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Scitovsky, behavioural economics, and beyond

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Scitovsky, Behavioural Economics, and Beyond

Maurizio Pugno

Abstract

By revisiting Scitovsky's work on well-being, which introduces 'novelty' into the consumer's option set as a peculiar source of satisfaction, this paper finds a number of connections with the recent behavioural economics so as to open new lines on inquiry. First, similarly to behavioural economics, Scitovsky used psychology to interpret sub-optimal choices. However, his welfare benchmark is different from rational choice, as understood by the economists, because 'novelty' implies a very strong form of uncertainty, as well as learning. Second, Scitovsky contributed to further elaboration of the two-systems framework put forward by Kahneman's recent book, which attempts to base behavioural economics on new foundations. Third, Scitovsky anticipated and contributed to specific analytical issues that have been studied in behavioural economics, such as the role of people's skill in uncertainty, the unpredictability of taste changes, and harmful addiction.

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“For the past fifteen years, I have been one of a handful of people who have tried to introduce psychology into economics. In one sense, we have been quite successful. Economists and psychologists are both now aware of the affinity between their two disciplines; and economic psychology as well as psychological or behavioral economics have become new fields” (Scitovsky, 1988, p.vii).

1. Introduction

Tibor Scitovsky’s book *The Joyless Economy: the Psychology of Human Satisfaction* (1992, and 1976 in its first edition)¹ shares two basic aims with recent behavioural economics: first, to “increase[...] the explanatory power of economics by providing it with more realistic psychological foundations” (Camerer & Loewenstein 2004: 3); second, to show that consumer choices may be systematically biased, i.e. consumers may tend to choose the options whose consequences are not the best for them. Both aims challenge the rational choice theory, as commonly understood by the economists. However, the research perspectives of Scitovsky and behavioural economics are quite different. Behavioural economics has developed around the study of a variety of deviations, sometimes called “anomalies” (Camerer & Loewenstein 2004; Fudenberg 2006), from rational choice, which is thus maintained as the welfare benchmark. By contrast, Scitovsky intended “to open a new field of enquiry” (Scitovsky 1992: 288) in welfare economics, and to revise the concept of rationality. In fact, he introduced ‘novelty’ in people’s choices as a source both of enjoyment and of a very strong form of uncertainty, being the outcome space incompletely known. The less ambitious aim of behavioural economics may be the reason for its success among economists, while Scitovsky has instead been relegated to being an isolated pioneer of behavioural economics (Angner & Loewenstein 2012). However, Kahneman (2003; 2011) has recently proposed a framework, called ‘two-systems of thought and judgment’, which suggests going beyond current research in behavioural economics, where also Scitovsky’s perspective may make a substantial contribution.

This paper, by reformulating Scitovsky’s analysis in the familiar terms of choice theory, shows how the research perspectives of Scitovsky and behavioural economics come close to each other, remain different, and may jointly suggest a more advanced line of

¹ For a detailed and historical account of Scitovsky’s thought see Earl (1992), Bianchi (2003), and Pugno (2011).

inquiry. As a second main aim, this paper discusses some issues raised by Scitovsky in his analysis of welfare – conceived as the “well-being of the individual person” (Scitovsky 1986: *ix*) – and that appear to have been taken up in behavioural economics. These issues concern uncertainty and skill, the unpredictability of future taste changes, and harmful addiction. Behavioural economics has studied these issues in some depth by providing new analysis and empirical evidence. But Scitovsky’s insights seem to be still unexplored in their most interesting aspects.

In the case of uncertainty and skill, behavioural economics obtains two results: that skill (called ‘competence’) in the specific field where choice is performed tends to make people ambiguity-seekers (Heath & Tversky 1991), where ambiguity is a strong form of uncertainty (Camerer & Weber 1992); and that the challenge component is preferred to the chance component of ambiguity (Klein et al. 2010). But Scitovsky referred to a ‘very strong’ form of uncertainty by introducing novelty in the option set, because people in this case may have limited knowledge of both the available options, and their competence in dealing with novel options (Scitovsky 1996: 599). Nevertheless, people may maintain a preference for novelty where also their emotions in searching for novelty play an important role (Scitovsky, 1992: 62). Therefore, Scitovsky and behavioural economics took a step closer to each other on the uncertainty issue, but other steps remain to be made.²

The second issue raised by Scitovsky and investigated by behavioural economics concerns unpredictability of people’s future taste changes, even if choices are made in certainty conditions. Scitovsky in fact argued that the preference for novelty may change by acquiring ‘consumption skill’, which means general mastery over one’s relationship with the environment and with others (Scitovsky 1992: 225-8). However, people find that future rewards from acquiring such skill are hard to predict, especially if compared to the case of investing in human capital through formal education (Scitovsky 1992: 231). Also behavioural economics has studied this issue, but with a focus restricted to the under-prediction of future taste changes irrespective of the underlying reasons (Loewenstein et al. 2003).

