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Making Do with Less: An Entropic View of Happiness

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ABSTRACT

Building on previous research on happiness, hierarchy of needs, entropy, consumption, experientialism, and collectivism, I suggest that countries that yield low entropy as a result of their consumption patterns are likely to be happier than countries with high consumption entropy, and that such relationship between entropy and happiness at a national level is positively moderated by the country's experientialist and collectivist orientations. Consequently, I propose three hypotheses to be tested by means of an experimental design which is only preliminary sketched at this moment of time. Finally, I discuss expected results, anticipate potential contributions, and suggest future research possibilities.

KEYWORDS

Happiness, subjective well-being (SWB), quality of life, life satisfaction, entropy, consumption, experientialism, materialism, collectivism, individualism.

INTRODUCTION

What do Colombia and Vanuatu, a small group of islands in the South Pacific, have in common? According to the Happy Planet Index (HPI), these are the happiest countries on earth (NEF, 2007)¹. This index places Colombia as the second-happiest country in the world, right after Vanuatu. One could intuitively assume that someone living in a peaceful paradise of white sands and turquoise seas feels happy about it. In the case of Colombia, however, the result is rather surprising considering this country's social and political turmoil. It might be expected that an objective assessment of the Colombian reality rated this country as unhappy, at least from an outsider's point of view, but such is not the case according to the HPI. In fact, the World Database of Happiness (WDH) also considers Colombia as the second-happiest out of 95 nations (Veenhoven, 2007)². Moreover, Colombia's placement in both the HPI and WDH is consistent with more orthodox studies on happiness conducted at a national level. In a study of happiness in 90 countries, for instance, Veenhoven and Kalmijn (2005) rank Colombia as the happiest one. When these authors adjust their measures for "inequality," linearly combining their measures of national happiness with such measures' standard deviations, Colombia falls back only one place. In another study, Diener et. al. (1995) rank Colombia in the eighth place among 55 countries in terms of

² Edited and published by the Erasmus University at Rotterdam, the WDH is an internet-accessible index that averages happiness ratings of 95 nations from 1995 to 2005. The WDH describes itself as an "ongoing register of scientific research on the subjective enjoyment of life" (Veenhoven, 2007). As opposed to the HPI, the WDH is a happiness-without-efficiency index that does not consider ecological impact in its measures.

¹ The New Economics Foundation (NEF), a UK-based non-governmental organization, publishes the Happy Planet Index (HPI), a custom indicator that combines environmental impact with well-being measures to estimate the environmental efficiency with which people live their lives. Environmental efficiency is accounted for by calculating each nation's "ecological footprint", that is, the total land surface required to adequately sustain the country's population. The ecological footprint is combined with life-satisfaction self-ratings and a life expectancy forecast to yield an index that reflects "the efficiency with which countries convert the earth's finite resources into well-being experienced by their citizens" (NEF, 2007). In other words, the HPI is a happiness-with-efficiency measure.

subjective well-being (SWB), measured by national surveys asking respondents how happy or how satisfied they are³.

Colombia's high placements in all of these listings contrast sharply with the United States': despite exhibiting significantly higher economic, social security, and welfare standards than the former, the USA is rated 150th in the HPI rank (out of 178 nations), and 17th in the WDH rank (out of 95). The poorer HPI standing, as compared to the WDH listing, is easily explained by the fact that the USA's ecological footprint is the highest amongst all the nations included in the HPI index, thus, resulting in a much lower composite measure of happiness-with-efficiency. In other words, the US' population is using up a disproportionately high amount of the planetary resources in exchange for a relatively small return in happiness or SWB.

