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The Hedonistic Paradox: Is Homo Economicus Happier?

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The "Hedonistic Paradox" states that *homo economicus*, or someone who seeks happiness for him- or herself, will not find it, but the person who helps others will. This study examines two questions in connection with happiness and generosity. First, do more generous people, as identified in dictator experiments, report on average greater happiness, or *subjective well-being*, as measured by responses to various questionnaires? Second, if the answer is affirmative, what is the causal relationship between generosity and happiness? We find a favorable correlation between generosity and several measures of happiness and examine various possible explanations, including that material well-being causes both happiness and generosity. The evidence from this experiment, however, indicates that a tertiary personality variable, sometimes called psychological well-being, is the primary cause of both happiness and greater generosity. In contrast to field studies, the experimental method of this inquiry permits anonymity measures designed to minimize subject misrepresentation of intrinsic generosity (e.g., due to social approval motives) and of actual happiness (e.g., because of social desirability biases) and produces a rich data set with multiple measures of subjective, psychological and material well-being. The results of this and other studies raise the question of whether greater attention should be paid to the potential benefits (beyond solely the material ones) of policies that promote charitable donations, volunteerism, service education, and, more generally, community involvement, political action, and social institutions that foster psychological well-being.

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1. Introduction

Concern for our own happiness recommends to us the virtue of prudence: concern for that of other people – Adam Smith [*The Theory of Moral Sentiments*, 1759 (1809), pg. 357].

A centerpiece of economics is the claim, set forth in Adam Smith's *The Wealth of Nations* and later demonstrated in the First Theorem of Welfare Economics, that, under certain conditions, the actions of the rational and self-interested *homo economicus* promote the general good, usually understood as the efficient allocation of material wealth. Yet many studies by social scientists cast doubt on the importance of income and wealth to the happiness of most societies. In philosophy there exists a very different conjecture about self-interest and happiness that resonates more with Adam Smith's other major work, *The Theory of Moral Sentiments*. The "Hedonistic Paradox" (or, rather, one version of it) states that the person who seeks pleasure, or happiness, for him- or herself will not find it, but the person who helps others will (or has a greater chance of finding it). Of course, the Hedonistic Paradox and the First Welfare Theorem do not necessarily conflict (Adam Smith apparently reconciled himself to both), but they do suggest very different approaches to the motivation and impact of individual behavior.

A substantial literature now exists on how *getting* money affects happiness. This paper poses, in a sense, the opposite question: how does *giving* money affect happiness? We report the results of an experiment that examines two questions in this connection. First, do more altruistic (i.e., intrinsically generous) people report on average greater happiness (or *subjective well-being* in the terminology of psychology)? Second, if the answer is affirmative, what kind of causal relationship might underlie this? As a concrete and simple measure of generosity, we use a "dictator experiment" in which one subject (the dictator) decides how much, if any, of a fixed sum of money to share with an anonymous counterpart (the recipient). This decision is then related to various measures of subjective, psychological and material well-being that are derived from subject responses to questionnaires. This design provides a simple and transparent measure of generosity that is easily understood by subjects and interpreted by investigators. Compared to field studies, the experimental method also possesses several advantages in addressing the

second question concerning causality. In particular, the laboratory context permits double-blind conditions, i.e., decisions and responses cannot be traced to specific participants either by fellow participants or by the investigator. Anonymity helps tackle two issues that are of potential concern in this investigation. First, it has been shown (e.g., Buchanan, Eckel and Grossman, 2000) that dictator generosity can be influenced by social approval motives, i.e., people share with others partly for self-interested reasons, viz., in order to garner the approval of others. Indeed, when reciprocal relationships exist, generosity even has the potential to increase the giver's material rewards (e.g., see the "trust" game of Berg, Dickhaut and McCabe, 1995). Second, psychological measures have also proven to be vulnerable to social approval motives (see Diener et al., 1999), and responses are less candid when they are not anonymous, e.g., respondents often profess to be happier than they actually are in order to present themselves in a socially desirable way. Finally, the experimental design also allows the inclusion of numerous instruments not available in other data sets, including one to identify any residual social approval motives and some new measures of happiness. Redundant measures of most variables, including of different dimensions of subjective well-being, psychological well-being, and material well-being, permit examination of the robustness of any effects involving those variables.

We find a favorable correlation between generosity and several measures of happiness, specifically, dictators who share with recipients (as opposed to those who give nothing) appear to have more favorable long-run, but not short-run, feelings, including higher overall happiness, higher positive feelings, lower negative feelings and higher peak happiness. We examine various possible explanations, including that generosity causes happiness, that happiness causes generosity, and that material well-being causes both happiness and generosity. The experimental evidence, however, most strongly supports a different hypothesis, namely, that psychological well-being (i.e., healthy psychological functioning) is the primary cause of both happiness and dictator generosity.

The current study finds no significant effect of material well-being on long run happiness. This is broadly consistent with both experimental (e.g., McBride, 2006) and field (e.g., Easterlin,

2001) research indicating that people adapt to income, wealth and other life conditions (although *relative* income might still matter to *relative* happiness). At the same time, our results concerning generosity and happiness are also in line with experiments (e.g., Charness and Grosskopf, 2001) and field evidence (e.g., Alesina, Di Tella and MacCulloch, 2004, Helliwell, 2006) suggesting social preferences are an important determinant of happiness. We propose that these results be reconciled by thinking of psychological well-being as a *stock*, similar to the "hedonic capital" of Graham and Oswald (2006), that produces the *flow* of subjective well-being. Individuals can contribute to this stock by certain types of behavior, including acts of generosity. Higher stocks of psychological well-being, in turn, are associated with more generous personalities, as with a greater inclination by dictators to share their endowments. Thus, generosity is both a *long run cause* of psychological well-being through repeated acts as well as a *short run effect* as with a generous act observed at a given time, such as dictator giving, consistent with findings from a recent development in psychology known as "positive psychology" (e.g., Gable and Haidt, 2005). Many in this movement claim that certain types of behaviors yield sustainable improvements in subjective well-being and that one important behavior of this type is performing acts of kindness (e.g., Lyubomirsky, Sheldon and Schkade, 2005).

The results of this study and others in economics and psychology on income, happiness, social preferences, and psychological well-being raise important questions relevant to economic policy. They suggest the importance for happiness of economic resources, not only as outcomes, but also as means to accommodate activities that promote happiness. For example, Thoits and Hewitt (2001) find that volunteer work improves happiness, life satisfaction, self-esteem and even physical health. Frey and Stutzer (2002a) conclude that democratic rights and economic freedom are positively related to happiness. These results suggest that greater attention should be paid to the potential benefits (beyond solely the material ones) of policies that promote charitable donations, volunteerism, service education, and, more generally, community involvement, political action, and social institutions that foster psychological well-being.

This paper is organized as follows. Section 2 addresses theory, method and evidence on

economics and well-being and proposes a framework for reconciling findings on happiness and generosity. Section 3 details the experiment and presents four hypotheses about the relationship between generosity and happiness. Section 4 presents the results and data analysis, and section 5 discusses the results in the context of the larger debate on well-being.

2. Economics and Well-Being

2.1. Methodological Background

The current study addresses a wide range of theories and utilizes numerous empirical instruments that are unfamiliar to many economists. Moreover, social science research has generated a vast literature on the measures and correlates of well-being. Therefore, the requisite background discussion for this paper is more extensive than the usual one but still cannot really do justice to prior scholarship. For further work in psychology, see articles by a leading subjective well-being researcher (SWB), Ed Diener, and his co-authors (1984, 1999).[1]

A common technique in studies of well-being is a single-occasion, self-report survey containing a scale of responses. These include single-item global inquiries such as the Fordyce Happiness Measure (1988), which asks "In general, how happy or unhappy do you usually feel?" with eleven response categories ranging from "extremely happy" to "extremely unhappy." Although single-item scales enjoy the benefit of brevity, from the point of view of many researchers they also suffer from various shortcomings including the inability to differentiate aspects of well-being. Therefore, most studies have employed multi-item scales: an example is the Bradburn Affect Balance Score (1969), which sums unweighted scores to individual responses to form a single index. The response formats also vary in numerous ways across studies. For example, Bradburn's measure is based on yes or no responses to questions such as

[1] Early contributions include Andrews and Withey (1976), Bradburn (1969), Campbell, Converse and Rodgers (1976) and Wilson (1967). Another leading SWB researcher, Ruut Veenhoven, maintains a register of scientific research on the subjective appreciation of life, the *World Database of Happiness*, that includes data on studies from 140 nations (www.worlddatabaseofhappiness.eur.nl). His current *Bibliography of Happiness* contains 4594 entries including journal articles, books and other scholarly publications. Interest in SWB has even spawned a recently founded association, the *International Society for Quality-of-Life Studies*, dedicated chiefly to its analysis, and a new review, the *Journal of Happiness Studies*, as well as long-established ones such as *Social Indicators Research*.

"During the past few weeks did you ever feel pleased about having accomplished something?" whereas Ryff's Scales of Psychological Well-Being (1989) elicit responses to questions such as "In general, I feel confident and positive about myself" on a six-point *Likert scale*, i.e., a scale identifying agreement or disagreement with the statement in degrees ranging from "strongly disagree" to "strongly agree."

A number of questions arise about the meaning, validity and interpretation of the various instruments that have been used to measure well-being (for a more detailed discussion, see Di Tella and MacCulloch, 2006). The first logical step is to identify what one means by happiness. Approaching the problem from mostly positivist traditions, researchers have usually defined happiness descriptively as reports of subjective state(s). This leads to seemingly difficult questions about how people conceive of happiness and whether they share a common meaning.

Using subjective variables also raises questions (especially among economists) about cardinalism and interpersonal comparability. In psychology, SWB scales are usually treated as cardinal measures of the underlying subjective states (e.g., through addition or averaging of scores and the use of OLS analysis). One may circumvent questions of cardinalism, however, by treating SWB reports as qualitative data, e.g., by employing categorical data analysis (see, for example, Clark and Oswald, 1994). Objections to reported SWB based on doubts about the interpersonal comparability are more problematic, e.g., does the term "happy" represent the same degree of the subjective experience to different persons? [2] There is a significant amount of indirect evidence from objective data, however, that should assuage concerns about these

[2] In opposition to the orthodox economic view, Ng (1997) argues for the measurability and comparability of reported happiness and the underlying preference. Ferrer-i-Carbonell and Frijters (2004) find that assuming ordinality or cardinality in the data analysis matters little for actual estimates. As a further point, reports of cardinal measurement of utility (e.g., Fredrickson and Kahneman, 1993, Kahneman, Wakker and Sarin, 1997) find memory biases such that remembered utility might differ from experienced utility. This has prompted calls for replacing single occasion measures of SWB with repeated random sampling (Kahneman, 1999) and with ordinal measures (see Kahneman and Krueger, 2006). Unfortunately, for most studies, including this one, repeated sampling is not practical. On a related point, Sandvik, Diener and Seidlitz (1993) find some evidence that current mood can unduly affect single occasion measures of happiness, but they conclude that such measures correlate more strongly with peer-reports and with self-reports of SWB over periods ranging from one month to one semester than with transient mood. Moreover, SWB measures have demonstrated considerable stability, even over ten year periods (Costa and McCrae, 1988).

matters. The self-reported measures that most studies, including this one, employ correlate in plausible ways with other observable variables, which bolsters one's confidence that questions of interpersonal comparability as well as cardinalism and the meaning of happiness, although theoretically problematic, are not insurmountable in practical terms.[3] These results suggest that people share a common experience and understanding of happiness and of its degrees, and that self-reports provide a meaningful measure of that state.

One potential source of error in self-report measures of happiness, however, is the response artifact of *social desirability*. This is the tendency for respondents sometimes to distort self-reports in a favorable, or socially desirable, direction (Furnham, 1986), e.g., if survey respondents overstate their true happiness.[4] A commonly used measure of this is the Marlowe-Crowne (MC) Social Desirability scale (Crowne and Marlowe, 1964), a 33 item questionnaire for which higher scores indicate more socially desirable responses. Various SWB scales have correlated significantly with the MC and other social desirability scales (Diener, et al., 1991), suggesting that the former may be somewhat corrupted by this artifact. In addition, various studies show that self-rated happiness is greater in face-to-face interviews than in self-administered written questionnaires (Smith, 1979, Sudman, 1967), implying that the degree of subject anonymity affects SWB results through a social desirability artifact. Other research

[3] For example, different self-report scales of SWB have demonstrated significant and generally high correlations with one another (Fordyce, 1988) as well as with certain objective circumstances in the individual's life (Brickman, et al., 1978), economic conditions of unemployment and inflation (Di Tella, MacCulloch and Oswald, 2001), opportunities for political participation (Frey and Stutzer, 2000a), subject recall of positive versus negative life events (Seidlitz, Wyer and Diener, 1997), reports of friends and family members (Sandvik, Diener and Seidlitz, 1993), reports of spouses (Costa and McCrae 1988), reports from clinical experts (Goldings, 1954), the duration of so-called Duchenne smiles (Ekman, Davidson and Friesen, 1990), heart rate and blood pressure measures of responses to stress (Shedler, Mayman and Manis, 1993), skin resistance measures of responses to stress (Weinberger, Schwartz and Davidson, 1979), and electroencephalogram measures of prefrontal brain activity (Sutton and Davidson, 1997). There is actually evidence that self-reported SWB is more reliable than alternative measures. Irwin, Kammann and Dixon (1979), for instance, found that respondents' ratings of their roommates' happiness more strongly correlated with their own happiness than with their roommates' self-ratings, concluding that peer ratings reflect mainly a projection of one's own happiness onto others. In addition, Fernández-Dols and Ruiz-Belda (1995) found that smiling is an unreliable expression of happiness except during social interaction.