The third issue concerns harmful addiction. Both Scitovsky and behavioural studies (e.g. Herrnstein & Prelec 1992; O’Donoghue & Rabin 1999; Loewenstein 1999) regard harmful addiction as an evident failure of people in maximising their wellness because they

are affected by some form of myopia. This approach clearly departs from Becker's rational model of addiction. However, Scitovsky not only considered myopia in evaluating the consequences of addictive substances, but also the opportunity cost of harmful addiction, i.e. the missed chance to acquire consumption skill, and thus increasingly to enjoy novelties.

The paper is organised into two main sections after this Introduction. Section 2 reformulates Scitovsky's analysis (subsection 2.1), investigates the main contrasts with behavioural economics (subsection 2.2), and shows how Kahneman's (2003; 2011) idea of the two-systems of thought and judgment can reconcile Scitovsky and behavioural economics, thus suggesting new lines of inquiry (subsection 2.3). Section 3 discusses the three specific issues on which Scitovsky and behavioural economics contribute from different perspectives. A brief conclusion ends the paper.

2. Understanding the perspectives of Scitovsky, of behavioural economics and of Kahneman's recent book

2.1 Scitovsky's analysis on choice options, biases, and well-being

In his analysis of well-being, Scitovsky extended the field of economic investigation by drawing from motivational psychologists, such as Daniel Berlyne, Donald Hebb, and Edward Deci. According to Scitovsky, economics was mainly focused on the consumption of goods, and ignored another crucial source of satisfaction: the experience to acquire new knowledge, thus challenging one's faculties, and to feel a sense of mastery and understanding of things and people. Scitovsky thus distinguishes within the consumer's option set between 'comfort', as mainly obtained from some level of consumption of goods, and 'novelty', as an experience of change in the consumer's faculties. Consumption goods may even be not necessary in the case of 'novelty', because the experience of the internal change may be due, e.g., only to social relationships. New consumption goods do not necessarily imply 'novelty' in Scitovsky's sense, because they may satisfy a need without any challenge for the consumer (S. 1992: chs.2-4; 1986: chs.10 and 14, where S. henceforth denotes Scitovsky).

² A measure of the distance between the Scitovskyian-type and the behavioural- or even conventional-type of uncertainty, i.e. that used in expected utility theory, has been provided by Pope and Selten (2010/2011).

A special difference between the two options, comfort and novelty, concerns uncertainty. In the case of comfort, the Scitovskyian consumer is usually well-informed not only about the characteristics of the goods that s/he is going to consume, but also about her/his preferences for them. Differently from comfort, novelty involves special conditions of uncertainty in consumer choice. Two main sources of uncertainty can be distinguished in this case. The first source is the unknown component that typically characterises novelty, which may be not known in advance and which will be known when novelty is resolved. The importance of the unknown component may even change the ‘state of nature’ when novelty is resolved: that is, the states of nature may be partially endogenous. Therefore, uncertainty in the case of Scitovskyian novelty is ‘very strong’ because it is not limited to the subjective lack of knowledge about the probability distributions of the (exogenous) states of nature, as in the case of ambiguity (see subsection 3.1). The second main source of uncertainty is the consumer’s characteristics, synthetically called by Scitovsky ‘consumption skill’ (S. 1992: 225-8). Indeed, emotions characterise the consumer’s experience before the resolution of novelty, and this reaction may be not completely known in advance. For example, anxiety or curiosity may typically arise while waiting for novelty resolution. Other cognitive and non-cognitive characteristics are required for successfully dealing with novelty at the time of its resolution and afterwards, especially on undertaking the search for another novelty. Uncertainty arises in the challenge of such skills.

The term ‘consumption skill’ may be somewhat misleading, because it recalls the skill of choosing among close alternative consumption goods. Scitovsky was instead referring to a generalist skill (S. 1992: 213), which may be defined as mastery over one’s relationship with the social and natural environment. It can be developed from childhood through joyful exploration and learning (S. 1992: 227; 1996: 603; 2000), and then cultivated in adulthood through the acquisition of culture and knowledge (S. 1992: ch.11; 1986: 60). Differently from production skill, the orientation of which is mainly guided by the market, consumption skill is closely linked to consumer’s talent. But talent may be not completely known before it has been discovered by direct experience, thus further substantiating the subjective source of uncertainty. In Scitovsky’s analysis, therefore, uncertainty concerns the match between the characteristics of novelty and the characteristics of the consumer, neither of which are completely known. Nevertheless, more sophisticated novelties can be best enjoyed by more sophisticated consumers, so that consumption skill can be seen as an access cost to appreciating novelty (S. 1986: 201, 123).

Therefore, appreciating novelty is a self-reinforcing process, which is essentially due to the pleasure drawn from this process, rather than from future expected returns, as it is usually the case for the accumulation of human capital (S. 1992: 227; 1986: 51,67,123-4). In Scitovsky's terminology, the successful experience of novelty implies "internal economies" (S. 1995: 203-4), i.e. positive internalities. It thus emerges an unceasing pursuit of the 'very strong' form of uncertainty, which would justify the myopia of the consumer. The reverse process may be also possible when the consumer experiences an unsuccessful challenge raised by novelty, with the consequence that her/his consumption skill deteriorates.