Colombia's placement in the HPI and WDH might be explained in part by previous research that has shown higher levels of satisfaction for people whose life is not materialistically or individualistically oriented; that is, a consumer's choice to favor low-cost personal experiences and social interaction over accumulating costly material possessions seems to translate into a perception of happiness (Csikszentmihalyi, 2000; Van Boven, 2005). In a very general way, it could be inferred that happiness is more likely to be found by interacting with people and having few possessions than by owning many things. Interestingly enough, this perspective seems consistent with Csikszentmihalyi's suggestion that high entropic consumption is often related to a lower perception of happiness (2000). That is, national levels of happiness might be inversely related to the amount of energy spent on trying to improve life quality. In short, a comparison of entropy versus happiness that considers national materialism or collectivism should provide clues to the reasons behind varying levels of happiness around the world. Thus, my central thesis affirms that happiness is inversely related to increases in entropy, and that this relationship is moderated by national orientation on the experientialist and collectivist dimensions.

THEORY AND ANTECEDENTS

One of the biggest constraints when studying happiness in individuals or nations is the sheer diffuseness of the construct. There might be as many definitions for happiness as there are theorists devoted to studying it. Previous research has alternatively—and sometimes interchangeably—used "satisfaction," "well-being," "living well," and "happiness" as analogous concepts. Happiness has also been associated with both a reasoned (objective) self-assessment of the personal situation and a general (subjective) feeling of well-being. The latter has prevailed and most recent studies focus on SWB as a proxy for happiness (Steel and Ones, 2002). The present study will treat happiness as synonymous to life satisfaction or SWB.

The Quest for Happiness

In their search for happiness, many people spend most of their productive years striving to make money and to accumulate material possessions. There is significant evidence, however, that indicates that increasing material goods or income level does not result in a proportional increase in happiness. On the contrary, continually competing for professional success, seeking higher income, and buying as many things as possible could be a direct path to unhappiness. Even if material goods add to quality of life, the cost/benefit relation is quadratic rather than linear, and there is a certain point past which no significant improvement in life satisfaction is attained by

³ Some theorists consider happiness as one of the core components of subjective well-being. Other components of SWB include life satisfaction, hedonic balance, fulfillment, and stress (Kim-Prieto, 2005).

accumulating additional possessions (Csikszentmihalyi, 2000; Van Boven, 2005). Figure 1 shows a simplified illustration of this relationship, with an extreme case represented by curve B for which acquiring additional material possessions over a specific threshold might in fact reduce the level of happiness.

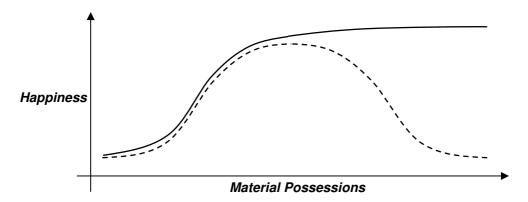


Figure 1. A hypothetical representation of the relationship between material possessions and individual happiness.

From the ancient Greek philosophers to modern-day theorists, this notion that materialistic goals and happiness are negatively related has been a recurrent issue. In 1930, Bertrand Russell proposed that living with "zest" led to a happier life; by zest he meant enjoying life, working at something meaningful but not in excess, engaging in multi-faceted interests, dealing with challenging situations, accepting that some realities cannot be modified, giving and receiving affection, and having close family relationships (Russell, 1930). More recent writers have also preached about the benefits of this kind of experientialist perspective. Csikszentmihalyi's (1990) "flow" (self-controlled, goal-related, meaningful actions), for instance, is quite similar to Russell's zest. In general, seeking experiences and socializing rather than continuously gathering material goods seems to translate into a richer, healthier and, therefore, happier existence (Van Boven, 2005).

Maslow Revisited

Abraham Maslow's taxonomy (1968, cited by Csikszentmihalyi, 2000) might be useful in explaining experientialist consuming behavior. That is, consuming behavior might respond to a desire to satisfy Maslow's existentialist categories: lower needs, love and belonging needs, and esteem and self-actualization needs. Another motivator that Maslow may have overlooked, which transcends existentialism, is the need to experience and keep the mind focused and attentive. In this context, engaging in goal-directed purposeful activities helps people fill personal voids. Csikszentmihalyi suggests that in materialistically oriented cultures consuming in itself is a mechanism by which people seek experiential rewards to fill such voids in lieu of more meaningful experiential (and/or social) activities. I further propose that the absence (or scarcity) of consciously meaningful activities, and the resulting feelings of emptiness, contribute to generalized feelings of unhappiness in countries with a strong focus on material well-being.

