bind individuals in their savings decisions. Nevertheless, we still have no compelling grounds for claiming that these constraints on individual freedom of choice facilitate people's efforts to achieve what they value the most over time.

Not only increasing transaction costs is a source of preoccupation but we also anticipate psych costs resulting from paternalistic interventions. Loewenstein and O´Donougue (2006) stress that presenting widespread phenomena like overindebtedness, obesity and undersaving as "undesirable" might impose a psych tax on those individuals, who previously opted for courses of action conducive to the abovementioned suboptimal outcomes. Campaigns against obesity already have the effect of turning eating into a shameful exercise that produces guilt. This kind of framing may hurt one's autonomy and free will to the extent that it conveys the message that a certain pattern of choice behavior is improper and condemnable. Given that this type of psychic tax provides no concrete source of revenue, it can be regarded as a non-negligible deadweight loss effect of some instances of paternalistic projects of intertemporal choice architecture.

As Glaeser rightly put it, it is not easy to control and establish a limit to paternalistic interventions (by the state or private sector) because those in charge are always ready to violate linguistic boundaries (2006, p.151). Some attempts to influence people's decision-making in the direction of optimal choice behaviors often violate individual's autonomy. This is

because most of them depend on general presumptions that do not necessarily apply to certain individuals with particular preferences, motives and values.

A Millian perspective on freedom also draws attention to the fact that there is no clear boundary between soft and hard paternalism. As soon as economists engage in value judgments and have the chance to recommend what is the best for other people (regardless of their competences), strong interferences are more easily justified. This can open the door to mandatory interventions.[13] We take Singapore's Central Provident Fund (CPF) as an example of effective savings program that is clearly an affront to individual freedom of choice (Akerloff and Shiller, 2009; Loke and Cramer, 2009). In that setting, individuals are obliged to contribute monthly to CPF, and are only allowed to withdraw some money after saving a minimum sum for medical and retirement accounts[14]. The success of compulsory savings schemes just like CPF inspire some interventionist ideas that in our opinion can perform very poorly in certain social environments.

Finally paternalistic designs can bring about unpredicted negative consequences. O`Donoughe and Rabin warn that a policy that helps some agents to avoid a common error may *hurt* those making another common error (2003, p.195). We doubt that boundedly rational policy advisers can identify all the possible mistakes they can make in particular institutional settings. This allows us to consider another important criticism of interference with agents' freedom of choice. Adherents of paternalistic policies often ignore that people are rather heterogeneous in their preferences, values, expectations and ways of life but must receive equal treatment and be allowed to exert the right to decide things for themselves.

Based on the foregoing difficulties, we are led to conclude that paternalistic policies need not be regarded as inevitable and objection to them as incoherent. We are more in agreement with those behavioral economists that recognize that their subfield is still in its infancy and remain hesitant to propose institutional reforms of far reaching consequences based on their psychologically more realistic models of choice.

[13] The case of cigarettes is a fine example. It began with activity framing, but as beliefs about smoking were changing, increased regulation and taxation policies arise. (Glaeser, 2006)

[14] The minimum amount in 2008 was approximately S$106.000 (S$-Singapore´s currency) or $72.780 (in US dollars), which means individuals could only withdraw a certain amount of money after they saved this minimum sum. (Loke and Cramer, 2009)

5. Welfare considerations associated with interventions in the individual's decision machinery

After scrutinizing arguments for and against paternalistic policies, we try to analyze some welfare measures and evaluation proposals that are often considered in the normative economic debate. Unless we have proper welfare measures to assess the effects of libertarian and paternalistic policies, the question of whether interferences will make individuals better off will remain partly unanswered.

The economic traditional welfare criterion (*decision utility*) cannot be used to evaluate these policies once it relies on the idea that better welfare indexes are related to satisfying people´s preferences to their maximum extent (given constraints). Yet psychologists and economists offer compelling evidence that under many contexts individuals make decisions that are not in their best interests. Some behavioral economists suggest that boundedly rational agents do not choose what is best for them and need help in order to do so. Some even go on to argue that their preferences cannot be considered as valid information. We take this as a rhetorical exaggeration.

The first welfare possible measure would be to use Kahneman´s concept of *experience utility* to evaluate empirically reported happiness before and after the intervention. However the problem is that people adapt very easily to either fortunate or unfortunate circumstances. Moreover, happiness scales are commonly influenced by current mood, weather and earlier questions on the survey. This lead us doubt whether the variation and the low responsiveness of happiness values are closely related to a specific light paternalism policy implementation.