This analysis provides Scitovsky with the basis for claiming that consumer choice is biased towards comfort and against novelty. In fact, – thus argued Scitovsky – economic growth and technological progress make the comfort option cheaper because it is intensive of market goods rather than the consumer's time, and attractive, i.e. user-friendly. Producers apply pressure on parents and children to buy their goods, and demand for production skill in the labour market. Consumers are thus induced to prefer the comfort option, and to shift the accumulation of knowledge away from general purposes – with negative effects on consumption skill – towards specialised purposes for serving the market better (S. 1986: 53-60; 1986: 196). The comfort option can be effective in providing satisfaction, but this is short-lived because of adaptation to the acquired level of comfort, and because of comparison with others' levels of comfort. Therefore, the bias in consumer choice does not concern the immediate reward, which can be earned as expected, but concerns the future streams of rewards ensuing from reduced increases or from decreases in consumption skill.

If the consumer radically loses the pleasure of novelty, thus living a boring and empty life, s/he may shift her/his choice in favour of comfort, but in a peculiar way. Indeed, s/he may search for harmful addictive products, since these provide immediate reward, although at the cost of future pain (S. 1992: 127-30; 1999; 2000). Scitovsky recognised that also addictive consumption may be regarded as novelty because the aspect of experience appears salient, and because love of uncertainty may arise, as in behavioural types of addiction like gambling. However, on closer inspection, addictive consumption is only a peculiar type of novelty that Scitovsky called "malign" (S. 1992: 293). The experience of addictive consumption is pleasurable not because of a successful challenge to useful faculties, but despite the fact that these or other faculties may deteriorate. The uncertainty of activities like gambling is of the usual weak type, while Scitovskyian uncertainty may be attractive despite its chance component, as mentioned above.

2.2 The contrast with behavioural economics

Behavioural economics, as it developed in the late 1970s through the works of Daniel Kahneman and Amos Tversky, has also been called ‘Psychology and economics’ (Rabin 1998; Della Vigna 2009), so as to underline how this sub-field is characterised. However, behavioural economics seems to follow a line of inquiry different from, and in particular more conservative than, that of Scitovsky.

According to Kahneman (2003: 1469), “Theories in behavioral economics have generally retained the basic architecture of the rational model, adding assumptions about cognitive limitations designed to account for specific anomalies.” The ‘rational model’ essentially means expected utility maximization and Bayesian probability judgments. It has been recognised by behavioural economists as “useful because it provides economists with a theoretical framework that can be applied to almost any form of economic (and even non-economic) behavior, and it makes refutable predictions” (Camerer & Loewenstein 2004: 3). As has been observed, however, “there is nothing inherent in behavioral economics that requires one to embrace the neoclassical economic model” (Camerer & Loewenstein 2004: 5), and this encourages comparison between behavioural economics and Scitovsky’s analysis.

In order to increase the realism of the rational model, psychology has been used in behavioural economics as an important source of both assumptions for economic theorising and hypotheses for economic research. The usual method has been to modify one assumption of the rational model at a time, and to study the consequences of doing so. A number of authoritative surveys describe how the assumptions have been modified and what results have been obtained (Rabin 1998; Della Vigna 2009). Behavioural economics, therefore, does not emerge as a unitary theory (Fudenberg 2006), but rather as a set of formulations complementary to the rational model, mainly with interpretative purposes, while the rational model is maintained as the welfare benchmark.

The research perspectives of behavioural economics and of Scitovsky therefore appear to point in rather different directions. Behavioural economics aims to understand how individuals tend to choose within a given option set, at a given moment of time and in certain given conditions. The analysis concentrates on the manipulation of these givens, possibly allowing for the collection of information to form beliefs when conditions are

(weakly) uncertain. Research seeks to show deviation from the benchmark of rational choice, where the size of the deviation measures the loss of utility. The success of behavioural economics has been due to the fact that some deviations have been ascertained as systematic and widespread in the population, while the formal link with the rational model has been directly maintained.

By contrast, Scitovsky sought to understand people's well-being by studying how they differ in their tendential choices of novelty, depending on the skill that they have acquired in the past from successful experiences of novelty. Optimal well-being may be defined as a distinctive path over time whereby individuals successfully challenge their skill with novelties. Predictions about the uncertain match between their skill and novelties may be accurate in the short-term, but they cannot be rational over time because uncertainty persists in a very strong variant in which new options and states of the world may arise. Along this path, not only does learning indefinitely persist, but it is the main part of well-being.³

Also policy implications are different. The main recommendation proposed in behavioural economics is to manipulate the reference points of the individual's decision-making so as to bring her/him towards her/his optimum position (e.g., Thaler & Sunstein 2003). The main recommendation proposed by Scitovsky is instead to invest in the formation of the individual's consumption skill, so as to enable her/him to improve her/his ability to select adequate goals, and to pursue them (e.g., Schubert 2012).