Smarter Versus Harder

The idea that meaningful experiences fulfill higher-order human needs in a way that costly material goods cannot satisfy them is consistent with Sujan et al.'s work-

smart propositions (Sujan, 1986; Sujan, Weitz and Kumar, 1994). Indeed, mentally-challenging, learning-oriented activities are intrinsically motivating as they satisfy basic human needs that in turn trigger feelings of satisfaction and well-being (Deci and Ryan, 2000), especially if performed in a collective social context. On the other hand, individualist, mentally-passive, performance-oriented, and extrinsically-rewarded activities contribute only marginally, if at all, to overall satisfaction. Add up the cumulatively negative effect of having to work many hours per week in mind-numbing jobs, as is customary in countries like the USA, and you have an intuitively appealing explanation for the differential happiness between this country and Colombia. That is, less stringent work schedules might help us understand why Colombian citizens tend to feel happier than nationals from other countries. Working smart could also be part of the recipe to happiness⁴.

Experientialism

After the 9/11 terrorist attacks, American consumers bought goods in record quantities, complying with President Bush's encouragement to "go out shopping" (Arndt et. al., 2004), thereby, aptly reflecting a phenomena common to the USA and many other western countries where consuming is deemed a patriotic act (Csikszentmihalyi, 2000). When US citizens "go out shopping," they are satisfying a short-term goal of having some pleasure by buying things. In this context, shopping becomes a substitute for more meaningful experiences. When purchasing is directed towards experiential consumption, however, there is a longer-term objective of enjoying through experience, something that previous research has shown to give happiness (Van Boven, 2005). In different circumstances than the 9/11 events, but under equally upsetting terrorist threats, Colombian citizens opt for family-binding experiences rather than buying things; that is, Colombians seem to have chosen the long-term, enjoyable, and communitarian "to-do," rather than the short-term, pleasurable, and lonely "to-have."

Collectivism

The contrasting attitudes between US and Colombian citizens for dealing with threatening conditions should also be evaluated within a collectivism framework. Previous investigations have reported that collectivism is a survival mechanism in poor countries, and thus, could be related to well-being (Ahuvia, 2002). In wealthier countries, however, collectivism appears to be inconsistent with the prevailing cultural pressures to achieve personal and economic success. That is, a collectivist orientation might in fact result in lower levels of SWB in wealthy economies. Therefore, whereas collectivism might contribute to SWB in a poor country like Colombia it could actually reduce life satisfaction in a wealthy country like the USA, a contrasting result that calls for careful empirical assessment.

The Entropic Perspective

An interesting and unorthodox approach to the previously suggested relationships, together with the possible moderation effects of collectivism or experientialism, involves assessing such antecedents of happiness from an entropic perspective. According to Csikszentmihalyi (2000), happiness and SWB could be

⁴ In fact, the legal work week in Colombia is 48 hours, more than the standard in many first-world countries. Therefore, any comparison of workload across different countries must take into account other factors besides legal work hours, such as average overtime, commuting time, the work environment's degree of competitiveness, etc.

related to the entropy resulting from consumption behavior patterns⁵. Studies conducted by Csikszentmihalyi show that the fossil and electrical energy consumed in a specific activity—and consequent consumption contribution to entropy—are often negatively related to the degree of happiness derived from such activity. This could be explained because engaging in passive consumption requires lower levels of psychic energy than more mentally-challenging social activities, which in turn results in lower reports of happiness.

On the other hand, as serious as the unhappiness issues can be, materialistic/individualistic consuming and working habits may have other, more detrimental consequences that can be even worse on a global scale. Parting from an entropic view of consumer behavior, Csikszentmihalyi suggests that consuming patterns prevailing in countries like the USA are resulting in entropic processes that accelerate the planet's decay⁶. The impact is so great that at least two additional planets would be needed to sustain the current population if everybody on earth lived and consumed as the USA does.

