

## ECONOMICS OF HAPPINESS

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### *Abstract*

This paper criticizes the neoclassical economic approach to happiness. One way in which it does so, is by questioning the belief that more money means more goods that in turn, produces greater subjective well being. By observing the income happiness relationship, and the results of several happiness surveys, it becomes apparent that income cannot be used as an exclusive indicator of happiness. In addition, it will be hinted that income's association to happiness is not solely a materialistic one, which neoclassic theory predicts, but rather income can increase happiness because of its effects on social happiness determinants, such as health, matrimony and education. The second part of this paper addresses the question of rationality and happiness. The neoclassical school believes that people will make rational decisions with perfect cognition and information. However, this paper finds that, in reality, this is not always the case. By looking at the apparent lack of self control performed by many members of the community in certain instances, it seems evident that some economic agents do not choose to maximize their utility. The final section of this paper will briefly offer insight into the possible economic theory and real life implications of the content of the paper.

### I. INTRODUCTION

The economic approach to happiness and income is both a complex and controversial issue. Traditionally, economics has taken a very materialistic view towards happiness; that, in essence, entails that more money means more goods, which in turn results in greater subjective well being. However, surveys that, until fairly recently, have been ignored by economists, have shown that this is not necessarily the case. Increased income does not always increase happiness at the expected rate. This evidence would indeed appear, to run contrary to popular economic belief. This essay will look into the income-happiness relationship, and offer insight into explaining this apparent paradox. In addition, it will be shown that income association to happiness is not solely a materialistic one, which neoclassical theory predicts, but rather income can increase

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happiness because of its effects on related social determinants. The correlation between income and happiness is thus strengthened because of the relationship between income and other determinants of happiness. Still, the inequality of happiness across nations and individuals with similar incomes shows that there are other determinants of happiness besides income. In addition, it will examine the association of unhappiness with dissatisfaction. This paper will argue that many of these variables are still related to economics. The second part of this paper addresses the question of rationality and happiness. It attempts to offer insight into the question of whether a person's decisions reflect what will actually maximize that individual's welfare. By looking at the apparent lack of self-control performed by many members of the community, it seems evident that some economic agents do not maximize their utility in some instances. The final section of this paper will briefly offer insight into the possible economic theory and real-life implications of the findings of the paper.

## **II. HAPPINESS AND ITS RELATION ON ECONOMICS**

Happiness, a term used interchangeably with subjective well-being, satisfaction, utility and welfare, can be defined as the current evaluation by an individual of his or her own satisfaction with life (Easterlin 2001). It is important not to conflate this definition of happiness with its use in unified utilitarian theory. Under unified utilitarian theory, happiness is differentiated from utility because happiness is the realization or actual utility opposed to hypothetical utility (Sheng 2004). For instance, consider going to a restaurant and ordering a hamburger. Utility would be the expected satisfaction that one would suppose they would receive by ordering the hamburger. Happiness would be the actual amount of satisfaction that the individual receives from consuming the burger. In this essay these two connected concepts will be called expected happiness and actual happiness. However, both forms of happiness have a common attribute that they are both subjective concepts. This makes it difficult to compare different individuals' levels of happiness or tell if the individual is testifying truthfully (Sheng 2004). Although Bentham attempted to put quantitative values to happiness in the seventeenth century, this approach has been generally abandoned because, for the most part, happiness today is looked upon as a relative, rather than an absolute concept (Gertham and Johannesson 1997).

There are variables in the happiness function that make the study of this matter important for economics. The prevalent connection between economics and happiness is the role that economics has adopted in exploring the maximization of welfare and quality of life (Easterlin 2003).

Traditionally, this has been attempted by financial analyses, such as Gross Domestic Product (GDP) per capita, because of the neoclassical view of utility that is concerned primarily with material outcomes that are affected by fiscal traits, such as income, costs and prices. Recently, however, with increased investigation into human behaviour, it has become increasingly obvious that other methods could contribute to creating a more comprehensive and accurate reflection of quality of life. Still, economic variables such as income and prices do have a huge impact on happiness, as is demonstrated in the paper. Research conducted in Europe indicates that increased happiness increases accountability, effectiveness, stability and rule of law: all attributes that provide for a healthy economy (Frey and Stutzer 2002). Consequently, the effects that happiness has on the economy should be mentioned within the paper.