2.3 Scitovsky and Kahneman's two-systems of thought and judgment

Recently, Kahneman (2003; 2011) has proposed a unitary theoretical framework able to include both behavioural anomalies and rational choice. This framework is especially interesting because it may also include a significant part of Scitovsky's analysis, and it remains open to inclusion of the remaining part through further research. Kahneman's proposal is a reformulation of an idea developed in psychology of the brain and decision-making which claims that people have two distinct and interconnected systems of thought and judgment.

³ Scitovsky in fact invoked a "higher" type of rationality to achieve welfare; one that would take account of internalities and externalities (S. 1992: 247).

System 1 draws basic impressions of experiences – on positive/negative affective bases – from ongoing perception and memory. This system is fast, automatic, and effortless, and it works through intuition, i.e. through an associative way to give meaning to ongoing experiences, and to resolve uncertainty about their unknown aspects. Reference dependence thus emerges clearly in perception (Kahneman 2003: 1454). This straightforward procedure – called ‘heuristic’ – is effective, and it is normally used by people. However, it may be a poor procedure when it excessively simplifies matters: for example, by substituting statistical association with causation, or difficult questions with easier but improper ones. This is the case when questions appear rather difficult but urgent; or simply when someone is in a bad mood (see Kahneman 2011: 69). System 1 is imperfect – according to Kahneman – by construction of humans’ perception and memory.

System 2 monitors system 1, and it intervenes when questions are difficult but not urgent by elaborating more accurate judgments through reasoning. It works on the basis of the impressions provided by system 1, and when it intervenes, it usually takes the final decision. This system is slow, intentional, effortful, and correlated with intelligence. However, also system 2 is imperfect because of limits to its computational resources. The imperfections of both systems cannot be completely overcome by economic incentives.

The anomalies studied in behavioural economics emerge as choices that follow system 1 and that system 2 is unable to correct with respect to the theoretical choice where system 2 were completely able to do so. The study is focused on those cases where system 1 combined with system 2 tends to fail, such as when imperfect perception or remembrance provide imperfect information to system 2.

This theoretical framework is especially interesting for Scitovsky’s analysis because Kahneman (2011: 234-44) has also advanced the following argument: that system 1 can acquire, through practice and in conditions of a sufficiently regular environment, the skill of choosing what system 2 would have chosen, thus possibly eliminating the heuristics. Furthermore, intuition may become so skilled that it can even create new better options. Since system 1 is effortless and system 2 is effortful, acquiring such skill makes people very effective – at least in some selected fields – and even creative. Therefore, reformulating the rational-behavioural dichotomy as emerges from behavioural economics into the two-systems framework allows one to see Scitovsky’s novelty/comfort dichotomy with more modern eyes, and, at the same time, to find what still remains to be explored of his perspective.

The two-systems framework takes an important step forward in understanding how people choose in everyday life, because it is also able to give account, on recent empirical bases, of how people can acquire the skill to choose. Scitovsky's analysis of this important aspect was vaguer, and he preferred to address the related issue of early and general education.⁴ Kahneman's framework thus seems to agree with Scitovsky's in considering choice to be a dynamic process where people may even become able to create new options. In this way both of them depart from the rational model. However, the following key aspects remain unclear and should be investigated more closely.

First, uncertainty cannot remain only of the weaker type in the two-systems framework, as it usually does in behavioural economics. Scitovsky's very strong type of uncertainty should be considered, because new options and endogenous states of nature may condition choice.

Second, according to Kahneman, skill is specialised and individuals can become experts in some fields, so that uncertainty on both the external states of nature and individuals' levels of skill can be minimised. Scitovsky instead stressed the generalist character of consumption skill, by referring to the great educational power of humanities and liberal arts in enabling individuals to understand the environment, themselves, and other people. He recognised that specific training is necessary to develop the skill to appreciate novelties, and even to create them. But he also observed that such training should be intrinsically motivated, rather than being governed by monetary incentives, in order to be effective in achieving and maintaining well-being. The issue of how the proper skill is acquired is thus crucial for making experts reliable, as stressed by Kahneman (2011: 12), and for people's well-being, as stressed by Scitovsky. However, more research on the definition and role of such skill is needed.

Third, also Kahneman has discussed the issue of well-being when he considers 'experienced life satisfaction'. He basically maintains that this is "largely determined by the genetics of the temperament" (Kahneman 2011: 401), so that skill would appear unable permanently to improve experienced life satisfaction, which is mostly emotionally laden (Kahneman & Deaton 2010). However, he also acknowledges that he has changed his mind when he stresses the importance for life satisfaction of setting and achieving goals over the life cycle (Kahneman 2011: 402). Scitovsky would agree with this latter position of

⁴ But see his discussion on how people "reduce [...] novelty by incorporating it into the already familiar" (S.