Bernheim and Rangel (2008) propose '*valid choices'* be an alternative measure. They keep using *decision utility* but focus on the choices that are thought to be welfare informative. They suggest that valid choices be the ones that are not made under hot visceral states. Instead they are frequent and self officiated. Although normatively appealing, it is very unlikely that a planner or policy maker would be able to remove non-valid choices from the choice set. It is hard to identify which choices are made under hot states and to select empirical data that suit the welfare criterion. With regard to special decisions like retirements decision, the above criterion of frequent valid choices is hardly applicable.

Another suggestion similar to Benheim and Rangel´s proposal (2008) is the *informed decision utility* measure (Loewenstein and Ubel, 2008). The main idea is that decision makers are able to maximize their well-being once they are well informed - through labels, warnings and

informative campaigns. However, we doubt that this standard would suffice given the major roles of inertia, procrastination, status quo bias, strategic ignorance (among other cognitive heuristics and biases) in production of manifest behavior.

A forth possible welfare evaluation would be the capabilities approach (Sen, 1985, 1999; Nussbaum, 2000). This would be a normative theory of welfare, not an objective measure properly. The central claim is similar to one of the critics made to *experience utility:* people adapt. Provided that people adapt even to negative conditions, the main issue is not whether people can be made "happier". Rather the point turns out to be if planners or policy makers are ready to ensure individuals to exert their basic human rights and opportunities.[15] Due to the unclear boundary line between soft and hard paternalism, we do not think all behavioral economists will unconditionally rely on this wellbeing perspective or commit to such wellbeing measure.

Thaler and Sunstein (2003), for instance, defend that light paternalism policies be assessed in terms of a cost-benefit matrix. Camerer et al (2003) propose a looser criterion which would require that the net benefit must exceed costs imposed for all economic agents. Yet it is difficult to measure psychological costs and benefits. We are not sure whether it is possible to obtain non-disputable hedonic calculus measurement. This is because pains (costs) and pleasures (benefits) are perceived differently by individuals. To complicate matters, under some circumstances people might not reveal clear and well formed preferences. In this case, it is difficult to establish an objective measure of what to be better off means.[16]

As we can see, none of the abovementioned welfare measures seem sufficiently good to warrant improvements in individual decision-making. In response to that, Thaler and Sunstein (2003) suggest that three measures be taken. They are: market mimicking (doing what the majority would do if explicit choices were required); coerced choices (forcing individuals to make an explicit choice); chose an option that minimizes the number of opt-outs.

[15] The tricky part is that if someone concludes that individuals have the right to save enough to retirement, then mandatory savings actions as automatic transfers from paychecks to individual savings accounts, and automatic discounts from paychecks to public savings accounts (to withdrawal at later age or with restrictions only) may be legitimized. Central Provident Fund (CPF) of Singapore, is an example of mandatory savings programs that is legitimized by a normative claim that saving is needed.

[16] For example, if a person has never thought about her own retirement savings she may not be immediate influenced by the fact that she has no net savings for retirement. If a Save More Tomorrow program is launched in this hypothetical person´s workplace, and her savings are automatic increased over the years but she still continues not caring for retirement savings it would be quite hard to detect objective and subjective values that show she was made better off, although from a normative position anyone would agree she was.

In the case of savings and retirement plans the foregoing recommendations are questionable. The market mimicking suggestion does not resolve the problem of observed negative outcomes, given that majority of people have limited knowledge and bounded willpower. Coerced choice is an apparent solution when we lack good welfare measures. However, experiments offer evidence that coerced choices lead to smaller contributions to savings plans than those observed in saving schemes with opt-outs rules (Thaler and Sunstein, 2003).

Minimizing opt-outs appears to be a good evaluation tool to savings programs. Some critics affirm this proposal is not coherent. This is because we cannot rely on choice data to estimate individual time preferences once light paternalism main claim is that choices not necessarily coincide with welfare. But for the case of savings decisions we disagree there is incoherence, once we are talking about a future biased decision (not subject to the influence of hot states, salience and hyperbolic discounting). Choice data is questionable when it is observed preference reversal, but we do not see savers stating they should be consuming more for instance.