### III. METHODOLOGY AND DATA

By nature, happiness is an emotion, and basic logic concludes that an individual experiencing the feeling knows what they are feeling best. Both the neoclassical and behavioural theories predict that preferences can differentiate among different individuals. For this reason, one of the most accepted tools for measuring happiness is surveys that have intensive databases such as the General Social Survey (GSS), World Value Survey, Eurobarometer Surveys, and Satisfaction with Life Scale (Frey and Stutzer 2002). Although psychologists and sociologists have been documenting and analyzing the data from surveys for years, social questionnaires have, for the most part, been neglected by economists (Oswald 1997). A typical questionnaire would pose a question such as “All things considered, would you describe yourself as very happy, pretty happy or not happy these days” (Oswald 1997). When conducting a survey across societies, the question could be revised accordingly to each respected culture, such as replacing “happy” with “satisfied” (Oswald 1997). For the most part, these surveys are not used to determine absolute levels of happiness, but rather relative level or to resolve the determinants of subjective well-being. It is interesting to note that across cultures, the determinants of ‘levels of happiness’, are fairly constant (Easterlin 2001). Some people have criticized the relevance and transitivity of this form of assessment. The wording, ordering and scaling of questions asked can all have effects on the outcome. Another problem with trying to determine the reasons for happiness is the intertwining of characteristics of happiness. For example, suppose that studies show that people who volunteer report higher happiness levels than people who do not volunteer. Additionally, suppose that extroverts report higher happiness levels than introverts and that

extroverts are more likely to volunteer than introverts are. In this instance, it would appear inconclusive, if volunteering or an outgoing nature or both make an individual happy (Frey and Stutzer 2002). A somewhat similar problem occurs when different groups are surveyed. Suppose that older people report higher happiness than younger persons. This could be a result of older people encountering higher well-being, or this could just be an effect of different interpretation and outlook, which alters their responses to questions. Still, despite these concerns, there is a clear trend of the importance appropriately of living levels, family, health and employment across diverse cultures (Easterlin 2001).

In response to the disapproval of direct satisfaction surveys, alternative forms of testing happiness have been created. One such form is by asking questions such as, "have you been thinking of yourself as a worthless person" and then, allowing psychiatric experts to analyze the results (Oswald 1997). This method has been criticized because of the inconsistency of the psychoanalytic assessment. A second approach involves looking at related statistics. An example of this could be the number of suicides per capita. (Oswald 1997). Clearly, taking one's own life could be interpreted as extreme unhappiness, if one assumes a positive relationship between the value of life and happiness. However, this method encounters a problem because it can represent only extreme emotions and may be affected by social norms. As a matter of fact, in Denmark, one out of every 3,000 deaths is a suicide, while in Britain, the number is one out of every 1,200 deaths, does not necessarily mean that generally one country's citizens are more happier than the other. Because of inadequate alternatives, and the frequent consistency, and great sample size of surveys, surveys are the resource used for the findings expressed in this paper.

### ***Gross National Product***

The relationship between income as Gross National Product (GNP) per capita and happiness may be surprising to some people. By looking at the connection of income and happiness in its static state, as shown in Figure 1, one can derive two important observations. First, there seems to be a connection between GNP per capita and happiness. In its fixed state, the relationship could be described as marginal decreasing happiness returns to income, which takes a curvilinear shape. In other words, happiness exponentially decreases at a lesser rate than income does. This observation would appear to be in line with conventional economic belief. A second important observation from this static graph is that happiness varies across countries with similar income levels and income fluctuates across

countries with comparable happiness levels. This would seem to indicate that although there is some relation between GDP per capita and happiness, it is not the only factor.