Kahneman rather than with the former. But Scitovsky's analysis is more sophisticated, because it claims that setting goals also implies achieving them only if the goals have been adequately set with respect to the individual's consumption skill. If goals turn out to be too ambitious because of poor skill, disappointment and ill-being may arise.⁵

The final and ultimate aspect that should be better investigated concerns the welfare benchmark against which to define and measure the anomalies. The two-systems framework seems to provide a more elaborate, but not essentially different, benchmark than behavioural economics does. Rational choice appears to belong to system 2, but system 1 works efficiently most of the time, in the sense that it chooses what rational choice would have done if system 2 had intervened. The anomalies thus appear to arise from system 1 and are then insufficiently corrected by system 2, to which system 1 provides the primary information. However, since system 1 does not work intentionally, the information drawn from perception and memory may not be accessed by system 2, with the possibility that this latent information may be useful for efficient and automatic choices but system 2 nevertheless intervenes and worsens the outcomes. For example, some psychological studies have found that verbalisation and rationalisation may disrupt insight solutions and preferable outcomes (Schooler et al. 1993; Wilson et al. 1993). In this case, rational choice would no longer be the welfare benchmark but would instead introduce anomalies against another benchmark to be defined.

Kahneman (2011: 209-33) recognises this possibility when he refers to the case in which skill has not properly developed because of too irregular an environment, but system 2 still intervenes to decide. In an early writing, Kahneman (1994), by anticipating individual's complexity in decision-making with the notion of multiple selves, even wondered "which of these selves should be granted authority over outcomes in the future". This question has been recently taken up by Gul and Pesendorfer (2007), who conclude that more research is needed to determine with behavioural and neurological methods what "true utility" is, so as to have a firm welfare benchmark.

Scitovsky's analysis may help resolve this issue because it focuses on a dynamic version of well-being, rather than on a static mental state of pleasure. According to

1992: 54).

⁵ When Kahneman (2011: 405) recognises that "depression involves a self-reinforcing cycle of miserable thought", he does not refer to a reduced skill, but to the failure of adaptation to the standard level of life satisfaction as fixed by genetics.

Scitovsky, well-being both arises from and largely overlaps with the growth of human potentialities. Research would thus be needed to gain better understanding – by using the two-systems framework – the best way to develop system 1 and to place system 2 at its service.

3. On three issues common to both Scitovsky and behavioural economics

3.1 Uncertainty and skill

In Scitovsky's analysis, consumption skill makes people uncertainty-seeker, since they would be induced to prefer novelty, which involves a 'very strong' type of uncertainty (see subsection 2.1). In behavioural economics a strong type of uncertainty that has been considered is 'ambiguity' (Ellsberg 1961), where the probabilities of the outcomes are not known but could be known in advance (Camerer & Weber 1992). It has been found that individuals are not indifferent between weak uncertainty, which has well-known probability distributions, and ambiguity, as predicted by the expected utility theory. Individuals tend, rather, to be ambiguity-averse (Camerer & Weber 1992).

Heath & Tversky (1991) allows reconciliation between ambiguity-aversion and ambiguity-seeking in a way consistent with Scitovsky's analysis, although there is no explicit recognition of this. They put forward the 'competence hypothesis', where competence includes skill and knowledge, in order to take account of the subjective conditions that make people ambiguity-seekers or ambiguity-averse. According to this hypothesis, "holding judged probability constant – people prefer to bet in context where they consider themselves competent than in a context where they feel ignorant" (Heath & Tversky 1991: 7). By means of experiments, the authors are able to show a positive relationship between judged probability, which would generally entail the individual's level of knowledge about the questions at hand, and the percentage of choices that favour betting on personal judgment, which is relatively ambiguous, in a chance lottery (e.g., poker chips).⁶ The expected utility theory would have predicted indifference between the two kinds of choices for any judged probability, i.e. 50% in any case. The standard ambiguity-aversion

⁶ A chance lottery is designed to have the same probability of winning as the probability of having chosen the correct answer that the interviewee indicated when s/he previously answered the knowledge questions, such as questions on politics and football.

hypothesis would have predicted a smaller percentage of choices in favour of judgment bets, and unrelated to judged probability.

Interestingly, the authors comment thus: “[p]erhaps the major reason for the competence hypothesis is motivational rather than cognitive. We propose that the consequences of each bet include, besides monetary pay-offs, the credit or blame associated with the outcome. Psychic payoffs of satisfaction or embarrassment can result from self-evaluation or from an evaluation by others” (Heath & Tversky 1991: 7). These comments give credit to Scitovsky on both the importance of the motivational basis that underlies the choice of novelty and the specific motivation, since this refers to the emotional motivation to challenge the individual’s skill.

Indeed, the challenge of the individual’s skill is the primary motivation underlying the novelty option, while the chance component of ambiguity is not interesting, according to Scitovsky. An attempt to distinguish between the challenge and the chance components in ambiguous choices has been made by Klein et al. (2010). They find that people prefer options where they can challenge their skill on chance-based options, even when ambiguity is present in both cases. Therefore, the label ‘ambiguity-seeking’ may be misleading insofar as it evokes a preference for chance.