[4] It is interesting to note, however, that the direction of social desirability bias is culture dependent. Cross-country studies (e.g., Easterlin, 1995) suggest that in certain countries including the United States respondents are more inclined to profess happiness, whereas elsewhere (e.g., France and Italy) there is an opposite tendency: When asked if he was happy, Charles de Gaulle replied "What do you take me for, an idiot?," reflecting an assumption, incidentally, about the relationship between happiness and intelligence that is refuted by the data (see Diener, 1984).

indicates that many of those who report that they are happy believe their self-reports but are actually unhappy, and that the MC scale is a helpful tool for identifying this artifact, as well.[5]

Most SWB research is based on the concept of *hedonic happiness*, which is a function of three separate components: positive affect, negative affect and life satisfaction. Affect refers to people's moods and emotions, and surveys of it might ask how often or to what extent the respondent feels or has felt interested, excited, inspired, guilty, bored or nervous, for example. Bradburn (1969) found that positive (or pleasant) affect and negative (or unpleasant) affect are unrelated and virtually uncorrelated with one another, but each correlated independently with a global well-being measure. In addition to the affective components of well-being, Andrews and Withey (1976) investigated the cognitive evaluation of life satisfaction. This is assessed, for example, by responses on a Likert scale to questions such as "The conditions of my life are excellent" and "I am satisfied with my life." Andrews and Withey claim that life satisfaction constitutes a third and distinct factor of well-being, and Lucas, Diener and Suh (1996) concur, arguing that positive affect, negative affect and life satisfaction form separable constructs. [6]

2.2. The Economics of Happiness: Giving and Getting

The scientific study of happiness was initially in the domain mostly of psychologists, but it quickly developed into an interdisciplinary research program. Despite some early and important contributions by economists to the literature (e.g., Easterlin 1974, Ng 1978, and van Praag and Kapteyn 1973), however, it only recently became a topic of intense interest and scholarship in economics. Within a brief period of time, though, economic investigations of happiness have

[5] Using various psychological and physiological measures, Shedler, Mayman and Manis (1993) find that, of people who appear well on self-report scales, there are actually two subgroups. One is psychologically well, but a sizable second group consists of people who are distressed (i.e., experience above average negative affect) but disavow their distress. Weinberger, Schwartz and Davidson (1979) call the latter *repressors* and, as assessed by heart rate, electrodermal responses and behavioral measures, they find the MC scale useful in identifying this group. The authors conclude that repressors genuinely believe their high MC responses but, in reality, experience more anxiety, not only than those with high psychological well-being, but also than those who are distressed and acknowledge it.

[6] Watson, Clark and Tellegen (1988) have confirmed the independence of positive and negative affect using a different instrument, whereas others have challenged this claim of independence. Taken together, however, the evidence suggests that, although positive and negative affect are sometimes inversely correlated at a point in time, the correlation diminishes, eventually to insignificance, with the time-frame and that separate measures are justified (Diener, et al. 1999). Life satisfaction appears to be distinct from positive and negative affect, but we consider it still an open question whether this is a component of what people call "happiness."

been sufficient in number and impact that Frey and Stutzer have compiled extensive reviews of them (2002a, b). One attraction of happiness to many economists is for evaluating the effects of economic variables and policies: Gruber and Mallainathan (2005) and Ng (2003) advocate the use of happiness data for policy analysis when welfare effects cannot be inferred from behavior.

Most of the research on SWB has been dedicated to determining the correlates and causes of SWB. Of particular interest to economists is research on the question "Does money buy happiness?" Broadly speaking, two schools of thought have evolved on this question, which propose that the relationship of happiness to income is either relative or absolute. The economist Richard Easterlin made seminal contributions (1973, 1974) to the relativist position, asserting that "In simple comparisons within countries, there is a repeated positive association between income and happiness; but when one compares rich and poor countries, or higher and lower income situations in a given country at two different times, the happiness differences ... do not appear" (1973, p. 8). He concluded that happiness is based, not on one's absolute income, but on a comparison to others, which in turn depends on one's society and is adjusted as average incomes change. In more recent work, Easterlin has maintained his argument (1995) and based it on shifting aspirations (2001). In contrast, Ruut Veenhoven (1991), a leading proponent of the absolutist school, questions the data analysis of the relativists. Moreover, he argues that, at low levels of income, increasing wealth helps satisfy basic needs and increases SWB, but after needs are satisfied additional income has little or no effect on happiness.

Some studies, e.g., McBride (2001) and Ferrer-i-Carbonell (2005), corroborate the relative income effect on SWB (but see also Senik, 2004, for anomalous evidence of the reverse relationship), and others, e.g., Oswald (1997), find that absolute income matters. Blanchflower and Oswald (2004) find support for both relative and absolute income effects. Nevertheless, although the SWB-income relationship is usually significant, income still accounts for a modest fraction of the overall variance in individual happiness: Diener et al. (1993) point to less than 2%, and even Easterlin (2001), a strong advocate of the importance of relative income, cites a

figure of 4%.[7] Indeed, all objective factors combined seem to contribute little to SWB: Campbell, Converse and Rodgers (1976) found that demographic factors (e.g., income, age, sex, race, education, marital status) explained less than 20% of the variance in SWB, and Andrews and Withey (1976) could account for only 8% using these variables. Regardless of who is right in the debate between relativists and absolutists, most would agree that, at least for developed economies, increases in income will not substantially increase aggregate happiness, and some even claim income is detrimental to SWB.[8] In any case, it appears from these studies that our concern with improving human welfare through greater material wealth is probably exaggerated, at least in economically developed countries.[9]

Consider now the evidence on the relationship between happiness and *giving*, rather than *getting*. Many studies find positive correlations between SWB and altruistic behavior or goals. One type of evidence comes from studies in which the experimenters first manipulate the mood of subjects, e.g., by letting subjects "find" a coin in a telephone booth or by letting them win or lose at a game, after which there is an opportunity to help, e.g., by aiding others with a task or by donating money to a charity (Harris and Smith, 1975, Isen, Horn and Rosenhan, 1973, Moore, Underwood and Rosenhan, 1973, Rosenhan, Underwood and Moore, 1974). Benson et al. (1980)

[7] On the other hand, Andrew Oswald has argued to us that this is a misleading way to think: although income explains only a small fraction of the SWB variance, with so much unaccounted for variance, the persistent SWB-income correlation is an important finding.

[8] The marginal happiness of income appears to diminish quickly: lottery winners do not report being significantly happier than a control group (Brickman, Coates and Janoff-Bulman, 1978), and even the super rich, those among the Forbes' wealthiest Americans, are only slightly happier than the average (Diener, Horowitz and Emmons, 1985b). Apropos, the following quote has been attributed to Arnold Schwarzenegger: "Money doesn't make you happy. I now have $50 million, but I was just as happy when I had $48 million." Ferrer-i-Carbonell and Frijters (2004) conclude that to increase individual satisfaction by one point on an 11-point scale requires an 800,000% increase in income. Other researchers, including Robert Frank (1997), Robert Lane (2000) and Robert Putnam (2000), believe that greater average income is related to a trend of decreasing happiness. Frank argues that the pursuit of short-run material gains relative to others represents a "positional externality," which diminishes resources devoted to activities that do produce long-run happiness, such as time spent with family and friends. Consistent with such an externality, Luttmer (2005) produces compelling evidence that SWB is based on a comparison of earnings.

[9] Indeed, the very preoccupation with material wealth or financial success may be harmful, as suggested by studies showing that more materialistic individuals experience lower levels of happiness and even enjoy their possessions less than others (Kasser and Ryan, 1993, Richins, McKeage and Najjar, 1992, Wright and Larsen, 1993). Another take on this suggested to us by Richard Easterlin is that those with lower relative incomes are both less happy and more concerned with material goals.

identify a positive correlation between life satisfaction and time spent in a variety of helping activities. According to Phelps (2001), people with altruistic personalities report greater overall happiness, and she attributes stalling happiness in the US to a declining percentage of altruists in the population. Interestingly, happiness also seems to be unfavorably related to a willingness to hurt others: the experiments of Bosman and van Winden (2002) and Charness and Grosskopf (2001) indicate that subjects who reduce the payoffs of others are subsequently less happy.

Is there evidence, however, suggesting altruistic behavior *causes* greater happiness? Meier and Stutzer (2004) employ a natural experiment involving the collapse of East Germany and its volunteer structure to claim such causality. Using panel data, Thoits and Hewitt (2001) show that happier people are more inclined to volunteer but also that volunteer work causes greater happiness, life satisfaction, self-esteem and even physical health. Switzer et al. (1995) find that, in comparison to a control group, adolescent boys who were required to participate in service activities showed favorable changes in measures of SWB such as negative affect and self-esteem as well as in behavioral measures such as school and community involvement and problem behavior. Contributors to the positive psychology movement regularly cite acts of kindness as an important intervention for attaining and maintaining higher levels of happiness. Boehm and Lyubomirsky (2006), for example, report that students instructed to perform random acts of kindness during a ten-week experiment achieve significantly higher levels of happiness relative to a control group, even through a one month follow-up. Other interventions have been examined over longer periods and proven beneficial 9-18 months later (Fordyce, 1983). It is striking that the behavioral interventions these researchers have found effective are relatively minor. The acts of kindness Boehm and Lyubomirsky mention include “holding the door open for a stranger” or “doing a roommate’s dishes.” The intervention Emmons and McCullough (2003) use is listing things for which one is grateful, and their subjects report being thankful for “waking up in the morning” and “the generosity of friends.” Another theme of this research is the importance of making happiness-enhancing behavior habitual, although optimal timing is important: daily manipulation is more effective than weekly in the Emmons and McCullough study, but Boehm

and Lyubomirsky find the reverse.

Recent theoretical and empirical research by economists suggests that people who act in the narrowly selfish way typically assumed in economics might actually fail to maximize not only subjective, but even material, returns (e.g., Eshel, Samuelson and Shaked, 1998, Gintis et al., 2003, and McCabe, Rigdon and Smith, 2003). These findings about the subjective and material benefits of pro-social behavior lend credence to Maslow's statement that "The neurotic is not emotionally sick; he is cognitively wrong."

2.3. Hedonic and Eudaimonistic Schools

There are, broadly speaking, two traditions in psychology to the study of well-being, which we will call the *hedonic* and *eudaimonistic schools*. The dominant hedonic school has a more *empirical* (or bottom-up) approach and is *outcome*-oriented, specifically, it stresses *subjective well-being*. The eudaimonistic approach, on the other hand, is more *theoretical* (or top-down) and emphasizes *process*, often characterized as progress toward *psychological well-being*. The theory, design and analysis of the current study are informed by both traditions, so they are reviewed briefly here (see Ryan and Deci, 2001, for further discussion of these two schools).

Although the methodology and terminology of the psychology literature on SWB may seem to have little in common with standard economics, the dominant traditions in both disciplines actually share common philosophical origins. The view of the hedonic school to well-being can be traced to the Socratic doctrine that happiness is the highest good. Philosophical hedonism took this doctrine and held that the chief goal of life is to seek pleasure and to avoid pain, a tenet endorsed by utilitarians like Bentham (1789). In fact, this formed the foundation of Utilitarianism, which, in turn, exercised the principal philosophical influence on the direction taken by mainstream economics. In both psychology and economics, this tradition treats happiness (or pleasure or satisfaction) as an outcome and typically relates it empirically to various life conditions and circumstances. Important recent contributions in this spirit include Kahneman, Diener and Schwartz (1999) and Layard (2005).

The eudaimonistic school is considerably more difficult to describe succinctly, partly

because of its theoretical complexity but also because of the absence of a clear consensus among its adherents on certain points. This school traces its origins to a different classical Hellenic philosophical tradition from the hedonic school, most notably to Aristotle (*Nicomachean Ethics*). The central construct is *eudaimonia* (pronounced yoo-die-muh-NEE-uh), which is often inadequately translated from the ancient Greek as "happiness." It refers to well-being produced through a process of human growth, which Aristotle associated with virtuous action (an alternate translation is "flourishing"). The first modern movement along these lines was "humanistic psychology" (e.g., Maslow, 1968, Rogers, 1961), which broke from most of psychology by its focus on healthy psychological functioning rather than pathology. More recent variations have been called "psychological well-being" (e.g., Ryff, 1989) and "self-determination theory" (Ryan and Deci, 2000). Despite differences in approach, we identify below four important points of agreement or consistent features in this literature.

First, the eudaimonistic approach stresses and distinguishes types of human needs. Although Maslow proposed a multi-layered "hierarchy of needs," most research draws on the simpler Aristotelian distinction between two types of needs. As Erich Fromm (1981) argues, there are "lower" needs and desires, such as physiological needs for food, drink and shelter, the satisfaction of which brings momentary pleasure, and then there are "higher" psychological needs, such as positive relations with others, the realization of which is conducive to growth and produces eudaimonia. Moreover, some conduct or outcomes that satisfy the first can undermine the second, e.g., eating in excess might bring transitory pleasure but not promote personal growth and the happiness that accompanies it.

Second, the goal is not subjective well-being, indeed, the focus is not on any outcome but rather on process, viz., progress consistent with psychological needs.[10] Although eudaimonists have general categories for these needs, a large part of healthy functioning is person-specific: people have different potentials toward which they can progress, a process Abraham Maslow

[10] Interestingly, this dovetails with recent work in economics by Frey and Stutzer (2005) on *procedural utility*, or the happiness associated with processes as opposed to outcomes.

(1968) called *self-actualization* (we will use this term and psychological well-being interchangeably). Moreover, people can be more or less self-actualizing, i.e., they differ in the degree to which they realize their higher potentials.

Third, although subjective well-being is not the goal of the eudaimonistic school, it is seen as a favorable by-product of psychological well-being (PWB). This is eudaimonia, which Waterman (1993, p. 16) defines as "the feelings accompanying behavior in the direction of, and consistent with, one's true potential." These feelings are associated with optimally set challenges: when goals are too easy or too difficult, positive affect is lower (Csikszentmihalyi and Csikszentmihalyi, 1988). In addition, people with high PWB are reported to experience more pronounced positive extremes. Maslow described "peak experiences" of intensely favorable and pleasant emotions among many people who are self-actualizing. Similarly, Csikszentmihalyi describes a "flow" state of extreme happiness in which a person loses the sense of self and becomes absorbed, not with outcome, but rather with an activity (particularly, a creative one) of his own choosing that is challenging but within his capabilities. In apparent contradiction to this, however, behavior aimed at higher needs is sometimes seen as detrimental to happiness. Ryff (1989), for example, writes that "realizing one's goals or purpose in life is not always easy – it requires effort and discipline, which may at times be at odds with short-term happiness."