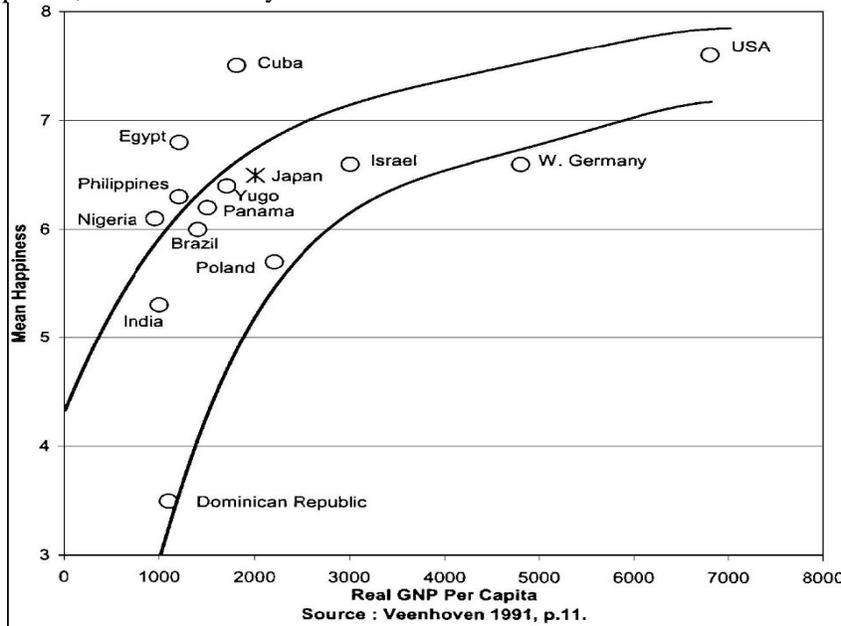
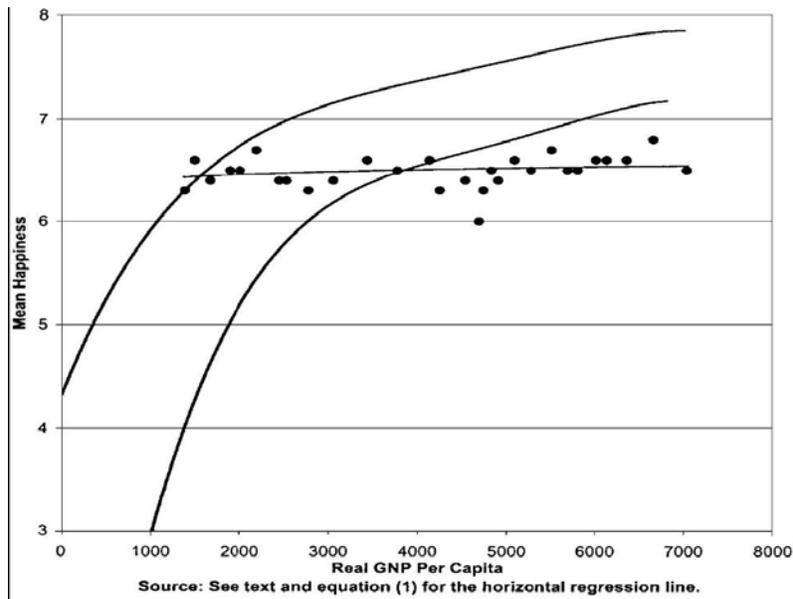


Figure 1. Mean Happiness

Although Richard A. Easterlin recognizes the decreasing marginal utility when comparing countries in a static state, he is unconvinced that this relationship holds when income and happiness are compared dynamically. Comparing income increases across time does not result in a similar manner. In fact, GDP per capita after a certain level only slightly increases happiness. Easterlin uses periodically consistent studies performed in Japan to demonstrate the great increase in wealth since the 1960's. In Figure 2, the two boundaries suggest the growth path of Japan based upon the neoclassical theory derived from comparing different countries' income and happiness. The dots connected by a regression line show the actual measured happiness felt by the Japanese during this period of substantial GDP per capita growth. Although, this does not follow what could be expected from a stagnate, cross-country analysis.