However, in Scitovsky’s analysis the type of uncertainty surrounding novelty is even stronger than ambiguity, as discussed in subsection 2.1. A clear examination of an aspect of uncertainty that has been regarded as relevant by Scitovsky but ignored by both the expected utility theory and behavioural economics with undesirable normative consequences has been advanced by another set of studies.

Pope (1983) introduced into algebraic decision modelling the pre-resolution period with its duration being a key factor in determining people’s anticipated utility from an act. She furnished examples of this impact on utility by how longer delays before an outcome is fully resolved alter the amount of hope and fear experienced during it, generate worse planning difficulties, and leave a person deprived of access to property for a longer time. In a similar vein Pope and Selten (2010/2011) introduce the pre-resolution period into the individual’s preferences. They justify this assumption by observing that “[m]any people would like to know as soon as possible whether they have passed an exam [...]. Many people would not like to know the exact day of their death years in advance.” Pope and Selten (2010/2011) also recognise that emotions, such as “curiosity, hope, or fear”, are typically involved in the pre-resolution period, and that “in suitable dosages, such emotions

enhance decision making”, thus also citing Damasio (1994). Finally, they refer to Scitovsky (1976) by recognising that “[t]hose taking choices yielding too little in the way of thrills and hope for the brain’s needed stimulation often compensate with other choices that involve socially and personally destructive behaviour such as juvenile delinquency and gambling.”

Pope et al. (2009) report some experimental results in support of the importance of the pre-resolution period in decision making under uncertainty conditions. A costly insurance was offered as a protection against an attack which with some levels of probability would later wipe out a sum made available to the participants in the experiments. The participants also provided explanations as why they had chosen either to protect or not to protect themselves against the risk of an attack by considering, respectively, worry or excitement in waiting for the outcome.

The main result was that the majority of participants reported either the secondary dissatisfaction of worry or the secondary satisfaction of enjoyable excitement as the motivators of their choices whether or not to protect themselves. The majority of them cited worry or excitement as their sole motivators. A small minority were found to be not influenced by secondary (dis)satisfaction, as captured by the worry/excitement questions as well as others. The authors regard this minority as those who followed the prescription of the expected utility theory, so that all the others appeared to make biased choices because they were affected by emotional reactions. The authors further observe that neither is Kahneman and Tversky’s (1992) cumulative prospect theory confirmed, mainly because also this theory neglects the pre-resolution period.⁷

The crucial role of the pre-resolution period in decision making under uncertainty has been examined at the theoretical level by Pope and Selten (2010/2011). They show that when atemporal expected utility theory is extended to include the length of the pre-resolution period, with for axiomatised expected utility theory a natural limit property, the individual’s preferences are unaffected by the length of the resolution time. This result casts doubt on the normative validity of expected utility theory, because a longer delay in learning the final outcome may have planning disadvantages, and different emotional consequences.

Pope and Selten (2010/2011) also bring an interesting criticism from the Scitovskyian perspective against a more conventional study which takes into account the pre-resolution period. This is Caplin and Leahy’s (2001) study, which attempts to find a consistent

generalisation of the axiomatised expected utility theory. To this end, Caplin and Leahy (2001) attach the emotions involved in the pre-resolution period to the outcome through a stable function, and consider the anticipation of these emotions in decision making under the ordinary uncertainty conditions. Pope and Selten (2010/2011) find that this attempt increases the epistemic inconsistency of the expected utility theory, because Caplin and Leahy employ in their axiomatisation a substitution axiom in which learning of the result of two successive stages of a compound gamble are modelled as if learned simultaneously. How these authors consider emotions would be implausible because they assume that preferences over distributions of emotional futures follow rational rules.

Scitovsky's analysis takes Pope and Selten's considerations as a step further because the pre-resolution period in the case of novelty involves changing emotions very likely. In this case, in fact, people's experiences of interest and challenge refer to changes in their consumption skill, and thus differ from one experience to the next over people's life-cycle. Further research should confirm this insight.

3.2 Change of preferences

"[T]astes are [...] constantly changed by the accumulation of experience", Scitovsky (1992: 5) stated in his book. However, as observed by Loewenstein and Angner (2003: 353), "[t]o date, very little research has sought to understand the factors that cause people to indulge, deny, or seek to change their own preferences."

The path-breaking approach to this issue is that of Gary Becker. In a fairly recent book, he has observed that in his work he "retains the assumption that individuals behave so as to maximize utility while extending the definition of individual preferences to include personal habits and addiction, peer pressure, parental influences on the tastes of children [etc.]", and thus "to include endogenous preferences" (Becker 1996: 4). He concludes: "[t]he direct linkage between present and future utilities – not whether the utility functions are considered stable or unstable – is what distinguishes this analysis from the more conventional one" (Becker 1996: 6).