The coincidence of high entropy and low SWB in materialistic/individualistic countries suggests some fascinating inferences about the relationship between the entropy of consumption and happiness at a national level. That is, at the individual level, higher contributions to the planet's decay might (subconsciously?) result in lower levels of happiness. On a cumulative national level, a generalized pattern of highly entropic consumption behaviors might thus result in collective feelings of unhappiness. Reversing this assumption, I propose that collectivist, experientialist countries with lower consumption entropies are happier in general terms.

RESEARCH QUESTIONS

I suggest that countries with higher happiness ratings will show lower entropy as a result of their experiential activities. The impact of consumption on entropy can be accounted for using Csikszentmihalyi's (2000) net effect of consumption; that is, subtracting negative outcomes from positive outcomes to determine the net effect on the world's order. The resulting net consumption effect (NCE) is an inverse measure of entropy: a positive NCE indicates negative entropy and a negative NCE indicates positive entropy (and corresponding decay of resources). Therefore, I propose the following hypotheses, framed within the theoretical background previously discussed, and using NCE as a proxy for consumption entropy cost:

*H*₁: Countries with low consumption entropy are happier than countries with high consumption entropy.

To investigate possible situational factors due to cultural specificity, I suggest testing for moderation effects on account of the different nations' orientations towards experientialism and collectivism. Therefore

H2: The positive relationship between low consumption entropy and happiness is stronger in experientialist countries than in materialist countries

In the context of the present study, the physical concept of *entropy* is reduced to its simplest definition as *change to a more disordered state*. Therefore, on a global scale, negative entropy ("negentropy") contributes to the world's order and positive entropy accelerates the world's resources decay.

⁶ An entropic view of consumerism entails calculating the net effect of consumption by adding up positive outcomes—increased order because of production processes and life quality improvement—and subtracting negative outcomes—entropy caused by those productive processes and by using up or wasting the things produced (Csikszentmihalyi, 2000).

H3: The positive relationship between low consumption entropy and happiness is stronger in collectivist countries than in individualist countries.

Figure 2 illustrates the hypothesized relationships.

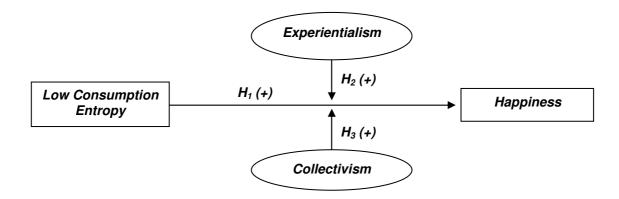


Figure 2. A general model to explain the relationship between low consumption entropy and happiness at a national level.

METHODOLOGY

Besides testing the main hypothesized relationship between a country's happiness measure and its average NCE, the proposed research will focus on testing for cultural trends (i.e., experientialism and collectivism) as possible moderators that affect such a relationship. Details on the empirical portion of the research are still in progress at the present time, so I hereby present a tentative research design.

Participants

I propose a cross-national study that compares self-reported happiness and NCE in Colombia, the USA, and a third country rated half-way between the happiest and the unhappiest countries in previous ranks. Such a third candidate could be India, currently in the 62nd place in the HPI. The inclusion of India would not only add a different reference in terms of happiness assessment position, but it would also provide a sharply contrasting benchmark in terms of national culture and religious orientation. Ideally, the study should validate previous measures of happiness by using surveys directed to random samples of respondents from the three countries. Such samples should encompass varied socio-economic strata in order to effectively control for differential situations that could affect the relationship, including income and educational levels. Logistic and practical considerations, though, call for a more modest approach, at least on this first instance. Therefore, national-level happiness indexes will be compared to individual consumption entropy estimated through hypothetical simulations. The latter will be assessed conducting surveys among MBA students in the three countries, which will be not only easier to administrate than random population samples' surveys, but will also provide a cross-national comparison of relatively socially equivalent respondents. This way, should I encounter significant differences between the three groups I will be able to derive relevant inferences on the relationships between the constructs of interest.