Fourth, there are common themes among eudaimonists about the kinds of attitudes and behaviors that characterize PWB, but, on this point, there are also considerable differences about the particulars. In the broadest version, Aristotle associates happiness and well-being with a life of virtue. Ryff (1989) sees PWB as having six distinct dimensions, whereas Ryan and Deci (2001) employ a similar but condensed list of three needs. Of these needs, the one common need that generates general behavioral predictions (as opposed to person-specific ones) is *relatedness*: those with high PWB are other-centered and identify with, care about and have positive relations with others. Kasser and his collaborators (2001, Sheldon and Kasser 1995) distill this further into two categories based on personal goals: goals can be *intrinsic*, i.e., oriented toward self-acceptance, affiliation and community feeling, or *extrinsic*, i.e., oriented toward some external

reward such as financial success, popularity and attractiveness. They find that intrinsic people (those whose goals are intrinsic) experience greater PWB and SWB than extrinsic people. In the positive psychology movement, Lymbomirsky and Sheldon (2006, 2005 with Schkade) draw a similar distinction between *circumstances* (e.g., income, physical health, geographic location) and *intentional activities* (e.g., joining a club, expressing gratitude, helping others). They find that adopting new activities produces sustainable improvements in SWB but that changing circumstances does not.

Testing eudaimonistic theories empirically presents certain challenges, mostly related to problems identifying meaningful measures of PWB that can lead to credible tests. Nevertheless, by associating PWB with personal characteristics or goals, eudaimonists have found evidence supportive of their hypotheses (e.g., Ryff, 1989, Sheldon and Kasser, 1995). As a compact measure of self-actualization, Jones and Crandall (1986) propose a shortened version of a 260-item index of self-actualization based on self-reported values and behavior. Ryff (1989) identifies six different dimensions or Scales of Psychological Well-Being, which consist of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth, and also offers an abbreviated version (with Keyes, 1995).

2.4. An Integrated Framework for Happiness and Generosity

In this section, we propose a framework for a positive relationship between happiness and generosity. Similar to the hedonic school, this framework focuses on happiness as the outcome and is descriptive, building on previous empirical findings, including recent ones in positive psychology. This influential movement, which was launched during Martin Seligman's recent term as president of the American Psychological Association, studies the determinants of positive psychological functioning (reminiscent of humanistic psychology), in contrast to the traditional emphasis of psychology on mental illnesses and personality disorders. Our proposal, however, also integrates important elements of the eudaimonistic school and of economic theory.

At the center of this framework is the distinction between stock and flow concepts of well-being. Graham and Oswald (2006) recently introduced formally the stock-flow concept into the

happiness literature, and we consider this an important avenue for understanding well-being.[11] In our version, subjective well-being is a flow that is produced by the stock of psychological well-being (although SWB is also subject to external shocks). That is, PWB can be thought of as a set of personality characteristics, which varies across individuals, and a higher stock of PWB means that an individual is richer in the attributes of psychological health (i.e., is more self-actualizing). Higher PWB, in turn, yields a higher average return in happiness terms. Specifically, this return, or flow, is conceptualized as eudaimonia, and, consistent with the emphasis in this school on feelings rather than cognition, implies greater positive affect and lower negative affect, but not necessarily greater satisfaction with life. As numerous contributors to this literature maintain, those high in PWB are also expected to experience higher peaks in their happiness.

Tying this back to generosity, we propose that certain behaviors, including altruistic ones, contribute to the stock of PWB, which then supports a higher average flow of happiness. This is consistent with results from positive psychology that specific behaviors increase both PWB and SWB (Sheldon and Lyubomirsky, 2006) and that altruistic acts are one such type of behavior (Boehm and Lyubomirsky, 2006). This same literature suggests that what is important is the type and frequency of such acts rather than their size: very small acts of kindness suffice to increase well-being.[12] Conversely, high PWB people are more likely to be observed engaging in altruistic behavior, but this also follows from the fact that self-actualizing people have a stronger preference for behavior consistent with their high PWB. Thus, altruistic behavior is both a cause of PWB as well as an effect of it, consistent with the previously cited findings of Thoits and Hewitt (2001) that volunteering both causes higher well-being and is caused by high well-being.

[11] Graham and Oswald call their stock and flow "hedonic capital" and "hedonic energy," respectively. Their model provides a clever explanation for *hedonic adaptation*, or the regression of SWB to historic levels after shocks. Our framework suggests a few added specifications, namely, that hedonic capital is best thought of as psychological well-being and that there are classes of contributions to the stock that can increase its steady state level and, consequently, the flow that proceeds from it.

[12] This makes sense as PWB is seen as a set of personality traits, and personality is relatively stable, so changing it is necessarily gradual (hence, the emphasis on habits in positive psychology). This has reasonable implications: one would expect a greater impact on a donor's PWB from repeated $50 per week donations than from a once-in-a-lifetime donation of $100,000, or from donating one pint of blood per month than from giving 12 pints once-a-year (apart from the catastrophic fact that the latter would more than exhaust the blood supply of the average adult).

This last point leads to a distinction between short run and long run. Although acts that support PWB are predicted to produce higher SWB in the long run, they do not necessarily have a favorable effect on SWB in the short run. The apparent contradiction in the eudaimonistic argument that self-actualizing behavior both increases and sometimes decreases happiness can be reconciled with this distinction between the short run and long run. In the current context, we assume that altruistic acts contribute to PWB and a higher average flow of SWB. In the short run, however, these acts can increase or decrease short run happiness depending on situation-specific factors. This is consistent with the results of the Konow (2006a) dictator study, which suggest that giving can have a favorable or unfavorable effect on short run affect, depending on the social norm relevant to the context. Thus, the benefits of greater generosity and of higher PWB are expected in the long run, but not necessarily short run, measures of happiness and affect.

3. Experimental Procedures and Hypotheses

3.1. Experimental Procedures

In this section, the details of the subject recruitment, laboratory protocol and experimental design are summarized. In order to provide a clean and transparent measure of generosity, a dictator experiment was employed: one subject (the dictator) is endowed with a sum of money that he or she may share with an anonymous counterpart (the recipient); the recipient has no recourse. Subjects were recruited in one of two ways: some signed up to fulfill a course requirement for undergraduate Economics and Psychology classes and others were recruited from undergraduate social science classes. Subjects were at no time told the purpose of the experiment, and subsequent queries of several students suggest that they did not surmise it. All dictator sessions involved a total of 24 subjects: 12 dictators and 12 recipients. All subjects first showed up at a common room, Room A, of the economics laboratory where they were individually registered and received a $5 show-up fee. Upon entering, each subject also drew a folded slip from a container, and those with an A on their slip were told to stay in Room A (for dictators) whereas those with a B (for recipients) were instructed to collect their belongings and

go to the other room.[13]

Given the previously cited evidence that lack of anonymity influences SWB responses and dictator generosity, a *double-blind* procedure was used. That is, neither the other subjects nor the experimenters knew the responses or gifts of any specific subject. Subjects were informed of the various measures taken to ensure anonymity on a General Instructions sheet from their unmarked packet of materials.[14] This sheet also informed subjects that they were "being asked to answer a series of questions on a variety of topics," and informed Room A subjects of the additional $10 fee they would receive for filling out the questionnaire. At this point, neither Room A nor Room B subjects were informed that the former would later be able to allocate money to the latter.

The experiment then proceeds as follows. Subjects in both rooms begin filling out the Main Questionnaire that consists of eight sections of questions related to subjective and psychological well-being. After 20 minutes, they place the questionnaire in an envelope marked "1," seal the envelope and return it to the packet. At this point, the subjects in Room A remove two envelopes, one labeled "Keep" and the other "Return." Subjects in both rooms remove a sheet marked "Payment Information," which informs them that Room A subjects are now being paid $10 for completing the questionnaires and that Room B subjects have completed the same questionnaires but receive no compensation beyond the $5 everyone received at the start. Each subject in Room A, however, may put any combination of one dollar bills and blank slips of

[13] It was decided that all subjects would initially appear in the same room in order to dispel any doubts about the existence of the other subjects, an issue that surfaced among some subjects in earlier dictator experiments with this subject pool (Konow, 2000). Previous experiments (Ball and Cech, 1996), including dictator experiments (Eckel and Grossman, 1998), have shown that subject generosity may differ when all subjects are the same sex. Therefore, male and female subjects drew from separate containers in each of which there was an equal number of Room A and Room B slips. This ensured an equal proportion of men and women in each room, although there were, on average, more women than men in both rooms. Of those who ultimately participated, 62% were female and 38% male, a proportion that does not differ at the 5% level of significance from the 57% females (p=0.180) among the general undergraduate population at the university or from the 56% females (p=0.085) among undergraduate students nationwide (U.S. Department of Education, 2000).

[14] These procedures include the following (the complete protocol is available, on request, from the corresponding author). Seating is determined randomly based on the slips initially drawn. Once in separate rooms, subjects collect a packet containing their materials for the experiment. They go one at a time and select any packet they wish from a box that is hidden behind a study carrel. Subjects then go to their seats at private study carrels that shield their actions from the view of others. The materials they fill out bear no subject IDs, are all returned to unmarked packets, and the packets are returned at the end of the experiment one at a time to any spot they wish in the hidden box from which they originally took them.

paper in the Return envelope, to be given later to a randomly chosen person in Room B, and put the rest in his or her Keep envelope.[15] Subjects are given five minutes to make their decision, pocket the Keep envelope and seal and return the Return envelope to the packet.

Subjects in both rooms then complete brief Follow-up Questions, seal the form and return it to the packet. The packet is sealed, and each subject proceeds individually to place it in the box. Subjects in both rooms fill out receipts, Subject Pool Participation Slips, where applicable, and a Subject Pool Questionnaire (which requests anonymous demographic information). Thereafter, Room A subjects are free to go. Their packets are opened, the dollar bills and blanks are counted and the dollars are replaced in the Return envelopes, which are then taken to Room B where they are individually and randomly distributed to Room B subjects as they depart.

Each of the eight sections of the Main Questionnaire contained separate instruments: seven well-being surveys and the MC Social Desirability Scale, which was included to gauge any residual response bias.[16] Among the many well-being instruments available, the ones used were chosen to represent a wide range of theories and methodologies and to test certain hypotheses about the potential relationship between happiness and generosity. In addition, the aim was to employ compact and easily administered measures, most of which have been previously tested in a variety of circumstances and on different subject pools. One section is an exception and presents a new set of questions. Nevertheless, the answer format for these questions is similar to Fordyce's *Happiness Measures* (1988), eliciting responses to four single-item questions on a nine-point scale that ranges from "extremely unhappy" to "extremely happy." The four new questions are "Over the past week, what is the *lowest* level you experienced?" (*LH*), "Over the past week, what is the *highest* level you experienced?" (*HH*), "*Overall*, how would you describe yourself?" (*OH*) and "*Right now*, how would you describe yourself?" (*NH*). We considered it

[15] The procedures and instructional wording are modeled closely on Hoffman, et al.'s (1994) Double Blind 2 treatment with certain necessary changes. In some ways, these anonymity procedures exceed theirs: the blank slips are made of "money paper," which has a color and consistency similar to actual money, and the donation is sealed twice, once in the "Return" envelope and again in the packet.

[16] The Appendix, which is available on request from the corresponding author, contains the items upon which these measures are based in addition to two material well-being questions that were in the Follow-up Questions.

important to include items that explicitly use the word “happy” or its cognates.

Three sections of the questionnaire examine the affective dimension of SWB, two dealing with overall or *long-run affect* and one with transient or *short-run affect*. One of the former is Bradburn’s (1969) five positive affect (*PA*) and five negative affect (*NA*) items, and the other is Watson, Clark and Tellegen’s (1988) Positive and Negative Affect Schedule Scales, which ask subjects to evaluate their mood *on the average* by rating 10 positive affect (*PAS*) and 10 negative affect (*NAS*) adjectives. A measure of short-run affect, or mood, is Batson, et al.’s (1988) Mood Index (*MI1*), which contains seven items that make up the single scale and eight that serve as fillers. To capture cognitive life satisfaction, Diener et al.’s (1985a) five item Satisfaction with Life Scale (*SWL*) was administered. Measures of psychological well-being include Jones and Crandall’s (1986) compact 15 item, single-scale Self-Actualization Index (*SAI*), and the three-item per scale version of Ryff’s (1995) six Scales of Psychological Well-Being. For the latter, we construct a single scale index (*PWBI*) rather than work with the six different scales.

The Follow-up Questions, which trail the allocation decision, consist of the Mood Index for a second time (*MI2*) and of two questions about material well-being (MWB). In most studies the latter is represented by family income, but for this population, income is a problematic measure of MWB. Since many students rely heavily on parents and other sources for financial support, the students whose incomes are greater (being mostly earnings to support their education) are potentially exactly the ones who are less well off materially. We decided to address this issue by asking subjects for two values that seem both relevant and simple enough that most students could answer them reliably. One is the subject’s total expenditures in dollars this school year. Since basic expenses on tuition, room and board are very similar at this university, most of the variation in expenditures should reflect genuine differences in their discretionary expenditures and current standard of living. On the other hand, this variable omits in-kind benefits (e.g., an automobile provided by parents) and ignores the fact that some current expenditures may represent future decreases in MWB (i.e., through student loans). We also include, therefore, the gross annual income of the subject’s parents with possible responses grouped at $25,000

intervals into seven categories, the seventh being $150,000 or more. This is an alternative measure of current MWB and, to the extent current and past parents' relative incomes are similar, it might also capture the cumulative or formative effect of relative affluence. The discrete answer format was chosen for this question after initial surveys suggested that students appear more confident about ranges than about specific dollar amounts of parents' income.[17]

The redundant measures of crucial variables, including positive affect, negative affect, short run affect, psychological well-being and material well-being, that were built into this study provide a rare opportunity to examine the robustness of any effects involving those variables. All SWB measures were collected in the Main Questionnaire prior to the allocation phase, indeed, before subjects in either room knew they were advantaged as dictators or disadvantaged as recipients. There were several reasons for this, including to clarify the size of the task and to avoid any bias in SWB scores due to subject inferences about the purpose of the experiment or expected compensation. Apart from these concerns, the timing should not matter for measures of long-run SWB. Prior collection of the measures did, however, enable us to repeat a measure of transient affect after the payment information phase in order to test for any effect of generosity on short-run SWB. Specifically, we examine whether dictator generosity causes a change in mood (*MID*) by subtracting the Mood Index prior to the allocation (*MI1*) from that immediately following the decision (*MI2*), similar to Batson, et al. (1988). As a basis of comparison for this mood change, a Control treatment was conducted with a separate group of subjects. The Control treatment was identical to the Dictator treatment described thus far except for the omission of any opportunity for Room A subjects to transfer any part of their $10 to Room B subjects, a fact that was communicated to both rooms during the payment information phase.