Scitovsky's analysis of the dynamics of consumption skill and preference for novelty can be interpreted according to Becker's claim that preferences depend on the consumer's

⁷ Specific questions addressing rules typical of rank-dependent theories, Kahneman and Tversky's, were

past experience. However, Scitovsky's analysis departed from Becker's on the assumption of rationality in intertemporal maximisation, as implied by the discussion in subsection 2.1, and further deepened in subsection 3.3.

Behavioural economics has investigated the issue of changes in preferences, claiming that people's choices are biased in this case. In particular, Loewenstein et al. (2003) argue, on the basis of empirical evidence, that people predict future utility with a 'projection bias'. Their model includes a conditioning subjective state in individual's preferences for any future period, but it does not necessarily posit a linkage between present and future, and it ignores uncertainty. It thus appears focused on one specific aspect of Scitovsky's analysis, i.e. the influence of changing subjective states on preferences. Loewenstein et al. (2003) thus call 'projection bias' the systematic error in predicting preferences on consumption, subject to changing subjective states over the future periods. The bias is in the direction of understatement, i.e. people would regard future preferences in between the current ones and the preferences conditioned by future subjective states.

Loewenstein et al. (2003: 25) also argue that the projection bias can provide the basis for an explanation of over-consumption and over-work that they see as "parallel" to Scitovsky's arguments. They first assume that the option set consists of consumption and leisure, where only consumption is subject to adaptation to a past reference level of consumption captured by changed subjective states. If the consumer underpredicts her/his adaptation, s/he also underestimates the extent to which increasing her/his current consumption will reduce her/his future well-being. Consequently, s/he over-consumes and over-works.

Loewenstein et al.'s (2003) 'projection bias' captures some important aspects of Scitovsky's analysis, and provides some supporting evidence, but it does not capture the core of his analysis. In Loewenstein et al.'s (2003), people find hard to foresee the effects of subjective states on their preferences, but they correctly predict their future subjective states, because they have had similar experience in the past. In Scitovsky, people find hard to foresee their future subjective states because these differ from one experience to the next, and change endogenously because of the accumulation of consumption skill. Furthermore, when Loewenstein et al. (2003) apply the 'projection bias', they obtain the result of over-consumption because the bias has been applied to people's adaptation to past levels of

included in the questionnaire given to the participants in the experiment.

consumption (while there is no adaptation to past levels of leisure). A *negative* internality would thus emerge. In Scitovsky, people mispredict the consequences of novelty on their consumption skill, which thus emerge as a *positive* internality if the experience has been successful.

3.3 Harmful addiction

Scitovsky was the first to introduce into economics the ‘opponent process theory’ of addiction from psychology, which would give account of the evolution of this type of behaviour (S. 1992: 127-31). His analysis on individuals’ preference for comfort and against novelty would be able to explain why people fall into harmful addiction. This section will show how Scitovsky’s initial insights has been subsequently developed by George Loewenstein; how Richard Herrnstein and Drazen Prelec’s ‘melioration theory’ of addiction captures only some aspects of the Scitovsky’s overall analysis; and, finally, how all these authors depart from the Beckerian approach to rational addiction.

In the introductory part of *The Joyless Economy*, Scitovsky reported Solomon and Corbit’s (1974) ‘opponent-process theory’ of addiction. This article was published in a psychology journal, but it was republished in 1978 in the *American Economic Review* with an enthusiastic preface by Scitovsky.

The ‘opponent-process theory’, which has a physiological substrate, generally refers to emotions, and argues that the individual has two opposite reactions to a stimulus: a quick, intense, temporary and, possibly, pleasurable reaction, and a reaction which is opposite in hedonic value, and which takes more time to build up and more time to decay. The repetition of the stimulus, typically due to substance ingestion, reduces the positive reaction, and increases the negative reaction. This theory would explain tolerance and withdrawal, and, on this basis, subsequent craving, dependence, desire to quit, and possible relapse. The main treatments implied are detoxification and abstinence.

Loewenstein (1999) has developed this theory by positing that people’s choices, as based on stable or slowly changing preferences, are influenced by ‘visceral factors’, such as hunger, thirst, pain, or even curiosity, which fluctuate according to external stimulations or deprivations. Since people’s attention is directed to current cues by visceral factors, they experience craving, which biases their rational choice and possibly triggers addictive consumption. The focus in explaining dependence and relapse is thus shifted from

withdrawal to craving, which would better accord with the facts, according to Loewenstein (1999). In this way, addiction plays a role in people's choices through craving as a powerful anticipatory emotion, while the anticipation of withdrawal would be a less vivid emotion (see also Loewenstein et al. 2001). The main suggestion for quitting thus becomes that of changing the environment so as to avoid the cues.

However, as also Loewenstein (1999: 246) recognises, there is much variance in substance addictive behaviour across persons and situations, which should be explained, while 'visceral factors' appear to be rather generic (Waal and Mørland 1999). Scitovsky's theory, as he especially emphasised in the refinements of his book, can meet these observations by proposing an explanation of how a trigger of harmful addiction arises, i.e. boredom. This trigger may work for both substance addiction and behavioural addiction, such as gambling (S. 1992: 130; 1999; 2000).