In sum, given that there are no indisputable welfare measures, policy evaluations in the specific case of savings and retirement interventions might be dependent on a combination of available *ex ante* and *ex post* accounts. E*x ante* treatments refer to self-officiating devices especially when inconsistency claims are related to individuals´ bounded rationality and limited self control. If people affirm they should be saving more, this may count as valid but not sufficient information. As *ex post* inferences different approaches should be applied together: as the attempt that minimizes opt-outs; the *informed decision utility* (through similar strategies as Kotlikoff´s letters – see page 10) and the *capabilities approach* (regarding the idea that people have the right to have easy access to safe, flexible, convenient, and affordable commitment savings products).

We emphasize that this is not a perfect or fully reliable measure, and shall not lead to unquestionable evaluation. But once we are still refining our capacity to detect psychological impacts and outcomes of policy intervention, this proposal might contribute to the analysis of already implemented policies. Indeed an expanded set of e*x post* measures are needed to accommodate the heterogeneity of individuals and many pieces of information about welfare and wellbeing. This might constitute a pluralistic bundle of techniques that serves to gradually build up normative behavioral economics. To our minds, behavioral economics should aspire to say something about important policy issues. Yet we think that the main obstacle to

achieving this goal is to exaggerate on the inevitability, coherence and benefits of paternalistic policy designs.

We are much in agreement with Mill's ideal that 'a man's mode of laying out his own existence is best not because it is best in itself, but because it is his own mode (1859, chapter 3). The greatest risk an interventionist policy may carry is denial of mankind fallibility. To the best of our knowledge, only cultivation of individuality and autonomy of boundedly rational agents can produce genuine human development. Otherwise, while good welfare measures are not developed, judgments of value may easily turn light paternalism into hard interventions.

6. Final remarks

Promoting individual (as well as social) welfare improvements is unquestionably an important goal challenge posed to the moral science of economics. Based on this conviction, this paper attempted to scrutinize the claims economists make in favor and contrary to interventionist (savings) policies in a world of boundedly rational agents.

The main lesson drawn from our research is that, despite the effectiveness of particular soft paternalistic policies, we are still in need of further investigations of when and under what environments we can justify tiny interferences with agents' decision-making task without harming their autonomy and freedom of choice. We doubt that we already have enough empirical techniques to measure the net payoffs of previously applied savings schemes or devices that could unquestionably lead to design and implementation of successful large scale programs. We suggested that the foregoing difficulties might be due to the fact that boundedly rational behavior results from the operation of two complementary paths: one refers to agent's mind (and their cognitive and affective capacities) and another is the environment (containing formal and informal institutions and organizations).

We hope that in the near future a growing number of applied studies will be made with the purpose of improving our understanding of the major causal roles psychological and institutional factors play in economic decision making, including those patterns regarded as suboptimal or at least not in tune with what we tend to consider outcomes that would be in the agent's best interest. Until now many blanks ought to be identified and filled so as to allow for a clear grasp of whether and how specific cognitive biases and self control problems are decisive in production of economically significant phenomena like overborrowing and small savings behaviors. We might also profit from listening to other economists' interpretations in

terms of distorted incentives provided by institutions and mistaken macroeconomic management strategies that give room for instances of moral hazard and adverse selection.

We warn the reader that the lack of perfect welfare measures challenges the view that light paternalism will bring human betterment with no serious harm to individual freedom of choice and autonomy. Proposals shall be carefully studied. We see no convincing grounds for claiming that any anti- light paternalist position is incoherent. Instead we take this as a rhetorical exaggeration or excessive enthusiasm about the potential of choice architecture. For the specific case of savings and retirement decisions, we are led to conclude that changes in default rules and framing options can guide policy reforms given that some individuals acknowledge their difficulties with planning and making choices of far-reaching consequences. Yet economists must remain hesitant to impose their own value judgments on others.

It seems to us that the success of savings programs like Thaler and Bernatzi's SMarT Plan offer interesting evidence that behavioral studies can inspire policy discussions. We insist on saying that there might be room for 'nudge' in a world of boundedly rational agents. Nevertheless, being able to influence (or nudge) individual decision making do not imply welfare superior outcomes.

The debate over freedom of choice for boundedly rational individuals is rather difficult. Economists, policy makers cannot say much about whether individuals prefer to give up their own values and autonomy on behalf a wealthier future and longer life. In addition, the boundaries between soft and hard paternalistic measures are rather blurred in the real world. With all the above in mind, we end saying that paternalism always face the risk of denying that human knowledge is fragmented and fallible.

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