A total of 186 subjects participated in this experiment consisting of 96 subjects in the four sessions of the Dictator treatment (12 pairs of subjects per session) and 90 subjects in the four

[17] One reader suggested expected future income would be a better measure for students. Perhaps, but we are unaware of any research on students suggesting that this would be more strongly related to SWB than current material well-being. Another possible proxy is the subject's major, but, in order to protect subject anonymity, we deliberately avoided eliciting demographic information in any way that it could be related to individual responses.

Control treatment (10 to 12 pairs per session). Total compensation per subject ranged from no less than $5 to no more than $15 and averaged $10. The sessions lasted on average about 45 minutes such that, on an hourly basis, total compensation was a little over $13 per hour. Moreover, after participating and receiving their payment, 96% of the 183 subjects responding indicated that they would be willing to participate in other economics experiments.

3.2.Experimental Hypotheses

If generosity is, in fact, favorably correlated with SWB, this section presents four different explanations about the underlying causal relationships. These four hypotheses are summarized in Figure 1, which lists the variables, the specific measures used to test them and whether the predicted relationship to a given measure is direct (+) or inverse (–).

Generosity Hypothesis: One explanation is that generosity causes happiness, i.e., people share with others because it makes them feel better. Positive correlations between dictator gifts and long-run measures of SWB (i.e., ones that address SWB *overall*, *on average*, or over a period of weeks) are consistent with this hypothesis, if one assumes that 1) current giving is representative of past patterns of giving, and 2) benefits accumulate to improve long-run SWB. But this is non-specific evidence on this hypothesis, because all of the causal relationships we will examine are consistent with such a correlation, including ones that posit direct causation in the opposite direction and indirect causation through tertiary factors. As specific evidence of the Generosity Hypothesis, therefore, we consider the following: more generous dictators experience an improvement in short-run happiness. Indeed, if generosity favorably affects long-run SWB, one would expect it to impact short-run SWB a fortiori. In the context of the experiment, we take generosity as the size of the dictator gift, and the effect on short run happiness is measured by the change in mood index (*MID*). The *MID* of dictators who give can also be compared with those who do not. To examine a possible self-selection bias, however, one can also compare these *MID* scores with those of Room A subjects in the Control sessions who had no opportunity to share.

Happiness Hypothesis: This explanation reverses the causality of the previous one and proposes that happiness causes generosity: people act on emotion, and those who feel better give more. As

with the previous hypothesis, a correlation between long-run SWB and generosity is inconclusive regarding causality.[18] Thus, the Happiness Hypothesis proposes that more favorable short-run happiness results in larger gifts. Specifically, the global measure of happiness now (*NH*) and the index of mood (*MI1*), both taken just prior to the allocation decision, provide two possible measures of short-run SWB that is posited to increase the size of gifts.

Material Well-Being Hypothesis: An alternative explanation is that both generosity and happiness are caused by the third factor of material well-being.[19] The Material Well-Being Hypothesis states that greater MWB causes improved SWB and, assuming giving is a normal good, leads to larger dictator gifts. The chief indicators of the subjects' material means are the two measures of MWB reported by them. Consistent with the hedonic tradition, this hypothesis relates to the stable causes and correlates of happiness, so we take SWB to be long run hedonic happiness, i.e., materially advantaged subjects are predicted to score higher on overall happiness, positive affect and life satisfaction, and lower on negative affect.

Psychological Well-Being Hypothesis: This explanation is based on the integrated framework proposed in the previous section. It posits that the tertiary factor of psychological well-being causes both happiness and generosity. The reader will remember that this framework proposes that repeated acts of generosity contribute to higher PWB in the long run, but that is not the causal relation that is being measured experimentally: subjects bring their "stock" of PWB into the laboratory (with all of the previous behavior that has determined it), complete questionnaires on PWB and SWB, and *only then* choose their allocations.[20] In this manner, then, we examine whether PWB appears to contribute to long run happiness and to short run generosity. Specifically, PWB is measured by the Psychological Well-Being Index (*PWBI*) and the Self-Actualization Index (*SAI*).[21] As described in section 2.4, the claim is that people with higher

[18] Moreover, it is unclear what form such an argument about long-run SWB would take, i.e., if the claim is that happy feelings cause generosity, why would a person who is unhappy today be more generous today because he was happy yesterday and the day before and, therefore, is happy in the long-run (i.e., on average)?

[19] An interesting claim that Charles Kenny (1999) proposes is that happiness causes MWB, viz., economic growth.

[20] Although such a measure was not included in this study, Konow (2006b) does find, however, that previous service activities are significantly and positively related to dictator generosity.

[21] Since Ryff sees PWB as multi-dimensional, her Scales of Psychological Well-Being involve six separate scales,

PWB experience greater long run happiness in the affective dimensions as well as higher peaks, so we predict they will register higher overall happiness, higher positive affect, lower negative affect and greater highest happiness. Finally, dictators high in PWB should be more likely to be what we will call "Givers," or to give something (as opposed to those who give nothing). But, based on previous findings reviewed above, we are agnostic about the size of the gift: the eudaimonistic literature indicates that the optimal "challenge" can be too small or too large, and positive psychology research suggests that very small acts of kindness suffice to change well-being. Thus, dictator PWB should be directly related to the likelihood of their being Givers, but not necessarily to the size of their gifts.

4. Results and Analysis

The experiment produced a rich data set. The Main Questionnaire and Follow-up Questions, which all subjects completed, comprise 137 usable responses per subject. Given the 186 participants, this means there are 25,482 potential data points. Reassuringly, only three of these 25,482 items (or 0.01%) were not answered.[22] For dictators, an additional item is their allocation. The Subject Pool Questionnaire also posed seven demographic questions, which followed the experiment and cannot be associated with the responses there. It confirmed that these subjects were representative of the general student population in terms of gender, ethnicity and college of major, although they were, on average, younger, having been drawn from lower

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but, for reasons of brevity and reliability, we constructed a single scale index using a subset of the original items. In this context, reliability refers to the extent to which items assess the same quality (related to the strength of inter-item correlations), but the six scales represent independent aspects of PWB. In addition, the abbreviated version we used consists of only three items per scale, which have similarly low reliability, especially since they were deliberately chosen for conceptual breadth rather than reliability (see Ryff and Keyes, 1995). In order to form a single scale that incorporates all six of Ryff's dimensions while seeking to favor reliability, we constructed the *PWBI* as follows: we identified the significant inter-item correlations ($p<.05$), and, for each of the six scales, selected the one item that had the highest average inter-item correlation. The resulting index consists of six items with their unweighted scores summed (and reverse-scored, where applicable). Compared to an index composed of all items (which we used in a previous draft of this paper), this scale has a somewhat higher average inter-item covariance and yields qualitatively the same results for the tests reported here, although the significance level is usually higher.

[22] These three items were reconstructed as the mean of their responses to other questions in each respective category. Actually, there was a 138th question that was frequently left blank and is not counted among the variables reported. This question asked for a second time, following the allocation phase, the *NH* question. The large number of non-responses was obviously due to the fact that it was overlooked by many subjects because of how it appeared on the form.

division classes. We consider first generosity and well-being and whether they are correlated, and then we analyze the evidence on the four hypotheses about the causal relationship between the two.

4.1.Generosity and Well-Being

Table 1 shows the Spearman-rank correlation coefficients, and below them the *p*-values, for the subjective and psychological well-being measures using the pooled sample from all sessions and rooms of the experiment. Although we otherwise treat *PA* and *NA* separately, their sum, which is the Affect Balance Scale (*ABS*), is often reported and we also do so here. All of the 91 correlations are the expected sign, and all but five are significant at the 5% level, as indicated by bold-type. These results are consistent with predictions about the SWB measures and support the use of the new single-item happiness questions.

The Spearman correlations for all subjects of the subjective and psychological well-being measures with the Marlowe-Crowne scale and material well-being are summarized in Table 2. Of the 14 well-being measures, 11 correlate significantly with the Marlowe-Crowne scale. These correlations, though, are typically weaker than those of SWB measures with one another, and the MC scale accounts for no more than 10% of the variance of any variable. So, these measures appear to be somewhat compromised, a fact of which one should take account. Nevertheless, this effect is not serious, an inference reinforced by results reported later. Thus, the anonymity measures were quite successful, and the subjects felt free to be candid (moreover, the residual correlations may reflect a genuine relationship between SWB and socially oriented behavior). Not one of the 14 subjective and psychological well-being measures is significantly correlated with either of the two measures of MWB. In fact, only one of these 28 correlations is significant even at the 20% level. This finding is not due to a lack of variation in MWB, as illustrated in Figure 2A, which shows the distribution of expenditures during the school year, and Figure 2B, which shows the annual income of parents.

Figure 3 illustrates the distribution of gifts from Room A dictators to Room B recipients. The modal gift is nothing at all, which was chosen by 40% of dictators, followed by an even $5

split (19%) and the minimum gift of $1 (17%), which is also the median. The mean allocation to Room B among all Room A dictators is $2.25 and among just those who gave any positive amount is $3.72. These transfers are at a typical level for dictator experiments, approximately intermediate at the lower end to the Hoffman, et al. (1994) Double Blind 2 treatment and at the upper end to their replication of the Forsythe, et al. (1994) dictator experiment.

Turning now to the relationship between dictator generosity and well-being, Table 3 summarizes the mean scores on well-being measures of dictators, who have been bifurcated into those who transferred $1 or more (the Givers) and those who kept the entire $10 (the Nongivers). Most measures of long-run happiness or affect are consistent with Givers being happier: they score significantly higher in terms of overall happiness (*OH*), positive affect (*PA*) but not significantly lower on negative affect (*NA*), according to the Bradburn scales, whereas they experience more positive (*PAS*, p=.08) and less negative affect (*NAS*), according to the PANAS scales. The one surprising result here concerns Bradburn's measure of negative affect. We conducted numerous additional tests on this instrument and found that the relation of *NA* to generosity is usually insignificant or, occasionally as here, contrary to any established hypothesis about generosity and happiness and opposite the direction indicated by every other significant measure. We conclude that *NA* is not a helpful indicator in the context of this experiment and omit it from further analysis.[23]

Of the remaining measures of subjective well-being, only highest happiness (*HH*) is significant: Givers reach significantly higher peaks than Nongivers. Lowest happiness (*LH*) is not significant, implying that both groups experience on average similar weekly lows around the third point on the scale: "unhappy." The measures of short-run happiness and affect, happiness now (*NH*) and the change in mood index (*MID*), also do not differ. The cognitive measure of

[23] The finding about *NA* may be an artifact: whereas *NAS* measures average affect, *NA* may be capturing more the recent occurrence of affective experiences (the largest anomalous difference between Givers and Nongivers on *NA* occurred on the question "During the past few weeks did you ever feel upset because someone criticized you?"). One possible explanation for the differing results between the *NA* and *NAS* scales is that, ceteris paribus, generosity is associated with less negative affect but with greater negative affective experiences, whereby the latter promote sharing by sharpening dictators' awareness of the effects of unkind behavior.

long-run SWB, satisfaction with life (*SWL*), is statistically equal for both groups. Psychological well-being, on the other hand, is significantly greater for Givers, according to both measures: the psychological well-being index (*PWBI*) and the self-actualization index (*SAI*). Finally, the MWB of Givers, as measured by their own expenditures and their parent's income, is not significantly greater than that of Nongivers, suggesting that this does not account for differences in giving, anymore than it explained differences in SWB.

Given the low variance that is typical for SWB data, the differences between mean scores for Givers and Nongivers are more important than they might first appear. Of the statistically significant differences in long run happiness, the mean difference between Givers and Nongivers is equal to 41% to 82% of a standard deviation, as seen in Table 3. Givers have higher peak happiness by 59% of a standard deviation, and their psychological well-being is greater by 57% to 73% of a standard deviation. Put another way, the differences in mean scores relative to the number of points on each respective scale ranges from 5% for *PAS* to 15% for *PA*. By comparison, the equivalent differences for a variety of dramatic life events are 3% for winning the lottery (Brickman et al., 1978), 7% for being one of the Forbes superrich (Diener et al., 1985b), 14% for becoming a paraplegic accident victim (Brickman, et al., 1978) and 12% for being unemployed (Clark and Oswald, 1994). As examples, Figures 4A, 4B and 4C illustrate the frequency distributions of responses for three measures for Givers versus Nongivers: Overall happiness (*OH*), Bradburn's positive affect (*PA*) and the self-actualization index (*SAI*).

Thus, there is evidence from the summary statistics presented so far of a favorable relationship between generosity and well-being, in particular, with long-run measures of affect, of overall and peak happiness, and of psychological well-being. The analysis turns now to multivariate regression, which treats the various well-being measures as dependent variables and giving, MWB, MC scores and recruitment technique as independent variables. Since the dependent variable here is ordinal, we employ a method that also enables us to evaluate scales qualitatively. Based on both theory and practice, ordered logit and ordered probit are generally regarded as equally valid procedures for the purpose at hand (Allison, 1999 and Greene, 1997).