Test Design

The study will assess self-reported happiness, consumption entropy cost as measured by NCE, and experientialist/collectivist orientation. Based on Abraham Maslow's taxonomy (1968, cited by Csikszentmihalyi, 2000), each country should be evaluated in at least three different categories: lower needs satisfaction, love and belonging satisfaction, and esteem and self-actualization satisfaction. Likewise, to have a more complete picture, at least one product (material good) and one service (experience) should be selected for each one of these three categories, with respondents answering questions directed at providing input to estimate the NCE. The proposed investigation, however, will focus on leisure activities under the assumption that recreational behavior often responds to those experientialist needs that transcend Maslow's existentialist taxonomy. Therefore, one recreational product and one leisure experience will be evaluated, chosen so that they are available to the average income levels expected for the respondents targeted.

Although the instrumental details are still far from being resolved, in general the surveys will entail asking respondents to (hypothetically) dispose of a given amount of money and/or a given amount of time. Respondents will thus be given different choices to spend their income and leisure time in order to define corresponding consuming patterns in function of such variables as country of origin and self-rated happiness, with demographic factors accounted for as controls.

Logistics permitting, I will conduct personal interviews in order to record subtle information regarding the respondent's personal, social, and work environment, as well as other contextual data that might contribute to the analysis.

Operationalization

Appropriate variables must be defined in order to adequately operationalize the hypothesized relationships.

Predictor. Net consumption effect (*NCE*), as a proxy for consumption entropy, will be the independent variable. I will use a custom index developed according to Csikszentmihalyi's (2000) general formulation that the net effect of consumption results from subtracting negative outcomes (entropy caused by production and consumption processes) from positive outcomes (increase in universal order and quality-of-life improvement). The following equation summarizes the proposed estimation for *NCE*:

$$NCE = OI + LQI - PPE - CE \qquad , \tag{1}$$

where *OI* is *order increase*, understood as value added by turning raw materials into useful goods; *LQI* is *life quality improvement*, estimated as self-reported life satisfaction resulting from the consumption of a specific good or service; *PPE* is *production process entropy*, calculated by adding the product's or service's ecological impact (electrical or fossil energy used and waste generated in the production process) plus the price paid for it; and *CE* is *consumption entropy*, estimated by the electrical or fossil energy used in consuming the good or service once (in BTUs) divided by the number of times the same good or service is expected to be used by the respondent (useful life in number of uses). Thus, in general terms, the NCE formula will give an arbitrary measure of consumption impact that takes into account contribution to well-being minus entropy.

Criteria. National happiness (*H*) will be the criterion, as measured by the NEF formulation (2007):

$$H = (LS * LE) / EF , \qquad (2)$$

where *LS* is *life satisfaction*, measured by custom surveys assessing overall satisfaction with life; *LE* is *life expectancy*, understood as life expectancy at birth estimated by national and/or international statistics agencies; and *EF* is *ecological footprint*, estimated as the land area required to sustain the country's population.

Moderators. Published ratings of the participating countries on the experientialist/materialist and collectivist/individualist domains will be used as moderators.

Controls. To account for alternative moderation effects due to cross-cultural differences, the participating nations' prevailing religious orientation and ethnic composition may be used as control variables. Actual operationalization of such control variables is pending at the present time.

EXPECTED CONTRIBUTIONS

Integrating previous perspectives on happiness and satisfaction of needs, I expect to find supporting evidence for the notion that excessive hedonism without a balancing sense of belonging and mastery goals results in a reduced perception of happiness. Moreover, based on this study, I expect to make inferences on the lowentropy condition of intrinsically rewarded and enjoyable experiences, and its effect on happiness. Likewise, I anticipate that extrinsically rewarded and pleasurable goods will yield high entropies and subsequently provide little happiness.