**Figure 2. Actual Happiness of Japan 1958-1987 from Easterlin 2004**

Mathematical regression can be used to prove this point further.

1.  $\text{Happiness} = 0.1255 \ln(Y) + 0.9804$  yields an adjusted regression squared of .917
2.  $\text{Happiness} = 0.0692 \ln(Y) + 5.9331$  yields an adjusted regression squared of .042

$Y$  = real GNP per capita and Equation 1 represents the static cross-country analysis and Equation 2 represents the dynamic single-country analysis. The significant co-efficient of Equation 1 suggests that there is decreasing marginal happiness with income whereas Equation 2 proves that there is no marginal utility due to increased income because the coefficient is insignificant. Understandably, individual data on happiness over time also shows that happiness plateaus after a certain point (Easterlin 2001). This data disagrees with the conventional idea that increased income increases happiness at a marginally decreasing rate. For this to be the case; it appeared that neoclassical utility is based on inaccurate assumptions.

There are two mainstream arguments attempting to explain why increased income insignificantly increases happiness after a certain point. The first is that aspirations increase as income rises (Easterlin 2001). Easterlin suggests that income rises at a similar rate to aspirations and thus the two offset themselves, leaving the individual at a similar level of subjective well-being. For example, as a result of a person's increased

income, he or she may not receive the same satisfaction from driving his or her old vehicle. In order to observe the same satisfaction, the person would have to purchase a more expensive car.

The second argument attempting to explain why income does not induce more happiness is that it is relative. This can be looked upon as people compare their income to society, other specific persons or themselves. An example illustrating the relative element of income and happiness is an experiment conducted by Richard Layard. He asked graduating Harvard students if they earned \$100,000 a year, would they prefer the average pay for everyone else to be \$50,000 or \$200,000? The majority answered that they would rather the average be \$50,000 (Layard 2003). Although neither theory of explaining the dynamic income happiness relationship is conclusive, they both offer insight into its explanation.

### *Other independent variables*

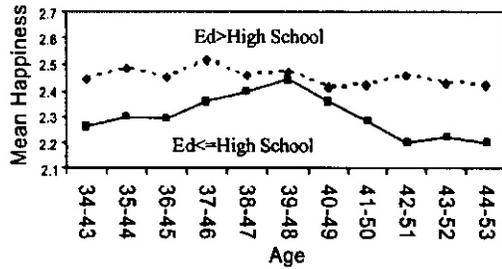
The neoclassical assumption of income increasing happiness because of increased availability of goods is further weakened because of income's positive effects on other happiness determinants. Three major determinants of happiness are briefly discussed below, along with their relation to income. The first, debatably, and one of the most influential determinants, is personal health. Surveys indicate that health is positively related significantly to happiness. Basic intuition about health should back up this concept further. In their study, the relationship between happiness, health and social economic factors: results based on a Swedish micro data, Gerdtham and Johannesson incorporate health into the utility function and then produce a function for health, written  $h=f(H,M)$  (Gertham and Johannesson 1997). Where  $h$  represents health,  $H$  denotes health goods such as Medicare, availability of medicine;  $M$  represents the initial state of the health of an individual. Although some health problems are obviously genetic and unpredictable, significant portion of health is directly connected to monetary issues. Increased funding improves prevention rates of illness, increases the rate of successful treatments and the comfort of dealing with sickness. A report to the United Nations states that the major determinants of health are health care access and quality (Case 2000). Clearly there is a connection between these determinants of health and income. In addition, increased finances have been proved to increase consumption of more nutritious food, offer better housing and safer environments, all increasing the probability of improved fitness (Case 2000). It is a further stretch, but by no means unconceivable, that increased

income can cause reduced stress, and therefore, lessen the likelihood of sickness.

Several surveys and data back up the income's relation to health. For example, generally speaking, people in wealthier countries have lower morbidity rates and longer life spans than those situated in poorer regions (Case 2000). There is some question, however, of the causal effect of this. For example, if a person is unhealthy, then he or she will not be able to work as much, and therefore, will have a reduced income. This argument, though valid, seems to be overwhelmed by studies suggesting that income generally increases health. It is worth mentioning that the demand of health care is also affected by its price. If medical costs were lessened, then it would seem apparent that more people would purchase medicine and other health goods.