We use ordered logit (or logistic regression) since it produces a nice statistic, called the *odds ratio*, not generated by ordered probit, for interpreting the impact of independent variables.[24]

Various regressions were conducted with different specifications for giving. Independent variables included gift in dollars, gift plus gift squared, log of gift, and a dummy variable for Giver equal to 1 if the dictator gave $1 or more and to 0 if he or she gave nothing. These regressions yielded similar effects in terms of sign, although the best fit was associated with the Giver dummy. That is, the size of the gift did not matter for these well-being measures. We report, therefore, only the results using the Giver dummy, which are also considerably easier to interpret (this also validates the distinction made on Table 3 between Givers and Nongivers). Table 4 presents a summary of the regression results. The dependent well-being variables are noted in the first column and the Giver dummy in the second. Separate regressions are reported for each of the two MWB measures: expenditures in thousands of dollars and parents' income. The Marlowe-Crowne scale is included to control for a response bias, and, finally, the recruitment dummy equals 1 if the subject was recruited from a class explicitly for money and 0 if the subject originally signed up to fulfill a class requirement.

Let us begin with a simple example of how these results can be interpreted. The second row for Highest Happiness presents the findings for the regression of this variable on parents' income, the MC scale and the recruitment dummy. In the Giver column, the first value of 1.39 is the coefficient from the ordered logit. The positive value indicates that being a Giver is associated with greater peak happiness, but it is not a convenient statistic for interpreting the magnitude of this effect. A somewhat better number for this purpose is the odds ratio, which is

[24] To understand this technique, consider first a binary logit model in which the left-hand side variable is a dichotomous outcome, e.g., happy or unhappy. If p_i is the probability of event *i*, then the odds ratio is simply $\frac{p_i}{1-p_i}$. For example, if the probability of subject *i* being happy is 0.75, then his odds of being happy is the probability of being happy divided by the probability of being unhappy, or 3=0.75/0.25 (sometimes expressed 3:1 or 3 to 1). Similarly, if p_i =0.25, the odds ratio equals 1/3, and if p_i=0.5, the odds ratio equals 1. The left-hand side variable in the logit model is the log of the odds ratio, called the *logit*. Ordered logit is the logical extension of binary logit to three or more ordered categories, e.g., happy, neutral and unhappy. Maximum likelihood estimates of parameters are calculated for both the left-hand side variables (measures of well-being) and the right-hand side variables (e.g., measures of generosity, MWB, etc.), here based on the cumulative logit model.

the second value in parentheses. The odds ratio of 4.02 for the Giver dummy means that the predicted odds of a Giver achieving highest happiness are about four times those for Nongivers. That is, if the odds of a particular Nongiver having peak happiness are 1, then the odds of an equivalent Giver (one with the same parents' income, MC score and recruitment method) achieving this are about 4. Or, if a particular Nongiver's odds of highest happiness are 1/2, an equivalent Giver's odds are about 2. This holds irrespective of the values of the right-hand side variables or of the break-off point for defining highest happiness. These factors affect the odds but not the odds ratio between Givers and Nongivers. This result is significant at the 5% level.

The remaining explanatory variables are not significant, but it is helpful to review how to interpret them. The coefficient of -0.22 on parents' income indicates that this is inversely related to highest happiness. Just as a positive coefficient corresponds to an odds ratio greater than 1, a negative coefficient corresponds to an odds ratio of less than 1. The odds ratio indicates the effect of a one-unit change, so a value of 0.81 means that a one point increase in parents' income (about $25,000) reduces the odds of highest happiness by 0.81 or, put differently, increases the odds of forgoing highest happiness by 23% (from the inverse 1/0.81). The odds ratio of 1.05 for the MC scale suggests that a one point increase in the 33-point MC scale results in a 5% increase in the odds of reported (in this case, overreported) peak happiness, and the odds ratio on the recruitment dummy means subjects recruited from classes for money have greater odds of highest happiness.

Reviewing the results on this table as a whole, we see that they largely corroborate what the summary statistics show. Giving is not significantly related to short run happiness or affect, lowest happiness and life satisfaction. The significant results on subjective and psychological well-being are correlated in the same way. Highest happiness and the two psychological well-being measures continue to be highly significant. Givers have about 3 to 4 times greater odds of highest happiness and 4 to 5 times greater odds of psychological well-being. Some of the measures of long run happiness, though, slip in significance somewhat, depending mostly on the specification for MWB. Relative to Nongivers, Givers have approximately 2 to 4 times greater

odds of overall happiness and positive affect and about 40% the odds of negative affect. Only four of the 22 MWB coefficients are significant (two marginally), and three of these suggest an unfavorable effect of MWB on SWB.[25] Finally, controlling for other variables, only four of the well-being measures (*PAS*, *SWL*, *PWBI* and *SAI*) are significantly related to the MC scale, whereas *NAS*, *NH*, *HH* and *LH*, which were significant using simple correlation coefficients, are no longer significant. The recruitment dummy is insignificant, except for the marginally so in the case of *SAI*, suggesting recruitment method was not important for this experiment.

4.2.Analysis of Hypotheses

The results presented above establish that generosity is favorably correlated with certain measures of well-being in this experiment. We now consider each of the four hypotheses, outlined in the previous section, about possible causes for these correlations.

Generosity Hypothesis: According to this, people give in order to feel better, in which case one would expect Givers to experience, on average, a more favorable mood change, or *MID* score. As indicated in Table 3, however, the 0.67 mean mood improvement of Givers is not significantly greater than the 0.51 value for Nongivers (p=0.323), and this is further substantiated with the ordered logit results reported in Table 4. Nevertheless, this could be due to self-selection: some, who are made happier by giving, do so, whereas others, who are made happier by not giving, do not.[26] For this reason, we also consider the *MID* scores of Room A subjects in the Control group, who had no opportunity to share their $10 endowment. Room A subjects in the Dictator treatment should experience, on average, a bigger boost in mood than their counterparts in the Control since subjects who are made happier by giving should register a larger improvement in mood in the former versus the latter treatment (and subjects whose happiness is not improved by giving should be unaffected by the difference in treatments). Table

[25] Even for the one positive and significant finding, an interpretation of the coefficients implies a minor role for MWB relative to giving: the boost in highest happiness from being a Giver is equivalent to having approximately $9500 of additional expenditures over the school year. This is striking since being a Giver is associated with giving as little as one dollar, and on average $3.72, whereas $9500 is 1.75 standard deviations from the mean expenditures of $26,960.

[26] We are indebted to George Loewenstein for first pointing out to us the need to state this point explicitly.

5 summarizes the mean *MID* values for Rooms A and B in both the Dictator and Control treatments. The mood change reported by Room A subjects in the Dictator treatment (0.60) is not significantly greater (p=0.947) than the Control (1.02), in fact, the Control *MID* is larger. Even if one takes just the Givers in the Dictator treatment, who presumably benefit from giving, their mean *MID* of 0.67 is not greater than that in the Room A Control (p=0.887), as indicated in the last line of the table. Using gift in dollars as an independent variable in ordered logit regressions similarly produces no significant results. Thus, we find no evidence that generosity *directly* causes happiness.

Happiness Hypothesis: This hypothesis reverses the causality from the previous one and proposes that happiness causes generosity. Specifically, subjects who enjoy greater happiness (*NH*) or a better mood (*MI1*) just prior to the allocation decision are hypothesized to be more generous. Table 6 summarizes the results on dictator generosity as they pertain to this and the other two remaining hypotheses. As one test of the happiness hypothesis, for example, subjects are split at the median value for *NH*. The first column shows the mean gifts of those with high *NH* ($2.07) and low *NH* ($2.53), respectively, and the *p*-value of 0.58 from a one-tail *t*-test of the null hypothesis that high NH subjects are more generous than low *NH* subjects. Thus, high *NH* subjects actually give less than low *NH* subjects, but this difference is not significant. Although the happiness hypothesis was only formulated with respect to gift size, it is interesting to see whether the decision to give is related to pre-allocation happiness. The second column indicates that 62.1% of high *NH* subjects gave something as opposed to 57.9% of low NH subjects, again an insignificant difference. Using *MI1* as a measure of mood, we also fail to find any evidence in support of the happiness hypothesis, in fact, both the gift size and the decision to give are insignificantly opposite expectations for them. Multivariate analysis leads to similar results. In OLS regressions of the Gift on *NH* or *MI1*, Expenditures or Parents' income, and the Recruitment dummy, we find no statistically significant relationships. In binary logit regressions in which the dependent variable is {1,0}={Giver, Nongiver}, none of the coefficients on *NH*, *MI1*, Expenditures, Parents' income or the Recruitment dummy is significant at conventional

levels. Thus, we find no evidence that happiness causes generosity.

Material Well-Being Hypothesis: Is material well-being the tertiary causal factor of both generosity and happiness? First, on the MWB-generosity relation, the middle rubric of Table 6 shows no support that subjects with high expenditures or parents' income give any more in dollar terms or are any more likely to give. Similarly, OLS regressions of dictator Gifts on either measure of MWB, both with and without the Recruitment dummy, yield no significant results. The same is true of binary logit regressions of the Giver variable on these explanatory variables.

Regarding the MWB-happiness relation, there is no initial support from any of the 28 correlation coefficients on Table 2. Analogous to Table 6, Table 7 splits subjects at the median for each of the two measures of MWB and reports mean values of the relevant hedonic happiness measures (*OH*, *PA*, *PAS*, *NAS* and *SWL*) separately for High and Low MWB subjects. None of the predictions of this hypothesis for SWB is significant at conventional levels. There is weakly significant evidence that expenditures increase *PA* but also that parents' income decreases *OH* (opposite the hypothesis). Regression analysis comes to similar conclusions. As previously discussed, only one of the 18 MWB odds ratios for the ordered logit regressions reported on Table 4 indicates a significant favorable impact on SWB, and three suggest the opposite effect.[27] Thus, the evidence does not favor MWB as the factor that causes generosity or happiness.

Psychological Well-Being Hypothesis: We have seen from a comparison of means (Table 3) and ordered logit regressions (Table 4) that Givers are more likely to be psychologically healthy and self-actualizing. In fact, these are the quantitatively largest and statistically most significant results between giving and well-being from the ordered logit analysis. The claim advanced by this hypothesis, however, is that those higher in PWB are more likely to be Givers and will have

[27] Although the happiness hypothesis is formulated with respect to *long run* hedonic happiness, the pattern of mood changes displayed on Table 5 might be seen as consistent with this hypothesis for *short run* happiness: Room A subjects, whose payments are usually larger than those of Room B subjects, also experience significantly greater mood improvements. Nevertheless, only Room A subjects know their actual payments at the time they complete the second mood index, so Room B mood change is based on expectations of payment, or perhaps on something altogether different such as the asymmetric power relation. In the absence of any significant correlation between payment amount and mood change for Room A subjects, the latter seems the more plausible explanation for the Room B mood change.

more favorable overall happiness, peak happiness and affect. On the first question of PWB and generosity, the right hand rubric of Table 6 is affirmative. Whereas 79.2% of High *PWBI* subjects give some positive amount, only 41.7% of Low *PWBI* subjects do so. Similarly, 73.1% of High *SAI* subjects decide to give, but only 45.4% of Low *SAI* subjects. Both of these results are statistically significant. Although this hypothesis does not state whether high PWB subjects will give more in dollar terms, it turns out that they do, although these differences are not significant. The Giver-PWB relation is also corroborated by the multivariate analysis reported in Table 9. The first two rows of the top rubric summarize logit regressions of the Giver dummy on *PWBI*, the two MWB measures (separately) and the recruitment dummy. These indicate that a one point increase in the 31 point *PWBI* scale is associated with a significant 23%-26% increase in the odds of giving. Similarly, the first two rows of the bottom rubric presents the results of the analogous regression on *SAI* and indicate that a one point increase on the 46 point *SAI* scale significantly increases the odds of giving by between 14% and 16%.

On the PWB-SWB relation, Table 8 presents results in a format analogous to Tables 6 and 7. Those high in PWB register more favorably on all relevant SWB measures, and all but one of these differences is significant. Multivariate ordered logit regressions summarized in Table 9 come to almost identical conclusions: both PWB measures indicate a favorable effect on all the targeted SWB measures, and the significance levels are also the same as in Table 8, save the effect of *SAI* on *NAS*, which slips to borderline significance (with *p*-values of .09 to .11). More generally, the signs of the coefficients on the PWB measures are as predicted for all 24 regressions in Table 9, and of the four regressions for each of the dependent variables, all four are significant for Giver, *OH*, *PA* and *PAS*, and two of four are significant for *NAS* and *HH*.

Thus, the PWB-Giver and PWB-SWB relations are consistent with the psychological well-being hypothesis and prove to be very robust with respect to alternate specifications of PWB, SWB, MWB and method of analysis, as seen in Tables 6, 8 and 9. Even the weaker significance of some measures of the SWB-Giver relation in Table 4 is supportive: the PWB hypothesis states that the only direct relations are PWB-Giver and PWB-SWB, both of which are presumably

subject to independent error, a fact that would weaken the indirect SWB-Giver relation.

5. Discussion

Research on happiness offers a powerful means for evaluating and informing economic policy. For example, it has been applied to study the benefits of targeted excise taxation (Gruber and Mullainathan, 2005), social capital (e.g., Helliwell, 2006), and certain types of political institutions (Frey and Stutzer, 2002a), as well as the costs of income inequality (Alesina, Di Tella and MacCulloch, 2004), racial discrimination (Blanchflower and Oswald, 2004), and inflation and unemployment (Di Tella, MacCulloch and Oswald, 2001). This study explores another variable that is impacted by policy: altruistic behavior. The experimental evidence presented here indicates that happiness and intrinsic generosity are favorably related and that psychological well-being is a causal factor. This builds on other recent evidence that altruistic behavior contributes in the long run to subjective well-being (Boehm and Lyubomirsky, 2006, Meier and Stutzer, 2004, and Switzer et al., 1995) and psychological well-being (Sheldon and Lyubomirsky, 2006, and Thoits and Hewitt, 2001). Together such findings suggest that greater attention should be paid to the benefits of policies that promote charitable behavior, volunteerism, service education, community activities, political involvement, and social policies and institutions that foster psychological well-being.