An obvious conclusion should the above results be achieved is that reverting to low-entropy habits does not only help the environment but also contributes to happiness and SWB, with mixed potential effects for the economy. For instance, when presenting his entropic view of consumption, Csikszentmihalyi (2000) raised some concerns that moving towards low-entropy behavior patterns could affect economy by weakening the productive sectors and fostering unemployment. A stronger emphasis on experience-driven consumption, rather than a goods-driven one, might be the answer to such concerns. Think how talking about an "era of service" has become a commonplace in popular literature in direct reference to the multiple business opportunities available for service providers. As a matter of fact, the business potential of service might be much higher than even the most optimistic analyst would imagine if highly materialistic cultures shift towards experientialism as a means to achieve quality of life. Comparing goods to corresponding services that substitute for them would likely show that services actually decrease entropy—or at least contribute less to the decay of resources—whereas material goods increase it. This notion poses intriguing implications: increasing the levels of happiness-with-efficiency might actually require some sort of reverse technology achieved through manually-skilled immigrant labor force or from outsourcing companies. In fact, if the effect of such a reversal to low-tech economies results not only in higher happiness-with-efficiency but also higher SWB (i.e., happiness-without-efficiency)—something worth being tested in future research projects—the case for low entropy consumption would be even stronger.

If empirical testing provides supporting evidence for the hypothesized relationships, regulatory entities could tailor marketing and public policies aimed at providing relevant entropic information to consumers that allows for intelligent purchase choices. An estimate of contribution to entropy could be attached to products or services as a measure of their ecological impact, or some sort of "low-entropy" or "negentropy" (negative entropy) certifications could be issued to certify a product's contribution to the world's well-being. Besides the obvious contribution to the environmental lobby, several interesting marketing and consumer behavior possibilities arise. For example, amidst the current trend of promoting countries as consumable brands to attract tourism and foreign investment, the entropy-happiness issue addressed in this study could prove to be a valuable nation-marketing tool.

Consumption might thus be reoriented in ways that attempt to satisfy individual needs without depleting the planet's resources, thereby certainly contributing not only to a happier individual existence but also to a brighter future for humankind. An experientialist focus of consumption, united to an emphasis on service rather than on products, could simultaneously preserve scarce resources and help people live happier, richer, and more fulfilling lives. More than likely the answer to the ancient quest for happiness rests on the simple but usually unheeded advice of *making do with less*. That is, less material possessions, less competition for economic success, less worrying about money. At the same time, it might be wise to *make do with more*. More experiences, more social intercourse, and more mental challenges.

ADDITIONAL AND FUTURE RESEARCH

Future research should attempt to replicate this study's findings in more complex and sophisticated experimental conditions in order to effectively control for potential specificity. The study should also be extended to additional nations and to a wider array of cultural, ethnic, and religious profiles in order to generalize validity. Furthermore, the NCE index must be fine-tuned so that it can become a practical tool for informed purchase decisions. If it is ever to be used for such sort of responsible marketing applications, the NCE index would have to be tailored to fit a consumer's choice behavior, possibly dropping the price from the equation. Likewise, given that it would turn out to be a standard certification, subjective self-assessment of life-quality improvement would have to be replaced by an external (i.e., standardized) evaluation of the same construct. Additionally, potential moderators should be further investigated to customize entropy-driven public policies to particular cultural contexts.

The proposed study focuses on leisure and recreational, and therefore experientialist, activities. Future studies might also consider incorporating products and services purchased to satisfy Maslow's existentialist needs to establish contrasts. In this context, I believe it would be especially interesting to compare countries in terms of how they work, and seek possible relationships between happiness, entropy and work habits. Intuitively, and somehow liberally extrapolating Sujan et al.'s theses on working smarter (Sujan, 1986; Sujan, Weitz and Kumar, 1994), happy countries seem to work smarter than unhappy countries, which calls for some very intriguing research. Working habits and typical work schedules could be compared across nations to test a possible correlation with levels of happiness. That is, happy countries like Colombia could be closer than other not-so-happy countries to that elusive optimal workload threshold suggested by Sujan et. al.

Multiple avenues lie open for additional research.

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