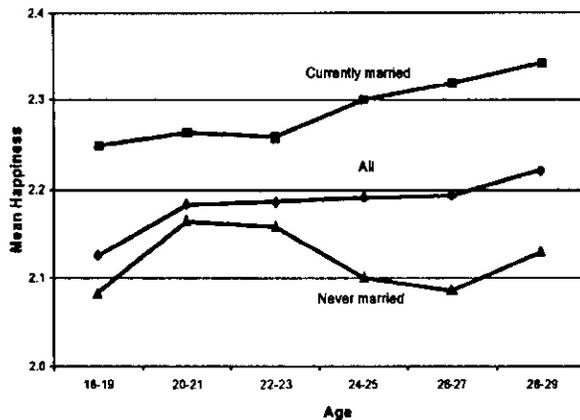
Another major determinant of happiness is one's matrimonial situation. Constantly, people in a marital union are happier than people who are not married (Easterlin 2004b). Furthermore, there have been dynamic surveys that indicate that people are happier after getting married and less happy after separation. Figure 2 (Easterlin 2003) testifies that happiness is related to marriage. However, these surveys do not take into account that people will separate or divorce if the marriage makes them less happy. Therefore, it is self-fulfilling that married persons will report greater happiness. The economic connection to marriage may be surprising to some. Many experts, including Becker, have argued that women's increased role in the work place has resulted in marriage being less appealing (Smock and Manning 1997). However, empirical evidence does not necessarily agree with the negative effect on women working on marriage. Evidence does suggest, however, a man's economic situation directly corresponds to both the likelihood of marriage and the probability of it being sustained (Smock and Manning 1997). If, as suggested, income increases the likelihood of a successful marriage and matrimony increases happiness, then there is a non-materialistic link between income and happiness that is overlooked in neoclassical economics.

The third influential factor on happiness is education. Studies and surveys suggest that people who complete their high school Diploma are happier than those who fail to do so. This can be shown on Fig 4 from (Easterlin 2003).



**Figure 3. Mean happiness, cohort of 1941-1950 by level of education and age. Three-year average is centered at each age.**

There are two reasons for income's relation to happiness. Firstly, people who have a higher education on average make more money than those with lower education (Pyror and Schaffor 1999).



**Figure 4. Mean happiness of females by marital status, birth cohort of 1953-1972 from ages 18-19 to 28-29.**

The second reason why education is so close to income is because richer individuals are more likely to pursue higher education than lower income persons. A study in India concluded that youth coming from higher income families expected their income to increase with education (Dhesi 2001). Additionally high-income families can pay for expensive post-secondary education and are more likely knowledgeable about subsidies and bursaries. Because income allows for higher education and reflects greater learning, it is important to inspect this relationship to determine its effects on the happiness income correlation.

The effect income has on seemingly non-economic happiness determinants such as family size, marriage, obesity, health, and education should not be disregarded when considering happiness income

relationship. These factors could play an important role in both the explanation and prediction of economic analysis and public policy. It seems that conventional economics have over emphasized the effect of income on happiness but have underestimated other variables that impact happiness.