A considerable number of careful investigations (e.g., Blanchflower and Oswald, 2004, Easterlin, 2001, McBride, 2001) has established that income growth leads to little or no increase in aggregate happiness. More generally, this is consistent with the "hedonic treadmill," the theory that, because of adaptation, attempts to increase happiness are for naught, rather like the myth of Sisyphus, who was condemned to roll a huge stone to the top of a hill, only to have it roll back down, and ceaselessly to repeat this futile exercise.[28] Many in the recent positive psychology movement, on the other hand, claim to identify factors that improve subjective well-being in the long run. The current study is informed by and seeks to reconcile both types of

[28] We are indebted to Claudia Senik for this metaphor, which she introduced at the recent Conference on the Economics of Happiness.

findings. Specifically, we argue that the pursuit of happiness can, indeed, be likened to a Sisyphusean task with its endless challenges that result in fluctuations around a relatively stable steady state. Nevertheless, the crucial point is that *it matters which stone one rolls up the hill*: some tasks, such as helping others, appear capable of sustaining happiness at a higher average level than other goals, like the pursuit of material wealth. Thus, we believe recent work suggests there are benefits from developing the study of what one might call "positive economics."

We conclude with some thoughts about how the integrated framework proposed in this paper might be generalized and seen in the context of broader debates in happiness research. In criticizing the hedonic school, eudaimonists often argue that treating happiness as the ultimate good sometimes carries implications that conflict with moral intuition (e.g., Ryff and Singer, 1998). The hedonic school, on the other hand, faults the eudaimonistic approach for imposing its own values regarding what is good, rather than letting it be determined by what individuals report to be important to them (e.g., Diener, Sapyta and Suh, 1998). Actually, by choosing PWB or SWB as important objects of investigation or worthwhile ends, researchers in both schools cannot escape making a value judgment, regardless of what respondents report.[29] Thus, an important component of this debate is philosophical, and we are unsure how this disagreement could be resolved by social science. On the other hand, we believe it might be possible to render this debate irrelevant for policy purposes, even if important philosophical differences remain. For example, the integrated framework set forth in this paper proposes that growth in PWB generates improvements in long run SWB. If this transmission proves to be the best, or possibly only, means for reliably increasing SWB, then it does not matter for practical purposes whether one targets PWB or long run SWB as the ultimate good.

On methodological issues, recent research suggests that the hedonic and eudaimonistic schools have been finding greater common ground, for example, on needs (e.g., Oishi et al., 1999) and on the potential for improving happiness (e.g., Diener, Lucas and Scollon, 2006, and

[29] Moreover, we are unaware of any research that actually asks people what they see as more important: PWB or SWB.

Sheldon and Lyubomirsky, 2006). In fact, the framework proposed in the current paper reflects an appreciation of employing economic reasoning to integrate insights from both schools. Incorporating the eudaimonistic approach, however, can prove problematic. The robustness of the results here with two different PWB instruments suggests that practical measurement problems are not insurmountable. But there is considerable heterogeneity in how to specify behavior that is consistent with well-being.[30] We conclude with a proposal on how to define and specify such behavior in general terms and on the implications of this proposal.

A consequence of intrinsic behavior, as opposed to extrinsic behavior, is that it contributes positively to well-being. In our framework, intrinsic behavior sustains a higher stock of PWB, and consequently, a greater flow of SWB, in the long run. Although these terms have been employed in different ways, we propose to define them in a new, simple way, which we believe is both general but descriptively precise: *extrinsic* behavior is focused on the self and its claims, whereas *intrinsic* behavior is focused on other people or activities. Extrinsic pursuits, for example, are aimed at fame, material wealth and physical attractiveness in order to provide the self with physical pleasure and/or social recognition. Intrinsic behavior, on the other hand, is centered on other people, things or activities for the benefits they provide others and/or the

[30] There are several leading approaches to this problem. Ryff and Singer (1998) use six dimensions of psychological well-being both to define well-being as well as to specify behavior that promotes it. Ryan and Deci (2000), on the other hand, identify three basic needs (autonomy, competence and relatedness) that advance a separate set of goals, which include PWB and SWB. Both approaches share much in common and are supported by numerous studies. Nevertheless, critics question the universality of their classifications (e.g., Oishi et al., 1999) and whether they produce falsifiable propositions (e.g., Diener, Sapyta and Suh, 1998). A more parsimonious distinction sometimes made is between *intrinsic* and *extrinsic*, which Kasser and Ryan (1996) use to categorize goals. A challenge in this literature is to define categories by general properties rather than by enumeration of their elements. For example, Kasser and Ryan define intrinsic goals as "inherently valuable or satisfying to the individual," and extrinsic goals as depending "on the contingent reaction of others." It is difficult, though, to conceptualize objective standards for intrinsic goals based on this definition, and extrinsic definition arguably includes some items listed as intrinsic, e.g., "community feeling" is surely contingent on the reaction of others. Sheldon and Lyubomirsky (2006) distinguish three categories that affect an individual's happiness: the *set point*, which is "genetically determined and is assumed to be fixed," *circumstances*, or the "relatively stable facts of an individual's life," which have at most a short run impact on happiness, and *intentional activity*, or "discrete actions or practices in which people can choose to engage," which can increase long run happiness. It is not clear, though, how to classify many variables in this system or that many of the examples given actually fit the definition of the category, e.g., one can view "getting married" as intentional activity rather than circumstance, many examples of circumstances can be very unstable (e.g., income), and intentional activities can also decrease happiness (e.g., fighting with family and colleagues). The point is that the specific examples in the literature usually ring true, but a set of general and clear-cut definitions that commands a consensus has not yet been identified.

personal satisfaction from the activity as opposed to the expected satisfaction from any claim resulting from the activity (e.g., intrinsic work is satisfying in itself whereas extrinsic work is chiefly for the money). We believe this distinction is able to reconcile a wide set of observations from both economics and psychology about the types of behavior that are and are not conducive to well-being, including the mostly favorable effects on happiness of marriage, friends, work, volunteering and community, and the absence of such effects from fame, possessions and wealth. This is also consistent with the loss of sense of self that has often been reported among happy people and during intrinsic activities, particularly during peak experiences (e.g., Maslow, 1968, and Csikszentmihalyi and Csikszentmihalyi, 1988).

At the core of the proposed definition is the distinction between self and other, which harkens to ancient philosophical and religious traditions that directly relate happiness to ethics. For example, Aristotle conceived of happiness in the pursuit of virtue, and Buddhism maintains that happiness follows from losing attachments to the concept of self and to material things and from developing compassion for others. Nevertheless, even if moral reasoning and social science research on altruistic behavior and happiness point to the benefits of the former, the intrinsic/extrinsic distinction suggests that individual action or public policy informed by that fact be undertaken with considerable care. The hedonistic paradox is also a caveat: "pleasure to be got must be forgot." Although he never faltered in his belief in happiness as an end, John Stuart Mill cautioned that it could not be attained by making it such:

> Those only are happy, I thought, who have their minds fixed on some object other than their own happiness, on the happiness of others, on the improvement of mankind, even on some art or pursuit, followed not as a means, but as itself an ideal end. Aiming thus at something else, they find happiness by the way. [Mill, 1893, pg. 117]

Researchers in positive psychology have begun identifying behavior that promotes long run happiness, and we hope that economics can contribute to the formulation of policy that complements these efforts.

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Table 1. Spearman Correlation Matrix for Subjective and Psychological Well-Being Measures (correlation coefficients and *p*-values)

	OH	*PA*	*NA*	*ABS*	*PAS*	*NAS*	*NH*	*MI1*	*MI2*	*HH*	*LH*	*SWL*	*SAI*
Overall Happiness (*OH*)													
Bradburn's Positive Affect (*PA*)	**0.35** **0.001**												
Bradburn's Negative Affect (*NA*)	**-0.25** **0.001**	-0.02 0.837											
Affect Balance Scale (*ABS*)	**0.39** **0.001**	**0.54** **0.001**	**-0.83** **0.001**										
Positive Affect Schedule (*PAS*)	**0.47** **0.001**	**0.35** **0.001**	**-0.16** **0.030**	**0.32** **0.001**									
Negative Affect Schedule (*NAS)*	**-0.31** **0.001**	**-0.20** **0.006**	**0.42** **0.001**	**-0.45** **0.001**	**-0.26** **0.001**								
Now Happiness (*NH*)	**0.47** **0.001**	**0.31** **0.001**	**-0.20** **0.007**	**0.35** **0.001**	**0.37** **0.001**	**-0.25** **0.001**							
Mood Index 1 (*MI1)*	**0.47** **0.001**	**0.25** **0.001**	**-0.27** **0.001**	**0.36** **0.001**	**0.35** **0.001**	**-0.37** **0.001**	**0.67** **0.001**						
Mood Index 2 *(MI2)*	**0.29** **0.001**	**0.25** **0.001**	**-0.20** **0.006**	**0.32** **0.001**	**0.36** **0.001**	**-0.17** **0.019**	**0.41** **0.001**	**0.47** **0.001**					
Highest Happiness (*HH)*	**0.42** **0.001**	**0.34** **0.001**	-0.14 0.061	**0.30** **0.001**	**0.28** **0.001**	**-0.27** **0.001**	**0.35** **0.001**	**0.37** **0.001**	**0.23** **0.002**				
Lowest Happiness (*LH*)	**0.32** **0.001**	**0.21** **0.004**	**-0.29** **0.001**	**0.38** **0.001**	0.12 0.102	**-0.25** **0.001**	**0.29** **0.001**	**0.34** **0.001**	**0.20** **0.006**	**0.21** **0.005**			
Satisfaction with Life (*SWL*)	**0.48** **0.001**	**0.31** **0.001**	**-0.35** **0.001**	**0.47** **0.001**	**0.44** **0.001**	**-0.33** **0.001**	**0.42** **0.001**	**0.37** **0.001**	**0.35** **0.001**	**0.35** **0.001**	**0.23** **0.002**		
Self-Actualization Index (*SAI*)	**0.31** **0.001**	**0.23** **0.001**	**-0.23** **0.002**	**0.32** **0.001**	**0.46** **0.001**	**-0.32** **0.001**	**0.23** **0.002**	**0.28** **0.001**	**0.32** **0.001**	**0.22** **0.002**	0.07 0.311	**0.28** **0.001**	
Psych. Well-Being Index (*PWBI*)	**0.42** **0.001**	**0.35** **0.001**	**-0.21** **0.001**	**0.37** **0.001**	**0.43** **0.001**	**-0.41** **0.001**	**0.29** **0.001**	**0.38** **0.001**	**0.26** **0.001**	**0.31** **0.001**	0.13 0.061	**0.53** **0.001**	**0.48** **0.001**

n=186

Table 2. Spearman Correlation Matrix for Subjective and Psychological Well-Being with MC scale and Material Well-Being (correlation coefficients and *p*-values)

	OH	*PA*	*NA*	*ABS*	*PAS*	*NAS*	*NH*	*MI1*	*MI2*	*HH*	*LH*	*SWL*	*SAI*	*PWBI*	*n*
Marlowe-Crowne scale (*MC*)	0.13	-0.07	**-0.24**	0.14	**0.27**	**-0.26**	**0.15**	**0.24**	**0.25**	**0.16**	**0.17**	**0.34**	**0.26**	**0.28**	186
	0.083	0.347	**0.001**	0.055	**0.001**	**0.001**	**0.038**	**0.001**	**0.001**	**0.028**	**0.021**	**0.001**	**0.001**	**0.001**	
School year expenditures ($)	0.03	0.03	0.08	-0.07	-0.04	0.00	-0.02	-0.03	-0.05	0.01	-0.08	-0.04	-0.09	-0.03	185
	0.700	0.707	0.264	0.320	0.616	0.953	0.761	0.682	0.474	0.854	0.246	0.602	0.218	0.694	
Parent's income	0.01	0.05	0.03	0.04	0.02	-0.02	-0.04	-0.02	-0.08	-0.05	-0.02	0.12	-0.07	-0.04	186
	0.869	0.490	0.706	0.564	0.777	0.776	0.563	0.742	0.267	0.518	0.788	0.101	0.369	0.568	

Table 3. Well-Being of Dictators
(mean scores)

Subjective Well-Being	**Givers**	**Nongivers**	**Givers better/(worse) off than Nongivers (% Std Dev)**
Long-run Happiness/Affect			
Overall Happiness (*OH*)	6.83	6.26	51**
Bradburn's Positive Affect (*PA*)	4.41	3.53	82**
Bradburn's Negative Affect (*NA*)	3.38	2.63	(56)
Positive Affect Schedule (*PAS*)	38.86	36.95	41*
Negative Affect Schedule (*NAS*)	21.14	24.74	52**
Highest/Lowest Happiness			
Highest Happiness (*HH*)	8.00	7.37	59**
Lowest Happiness (*LH*)	3.03	3.05	(2)
Short-run Happiness/Affect			
Now Happiness (*NH*)	5.76	6.00	(16)
Mood Index Difference (*MID*)	0.67	0.51	14
Life Satisfaction			
Satisfaction with Life (*SWL*)	24.14	24.37	(4)
Psychological Well-Being			
Psychological Well-Being Index (*PWBI*)	31.36	28.63	73**
Self-Actualization Index (*SAI*)	46.69	43.68	57**
Material Well-Being			
School year expenditures ($)	27,314	26,421	16
Parents' income	3.45	3.26	11

Notes: */** indicates significance at the 10/5% level according to one-tail *t*-tests of the null hypothesis that Givers are better off than Nongivers (e.g., that they have higher positive affect, lower negative affect, higher income, etc.); n=48.