In Scitovsky's analysis boredom arises because the consumer has been frustrated in their experience of novelty, possibly starting from childhood, so as to discourage the development of her/his consumption skill. This would make the consumer unable to appreciate epistemic novelty, thus bringing her/him in a condition of boredom. This, in turn, would make the consumer more sensitive to cues for risky behaviours and consumption that promise immediate returns, such as addictive goods.⁸

There are two main differences between Scitovsky's analysis and Becker and Murphy's (1988) model.⁹ First, in order to obtain a rise in the less desirable consumption, Scitovsky's analysis does not require its marginal utility curve to shift upwards, as the Beckerian approach does for harmful addiction, because it is sufficient that the marginal utility curve of the alternative option, i.e. novelty, shifts downwards. Secondly, Scitovsky was far from assuming full information about novelty, and he provided several arguments for this claim (see subsection 2.1). If people in the Scitovskyian world were more convinced about the positive consequences of novelty, they would invest more in consumption skill,

⁸ Scitovsky's insight that addiction is triggered by choice, and specifically in conditions of boredom, has been also confirmed in psychology (Heyman 2009; LePera 2011 and the literature cited therein).

⁹ Also Bernheim and Rangel (2007) proposed a theory of rational addiction, although more sophisticated than Becker's. They assume that individuals' preferences are extended so that their "lifetime state-contingent consumption paths remain[...] constant across time and states of nature", and can be ranked (Bernheim and Rangel 2007: 10). Individuals would experience addiction as a systematic alternation of hot/cold mental states.

although at some current costs. Scitovsky's basic recommendation for escaping from boredom was precisely to invest in consumption skill.

The fact that harmful addiction in the Beckerian approach works as self-medication appears to apply to Scitovsky's analysis as well. However, in this latter case, people would take some time to realise that such self-medication is highly inefficient in curing boredom, and that it may turn into an unsatisfactory trap.¹⁰ Unfortunately, the first best alternative, which requires a developed consumption skill, is out of reach for these people, and even partially known to them. This fact makes people prone to addiction also of the behavioural type. The pull-effect of craving for addictive substances is not necessary, because the push-effect of missing the opportunity of the best alternative may be sufficient.

Herrnstein and Prelec (1992) have captured the aspect of Scitovsky's analysis concerning people's limited knowledge about the future consequences on their choices through change in their skill. These authors propose the 'melioration theory' of addiction, according to which people become addicted through a series of incremental meliorating decisions to consume the addictive products. However, people do not perceive the harmful consequences of such products until it is too late.¹¹

This theory appears naïve if applied to the case of substance addiction, mainly because the negative effects of addictive substances are generally well-known. Herrnstein and Prelec's theory instead gains in plausibility if applied to Scitovsky's case where knowledge is necessarily limited.

4. Conclusions

Behavioural economics is a young subfield where psychology helps economic analysis to interpret how people tend to make choices not necessarily optimal for them. In the 1970s, Kahneman and Tversky's work gave impetus to the development of behavioural economics as an extension of the conventional theory of rational choice which has been maintained as the welfare benchmark. In his very recent book, Kahneman has advanced a

¹⁰ Thus wrote Scitovsky (1992: 73): people, who "were gradually lured into a new way of life by their love of comfort, unaware at first of the costs involved and finding themselves fully accustomed to their new ways by time they realize the extent of the loss of pleasure suffered."

¹¹ Another behavioural type of model of addiction that bases preferences on the underevaluation of the future is that proposed by O'Donoghue and Rabin (1999).

theoretical framework in which behavioural and rational choice can be accommodated in new and dynamic manner.

This paper has revisited Scitovsky's work on well-being, which introduces novelty into the consumer's option set as a peculiar source of satisfaction. On this basis, the paper has found a number of connections with behavioural economics so as to open new lines on inquiry. First, similarly to behavioural economics, Scitovsky used psychology to interpret sub-optimal choices. However, his welfare benchmark is different from rational choice, because 'novelty' implies a very strong form of uncertainty, and learning. Second, Scitovsky contributed to further elaboration of the two-systems framework put forward by Kahneman's recent book, which attempts to base behavioural economics on new foundations. Third, Scitovsky anticipated and contributed to specific analytical issues that have been studied in behavioural economics, such as the role of people's skill in uncertainty, the unpredictability of taste changes, and harmful addiction.

Therefore, Scitovsky should not only be considered as a courageous pioneer in having introduced psychology into economics, being his attempt greeted with great scepticism in his time. Indeed, his insight appears rather ahead also of our time, because interdisciplinary research on human choices as a dynamic process is still in the exploratory stage. Kahneman in his recent book has taken some steps in a direction not far from that indicated by Scitovsky by introducing the economic concept of choice into a comprehensive psychological framework. In a complementary way, some other studies have recently advanced the economic research by introducing very psychological concepts, such as personality traits, into dynamic models (Almlund et al. 2011; Ferguson et al. 2011).

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