#### **IV. HAPPINESS AND RATIONALITY**

In economics, a major concern, is if people have the ability to make choices to maximize their happiness. Generally, with regard to happiness, rationality requires both that individuals can maximize their happiness, and will make the appropriate choices that do so (Simon 1978). The neoclassical theory makes several rationality assumptions. The foremost of these is that people know the full impact of each of their decisions. As a result, there cannot exist any methodical errors in the decision making. If any sporadic mistakes do occur, these random errors can be disregarded because they are aggregated and thus offset themselves. Humans are assumed to know how much utility they will achieve and be able to compute the present value of future satisfaction. This conventional theory assumes that people are perfectly informed, act completely freely, choose to maximize their happiness, and therefore, have no self-control issues. Moreover, the neoclassical theory contends that every choice made by a human is rational. For example, smoking and unhealthy eating are happiness maximizing rational decisions (Frey and Stutzer 2006). Behaviour economics disputes the neoclassical implied assumption that people always make decisions that maximize subjective well-being maximizing. It does so by attempting to separate the decision from what the individual actually wants. By assuming that people's choices reveal what they truly desire, conventional theory does not allow for their rationality to be questioned. Although most behaviour economists believe that often revealed preferences will equal preferred preferences, there are many instances where they do not; one example is the natural lack of self-control apparent in some people. Both myopic behaviour and procrastination hints toward economic agent's lack of restraint (Frey and Stutzer 2006). As a result there is a difference between what people want and what would maximize their utility.

To show how self-control issues conflict with revealed preference, Frey and Stutzer examine smoking, obesity and television watching. Studies on smoking suggest that eight out of ten smokers would like to quit. Additionally, on average, smokers attempt to quit once every eight and half months and most fail to sustain restraint smoking. The neoclassical theory would suggest that an increased cost of smoking would

decrease utility if there were no externalities because people know what they want. A model that incorporates self-control problems suggests that an increase in cost to cigarette smoking could actually increase happiness. When a fifty-cent tax was introduced in Canada and the United States, there was a reported overall increase in happiness among those smoking at the time (Frey and Stutzer 2006). The increased cost to smoking further discouraged new entrants from consuming cigarettes.

Similar evidence arises when observing obesity. Over the last three decades, the body mass index research has indicated massive increases in obesity over most of the Western World (Frey and Stutzer 2006). A major reason for this is the decreased costs of high calorie foods relative to low calorie options. Again, the neoclassical theory predicts that since people's choices represent their maximized utility, increased obesity increases happiness. After all, people could choose to eat healthy because the absolute value of healthy foods did not rise. A behavioural economic model that incorporates flawed self-control predicts that despite people's decisions to eat less healthy, and therefore, increase body weight, there could be a decrease in happiness. A study of 8,000 women suggests the latter theory to be the more accurate. Increased obesity decreases satisfaction between the individual and partner, work, society and family (Frey and Stutzer 2006). There is also a link between stress, depression and obesity, but because it is unclear which is the cause and which is the effect, it is difficult to blame obesity for these additional damaging factors.

A third instance of apparent lack of self-control is concerned with television watching. In some countries people watch as much TV as they spend time performing paid work. Neoclassical theory predicts that this increase in television watching will necessarily increase utility, while the behavioural economics is not so certain. Some economists contend that the reason why so many people watch so much television is because of the immediate benefits without apparent costs. This means that one hour of additional viewing is not detrimental, but many accrued hours of screening can greatly hurt individuals. Costs such as sleep loss, social isolation, educational disadvantages and career limitation do not necessarily appear in the short run. In addition, some contend that television watching appears to create dissatisfaction with life. An example of this is Canada; because of its sheltered location was unable to receive TV signals until the early 1970's. Studies conducted by Tannis MacBeth Williams indicated that after the television was introduced to the home, overall happiness decreased (Frey and Stutzer 2006). This is not to say that the optimal amount of viewing is zero but rather to indicate that increased watching can have adverse effects on happiness. The underlining common

denominator of all three of these examples is that people chose alternatives that did not maximize their subjective well being.