Table 4. Summary of Ordered Logit Regression Results
Coefficients (Odds ratios)

		Material well-being			
Subjective Well-Being	**Giver dummy**	**Expenditures ($1000)**	**Parents' Income**	**Marlowe-Crowne scale**	**Recruitment dummy**
Long-run Happiness/Affect					
Overall Happiness (*OH*)	1.07 (2.92)*	–0.13 (0.88)**		0.04 (1.04)	0.82 (2.27)
	0.96 (2.61)*		–0.18 (0.84)	0.05 (1.05)	0.67 (1.95)
Bradburn's Pos. Affect (*PA*)	1.22 (3.38)**	0.06 (1.06)		–0.04 (0.96)	–0.11 (0.90)
	1.33 (3.77)**		–0.15 (0.86)	–0.06 (0.94)	0.10 (1.10)
Pos. Affect Schedule (*PAS*)	0.86 (2.35)*	–0.02 (0.98)		0.13 (1.14)**	0.15 (1.16)
	0.83 (2.29)		0.03 (1.03)	0.14 (1.15)**	0.08 (1.08)
Neg. Affect Schedule (*NAS*)	–0.87 (0.42)*	0.01 (1.01)		–0.07 (0.93)	–0.17 (0.84)
	–1.06 (0.35)**		0.29 (1.34)*	–0.06 (0.94)	–0.26 (0.77)
Highest/Lowest Happiness					
Highest Happiness (*HH*)	1.22 (3.40)**	0.13 (1.14)**		0.10 (1.10)*	0.08 (1.09)
	1.39 (4.02)**		–0.22 (0.81)	0.05 (1.05)	0.48 (1.62)
Lowest Happiness (*LH*)	–0.04 (0.96)	0.02 (1.02)		0.05 (1.05)	–0.19 (0.82)
	–0.06 (0.94)		0.12 (1.13)	0.06 (1.06)	–0.22 (0.80)
Short-run Happiness/Affect					
Now Happiness (*NH*)	–0.22 (0.80)	–0.04 (0.96)		0.05 (1.05)	–0.01 (0.99)
	–0.23 (0.79)		–0.07 (0.93)	0.05 (1.05)	–0.09 (0.91)
Change Mood Index (*MID*)	0.32 (1.38)	–0.08 (0.92)*		–0.06 (0.94)	–0.13 (0.88)
	0.21 (1.24)		0.21 (1.23)	–0.04 (0.96)	–0.37 (0.69)
Life Satisfaction					
Satisfaction with Life (*SWL*)	0.21 (1.23)	–0.02 (0.98)		0.19 (1.21)**	–0.56 (0.57)
	0.13 (1.14)		0.13 (1.14)	0.20 (1.22)**	–0.67 (0.51)
Psychological Well-Being					
Psych. WB Index (*PWBI*)	1.57 (4.80)**	0.02 (1.02)		0.17 (1.19)**	0.22 (1.24)
	1.61 (5.02)**		–0.14 (0.87)	0.16 (1.17)**	0.36 (1.44)
Self-Actualiz. Index (*SAI*)	1.46 (4.32)**	–0.07 (0.93)		0.13 (1.14)**	0.91 (2.49)*
	1.54 (4.66)**		–0.22 (0.80)	0.13 (1.14)**	0.87 (2.39)*

Notes: */** indicates significance at the 10/5% level; n=48.

Table 5. Mean Mood Change (*MID*)

		Treatment		H_0: Dictator>Control
Room		Dictator	Control	(*p*-value)
Room A	*MID*	0.60	1.02	0.947
	n	48	45	
Room B	*MID*	-0.94	-1.16	0.238
	n	48	45	
H_0: Room A>Room B				
(*p*-value)		0.001	0.001	
Using Givers only in Dictator Treatment:				
Room A	*MID*	0.67	1.02	0.887
	n	29	45	

Table 6. Dictator Generosity
(Mean Gifts, % of Givers)

	Happiness Hypothesis				Material Well-Being Hyp				Psych Well-Being Hyp			
	NH		*MI1*		Expends		Parents' Inc		*PWBI*		*SAI*	
	Gift ($)	Givers (%)	Gift ($)	Givers (%)	Gift ($)	Givers (%)	Gift ($)	Givers (%)	Gift ($)	Givers (%)	Gift ($)	Givers (%)
High	2.07	62.1	1.96	58.3	1.93	60.7	2.25	56.2	2.42	**79.2**	2.42	**73.1**
Low	2.53	57.9	2.54	62.5	2.70	60.0	2.25	68.7	2.08	**41.7**	2.05	**45.4**
p-value	0.71	0.39	0.76	0.88	0.82	0.48	0.50	0.80	0.34	**0.01**	0.32	**0.03**

Notes: For each variable (e.g., *NH*), dictators are split into those who score at or above the median in terms of that variable (High) and those who are below the median of that variable (Low). The Gift columns indicate the mean gifts for each group as well as the *p*-value for a one-tail *t*-test of the null hypothesis that the Gift of the High group is greater than that of the Low group. The Giver columns show the proportion of givers for each group and the *p*-value for a one-tail *z*-test of the hypothesis that the fraction of Givers in the High group exceed that in the Low group. Results that pertain to the specific predictions of each hypothesis are indicated in boxes, and significant results are in bold type.

Table 7. Results on Hedonic Happiness and Material Well-Being

		Mean Scores					
MWB Measure		*OH*	*PA*	*PAS*	*NAS*	*SWL*	*n*
Expenditures	High	6.50	4.25	38.3	22.0	23.2	28
	Low	6.75	3.80	37.8	23.4	25.6	20
	p-value	0.77	0.09	0.38	0.25	0.92	
Parents' income	High	6.44	4.00	37.9	23.3	24.2	32
	Low	6.94	4.19	38.6	21.0	24.2	16
	p-value	0.93	0.70	0.68	0.86	0.49	

Notes: Dictators are split into those who score at or above the median MWB and those who are below it. Each column indicates the mean SWB for each group and the *p*-value for a one-tail *t*-test of the null hypothesis that High group is better than the Low group in terms of hedonic happiness.

Table 8. Results on Subjective and Psychological Well-Being

		Mean Scores					
PWB Measure		*OH*	*PA*	*PAS*	*NAS*	*HH*	*n*
Psych. WB Index (*PWBI*)	High	**6.96**	**4.35**	**39.8**	**19.2**	**8.13**	24
	Low	**6.25**	**3.75**	**36.3**	**25.9**	**7.38**	24
	p-value	**0.01**	**0.04**	**0.01**	**0.01**	**0.01**	
Self-Actual. Index (*SAI*)	High	**7.08**	**4.42**	**40.0**	**20.5**	7.92	26
	Low	**6.05**	**3.64**	**35.8**	**25.0**	7.55	22
	p-value	**0.01**	**0.01**	**0.01**	**0.01**	0.12	

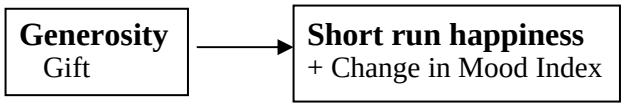
Notes: Dictators are split into those who score at or above the median PWB and those who are below it. Each column indicates the mean SWB for each group and the *p*-value for a one-tail *t*-test of the null hypothesis that High group is better than the Low group in terms of SWB. Significant results are in bold type.

Table 9. Summary of Logit Regressions on Psychological Well-Being
Coefficients (Odds ratios)

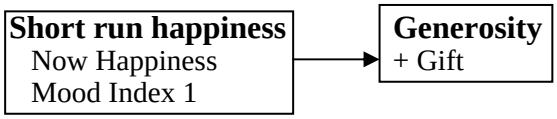
		Material well-being			
Dependent variable	**PWB Measure**	**Expenditures ($1000)**	**Parents' Income**	**Marlowe-Crowne scale**	**Recruitment dummy**
PWB Measure: Psych. WB Index					
Giver dummy	0.21 (1.23)**	0.04 (1.04)			–0.38 (0.68)
	0.23 (1.26)**		0.22 (1.25)		–0.39 (0.68)
Overall Happiness (*OH*)	0.39 (1.48)**	–0.15 (0.86)**		–0.06 (0.94)	0.85 (2.35)
	0.33 (1.39)**		–0.07 (0.93)	–0.03 (0.97)	0.59 (1.80)
Bradburn's Pos. Affect (*PA*)	0.27 (1.31)**	0.06 (1.06)		–0.11 (0.90)*	–0.29 (0.75)
	0.28 (1.32)**		–0.03 (0.97)	–0.11 (0.89)*	–0.13 (0.88)
Pos. Affect Schedule (*PAS*)	0.29 (1.33)**	–0.03 (0.97)		0.06 (1.06)	0.23 (1.26)
	0.28 (1.32)**		0.07 (1.07)	0.07 (1.07)*	0.10 (1.11)
Neg. Affect Schedule (*NAS*)	–0.29 (0.75)**	0.04 (1.04)		–0.00 (1.00)	–0.18 (0.84)
	–0.28 (0.76)**		0.23 (1.26)	0.01 (1.01)	–0.23 (0.79)
Highest Happiness (*HH*)	0.27 (1.31)**	0.13 (1.13)**		0.03 (1.03)	0.13 (1.14)
	0.27 (1.31)**		–0.10 (0.91)	–0.01 (0.99)	0.48 (1.61)
PWB Measure: Self-Actual. Index					
Giver dummy	0.15 (1.16)**	0.08 (1.09)			–0.73 (0.48)
	0.13 (1.14)**		0.16 (1.18)		–0.54 (0.58)
Overall Happiness (*OH*)	0.16 (1.18)**	–0.10 (0.90)*		–0.03 (0.97)	0.39 (1.47)
	0.18 (1.19)**		–0.07 (0.93)	–0.02 (0.98)	0.17 (1.19)
Bradburn's Pos. Affect (*PA*)	0.23 (1.26)**	0.14 (1.16)**		–0.11 (0.90)*	–0.95 (0.39)
	0.17 (1.19)**		–0.07 (0.93)	–0.11 (0.90)*	–0.41 (0.66)
Pos. Affect Schedule (*PAS*)	0.21 (1.24)**	0.04 (1.05)		0.09 (1.10)*	–0.54 (0.58)
	0.21 (1.23)**		0.17 (1.19)	0.10 (1.10)*	–0.38 (0.68)
Neg. Affect Schedule (*NAS*)	–0.09 (0.92)*	–0.00 (1.00)		–0.04 (0.96)	–0.02 (0.98)
	–0.08 (0.92)		0.22 (1.25)	–0.03 (0.98)	–0.09 (0.91)
Highest Happiness (*HH*)	0.06 (1.06)	0.15 (1.16)**		0.07 (1.08)	–0.09 (0.92)
	0.02 (1.02)		–0.14 (0.87)	0.04 (1.04)	0.31 (1.37)

Notes: */** indicates significance at the 10/5% level; n=48.

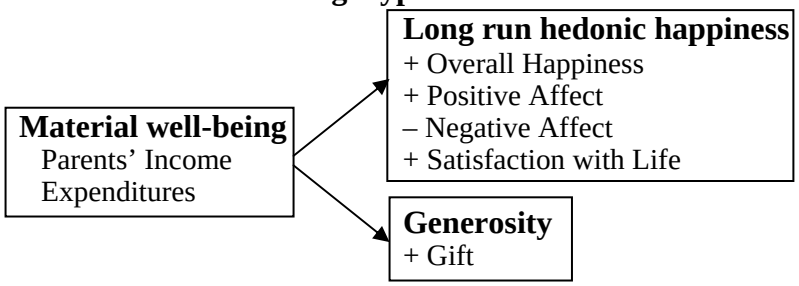
Generosity Hypothesis:



Happiness Hypothesis:



Material Well-Being Hypothesis:



Psychological Well-Being Hypothesis:

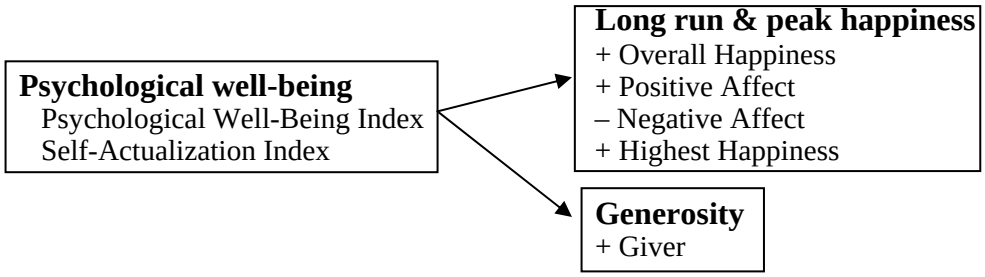


Figure 1. Summary of Hypotheses

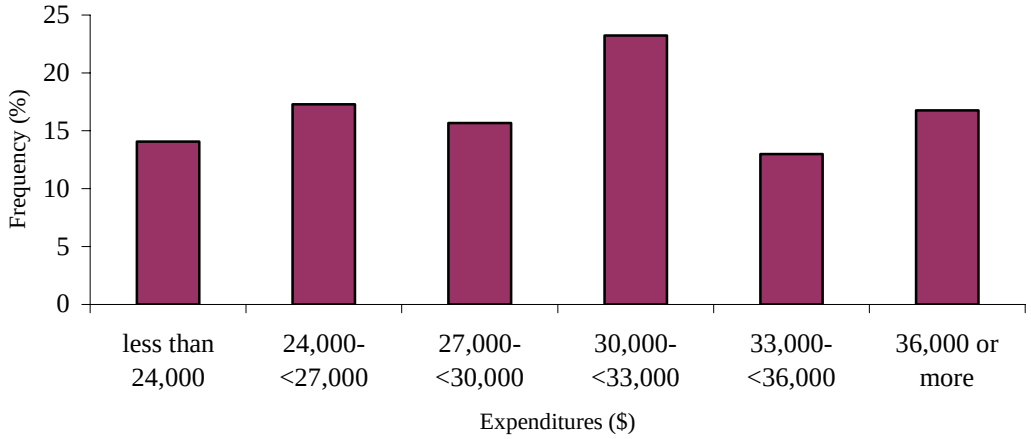


Figure 2A. Expenditures of Subjects

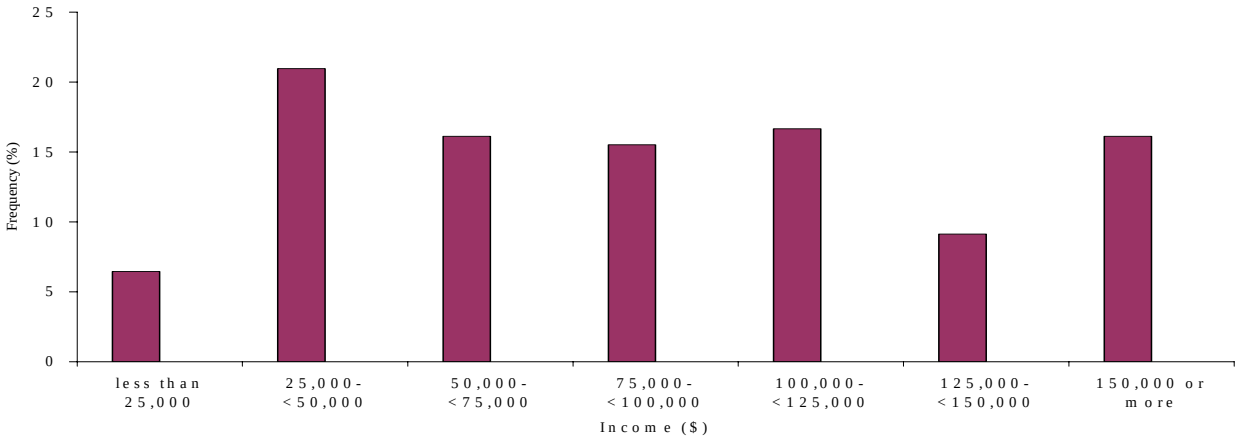


Figure 2B. Annual Income of Parents

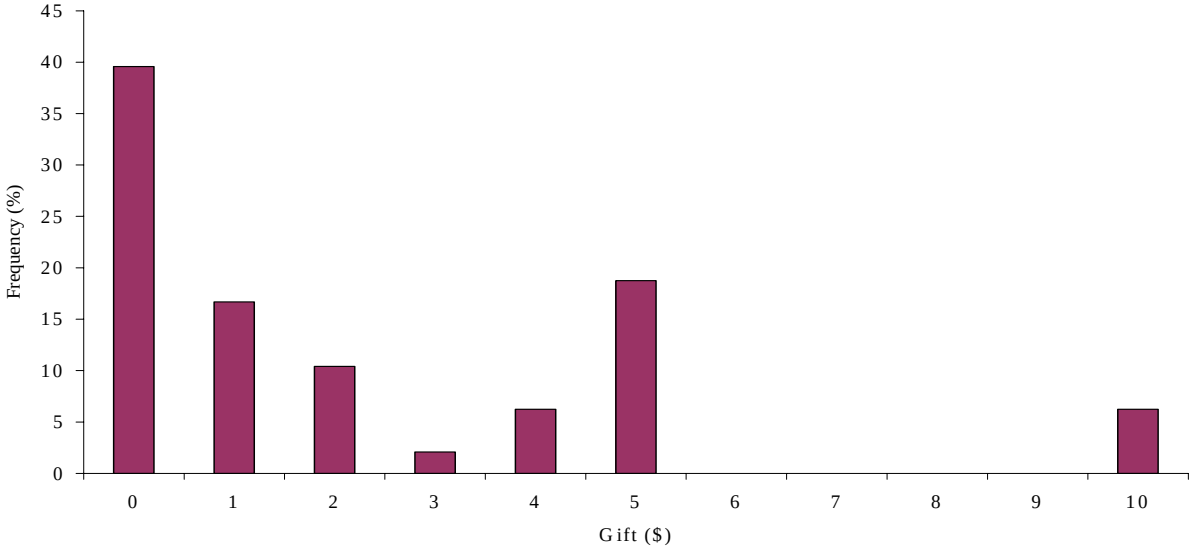


Figure 3. Dictator Gifts

Figure 4A. Overall Happiness for Dictators

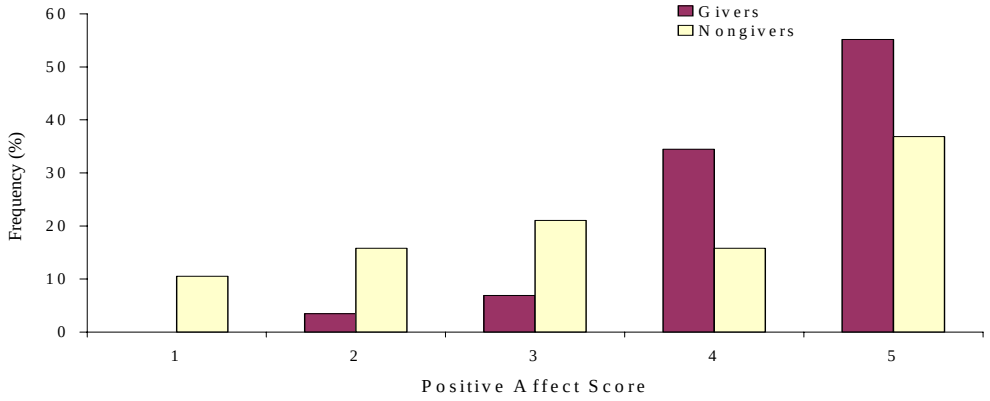


Figure 4B. Bradburn's Positive Affect for Dictators

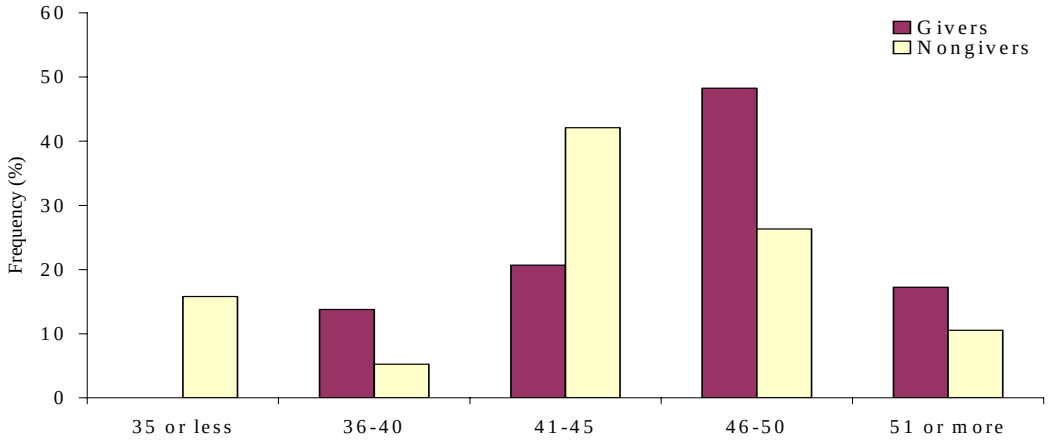


Figure 4C. Self-Actualization Index for Dictators

Appendix: Items on Well-Being Measures

Single-Item Happiness Questions (LH, HH, OH, NH)

extremely unhappy	very unhappy	somewhat unhappy	somewhat unhappy	neutral	somewhat happy	happy	very happy	extremely happy
1	2	3	4	5	6	7	8	9

LH. Over the past week, what is the *lowest* level you experienced?
HH. Over the past week, what is the *highest* level you experienced?
OH. *Overall*, how would you describe yourself?
NH. *Right now*, how would you describe yourself?

Bradburn's (1969) Positive Affect (PA) and Negative Affect (NA) Scales

Listed below are a number of questions concerning your feelings during the past few weeks. Read each item and choose a response of Yes (Y) or No (N).
During the past few weeks did you ever feel. . .
PA items:
Y N Pleased about having accomplished something?
Y N That things were going your way?
Y N Proud because someone complimented you on something you had done?
Y N Particularly excited or interested in something?
Y N On top of the world?
NA items:
Y N Depressed or very unhappy?
Y N Very lonely or remote from other people?
Y N Upset because someone criticized you?
Y N So restless that you couldn't sit long in a chair?
Y N Bored?

Watson, Clark and Tellegen's (1988) Positive Affect (PAS) and Negative Affect (NAS) Schedules

This scale consists of a number of words that describe different feelings and emotions. Read each item and them mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on the average. Use the following scale to record your answer.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

PAS items: interested, alert, excited, inspired, strong, determined, attentive, active, enthusiastic, proud
NAS items: irritable, distressed, ashamed, upset, nervous, guilty, scared, jittery, hostile, afraid

Batson, et al.'s (1988) Mood Index (MI1, MI2)

Because a person's mood may affect responses, we will ask you to report your current mood at several points during this study. On each scale below, please circle the number that best represents how you are feeling right now.
1 2 3 4 5 6 7 8 9
Mood items: bad mood-good mood, sad-happy, depressed-elated, dissatisfied-satisfied, gloomy-cheerful,displeased-pleased, sorrowful-joyful
Fillers: nervous-calm, tense-relaxed, uncomfortable-comfortable, apathetic-caring, lethargic-energetic, unconfident-confident, unresponsive-emotional, passive-active

Diener, et al.'s (1985a) Satisfaction with Life Scale (SWL)

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding the item. Please be open and honest in your responding. The 7-point scale is:

1	2	3	4	5	6	7
strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree

1. ____ In most ways my life is close to my ideal.
2. ____ The conditions of my life are excellent.
3. ____ I am satisfied with my life.

4. ____ So far I have gotten the important things I want in life.
5. ____ If I could live my life over, I would change almost nothing.

Jones and Crandall's (1986) Self-Actualization Index (SAI)

1	2	3	4
disagree	somewhat disagree	somewhat agree	agree

1. I do not feel ashamed of any of my emotions.
2.* I feel I must do what others expect me to do.
3. I believe that people are essentially good and can be trusted.
4. I feel free to be angry at those I love.
5.* It is always necessary that others approve of what I do.
6.* I don't accept my own weaknesses.
7. I can like people without having to approve of them.
8.* I fear failure.
9.* I avoid attempts to analyze and simplify complex domains.
10. It is better to be yourself than to be popular.
11.* I have no mission in life to which I feel especially dedicated.
12. I can express my feelings even when they may result in undesirable consequences.
13.* I do not feel responsible to help anybody.
14.* I am bothered by fears of being inadequate.
15. I am loved because I give love.

*Results for these questions are reverse-scored so that more self-actualizing responses produce higher scores, i.e., reverse score=5−raw score.

Ryff's (1995) Scales of Psychological Well-Being (SPWB)

1	2	3	4	5	6
strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree

1.* I tend to be influenced by people with strong opinions.
2. In general, I feel I am in charge of the situation in which I live.
3. I think it is important to have new experiences that challenge how you think about yourself and the world.
4.* Maintaining close relationships has been difficult and frustrating for me.
5.* I live life one day at a time and don't really think about the future.
6. When I look at the story of my life, I am pleased with how things have turned out.
7. I have confidence in my opinions, even if they are contrary to the general consensus.
8.* The demands of everyday life often get me down.
9.† For me, life has been a continuous process of learning, changing and growth.
10. People would describe me as a giving person, willing to share my time with others.
11.† Some people wander aimlessly through life, but I am not one of them.
12. I like most aspects of my personality.
13.† I judge myself by what I think is important, not by the values of what others think is important.
14.† I am quite good at managing the many responsibilities of my daily life.
15.* I gave up trying to make a big improvements or changes in my life a long time ago.
16.*† I have not experienced many warm and trusting relationships with others.
17.* I sometimes feel as if I've done all there is to do in life.
18.*† In many ways, I feel disappointed about my achievements in life.

*These items are reverse-scored so that higher scores correspond to greater psychological well-being. †These questions were selected for the Psychological Well-Being Index (PWB).

Marlowe-Crowne (1964) Social Desirability Scale (MC)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

T* F Before voting I thoroughly investigate the qualifications of all the candidates.
T* F I never hesitate to go out of my way to help someone in trouble.
T F* It is sometimes hard for me to go on with my work if I am not encouraged.
T* F I have never intensely disliked anyone.

T F* On occasion I have had doubts about my ability to succeed in life.
T F* I sometimes feel resentful when I don't get my way.
T* F I am always careful about my manner of dress.
T* F My table manners at home are as good as when I eat out in a restaurant.
T F* If I could get into a movie without paying and be sure I was not seen, I would probably do it.
T F* On a few occasions, I have given up doing something because I thought too little of my ability.
T F* I like to gossip at times.
T F* There have been times when I felt like rebelling against people in authority even though I knew they were right.
T* F No matter who I'm talking to, I'm always a good listener.
T F* I can remember "playing sick" to get out of something.
T F* There have been occasions when I took advantage of someone.
T* F I'm always willing to admit it when I make a mistake.
T* F I always try to practice what I preach.
T* F I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
T F* I sometimes try to get even, rather than forgive and forget.
T* F When I don't know something I don't at all mind admitting it.
T* F I am always courteous, even to people who are disagreeable.
T F* At times I have really insisted on having things my own way.
T F* There have been occasions when I felt like smashing things.
T* F I would never think of letting someone else be punished for my wrongdoings.
T* F I never resent being asked to return a favor.
T* F I have never been irked when people expressed ideas very different from my own.
T* F I never make a long trip without checking the safety of my car.
T F* There have been times when I was quite jealous of the good fortune of others.
T* F I have almost never felt the urge to tell someone off.
T F* I am sometimes irritated by people who ask favors of me.
T* F I have never felt that I was punished without cause.
T F* I sometimes think when people have a misfortune they only got what they deserved.
T* F I have never deliberately said something that hurt someone's feelings.

*These socially desirable responses are scored one, otherwise zero.

Material Well-Being Questions

What is your best estimate of your total expenditures this school year? Please consider all expenses, even if some are covered by financial aid or grants, including tuition, housing, food, clothing, transportation, entertainment, etc. Indicate in whole dollars.

$_____ for the school year

What is the total (gross) income last year of your parents or guardians (or spouse, if married)? Exclude your own earnings. Please choose a single response, even if it is a guess.

1 $0 to less than $25,000
2 $25,000 to less than $50,000
3 $50,000 to less than $75,000
4 $75,000 to less than $100,000
5 $100,000 to less than $125,000
6 $125,000 to less than $150,000
7 $150,000 or more