Frey and Stutzer go further to suggest four instances when a selection is overvalued and as a result people do not choose happiness maximizing behaviour. The first is concerned with human's constant underestimation of their coping ability. The inability to forecast their adaptation capabilities applies to both positive and negative scenarios. For example, a graduate student will claim to be devastated if he or she does not receive tenure. Studies show that the student, over five years, is just as likely to be happy with or without the tenure (Frey and Stutzer 2006). The same underestimation is applicable with managing hardships, such as deaths of significant others. The second tendency is for agents to overvalue or undervalue options due to the distortion of memories. It is necessary for humans to resort to related memories when facing a decision for insights on the "right" choice. Unfortunately, people have an inclination to refer to their most memorable and emotionally intense moments. As a result, humans perform biased and inaccurate assessments and are inclined to overvalue and undervalue options. A third tendency that causes the over and underestimation of options is people's inclination to rationalize. People are constantly explaining the reasons for their choices to both themselves and others. As a result, options whose value is easily articulated tend to be overvalued and those, less expressible, undervalued. The fourth and final reason for inaccurate choices is that people do not necessarily know what makes them happy. This is a very vague and complicated issue. Indeed, people are influenced by multiple factors. At any given moment they are often unsure which factor is giving them the emotion. A simplified example is a group of friends watching a hockey game. One comrade feels good and this person may think he feels good because of the game, when really, he feels this because the companionship of his friends. A fifth factor that should be mentioned is the concept of procedural utility. This is the case when individuals not only care about the outcome, but also the process and conditions that lead to the outcome (Benz 2005). For the most part, neoclassical economics is solely concerned with outcomes, and ignore procedural utility. These five reasons for the wrongful judgment of happiness help explain human's non-happiness maximizing behaviour; a notion that neoclassical theory denies existence.

## V. IMPLICATIONS

The implications of findings showing that individuals do not, in fact, follow the neoclassical or conventional view of happiness can have

significant implications. Since these consequences could run into almost every conceivable facet of life, only those directly and obviously applicable to this paper will be discussed. Because income does not significantly increase happiness after a certain point, it can be argued that there should be greater income distribution from the high to the lower income ranges. In addition, perhaps, economics should focus less increasing welfare by focusing on income and prices and more on other variables that are related, but respectively unique. For example, unemployment should not only be seen as an unused resource but also as a significant indicator of overall happiness. If the evidence that is suggested in this paper is correct, a person on welfare would be less happy than an employed person earning the very same amount, *ceteris paribus*. In addition, economic policy could be changed to increase both the likelihood and the sustainability of marriage because by doing so it is increasing welfare. Education does not only generally produce a more effective and knowledgeable workforce, but it also increases the subjective well-being. There is much literature on the affects of health on workplace productivity, but what is often overlooked is the effect health has on happiness. The findings discussed in this essay would conclude that affordable health care option for all is not just a justice or an equality issue, but also one that maximizes utility. In Physiology, the set point theory emphasizes that individuals' happiness is a factor of both personality and genetics, and will remain the same no matter what throughout a person's life (Easterlin 2004). In contrast, the neoclassical economic theory stresses that material substance is the determinant of happiness. However, after looking at the data, it would seem that a comprise of the two ideals would be most accurate in determining and explaining actual human behaviour. The implications of the rationality of happiness also have seemingly far-reaching effects. The evidence in this article would encourage the use of taxes and other government interventions to help people maximize their own utility. In many instances, people don't want to consume a product, but they lack the self-control not to indulge. Perhaps educating people of the consequences of negative characteristics such as obesity, television-watching and smoking can help maximize happiness. The economic model should consider that people are flawed. It ought to show that outcomes are not necessarily the source of all happiness, but that the process of achieving a certain outcome also can affect utility. Of course, all these arguments are debatable because of the multiple ramifications of each, but even so, it is important to discuss and recognize their existence.

## VI. CONCLUSIONS

The conventional view of happiness seems to be in need of revision or reconstruction, in light of the increasing information gathered from surveys and data. The materialistic marginally decreasing happiness returns to increased income contrasts with empirical evidence that suggests happiness plateaus after a certain level. Furthermore, the income happiness relationship seems to be the result of not just the possession of the quantity and quality of goods, but also of income's relationship to other happiness determinants such as health, marriage and education. This intriguing finding can offer important insights into welfare economics. The ability of people to maximize their own utility can also be disputed because of lack of self control. By examining certain scenarios that show people making the "wrong" choices, economics can benefit and contribute to other sciences which have already offered insights into this seemingly irrational behavior. There seems to be a great need for altering current mainstream economic assumptions and predictions. Unfortunately, identifying a problem is rarely as daunting as ratifying one.

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