PURSUING PLEASURE VERSUS GROWTH AND EXCELLENCE:
LINKS WITH DIFFERENT ASPECTS OF WELL-BEING

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Abstract

Throughout history, two conceptions of happiness have been advocated. The hedonic ideal, which often predominates in modern Western societies, advocates enjoyment and avoidance of pain. The eudaimonic view argues that fulfillment comes from personal growth and excellence. This research was among the first empirical comparisons of eudaimonic and hedonic pursuits in terms of their actual relationships with happiness.

One study was conducted with a single questionnaire (117 participants) and a second used detailed experience-sampling (100 participants). In the majority of analyses, hedonic activity was linked with greater positive affect and lower negative affect than eudaimonic activity was, while eudaimonic activity was associated with greater meaning in life and higher personal expressiveness (i.e., authenticity, involvement, fulfillment, and feeling alive). These results suggest that positive and negative affect (more emotional and visceral) could be called hedonic well-being, while meaning and personal expressiveness (subtler, require thought, and involve feeling more integrated and right than good) might be called eudaimonic well-being. The findings also underline the limitations of assessing only hedonic happiness, as is usually done – it can lead to inaccurate conclusions about the benefits of eudaimonic pursuits.

The results also suggested a trade-off in time between the benefits of hedonic and eudaimonic activities. The links between hedonic activity and well-being were strongest during the activity but often weakened with time. In contrast, the links between eudaimonic activity and happiness were weakest during the activity but became stronger with repeated eudaimonic efforts. People with frequent eudaimonic interests were also
happier during many activities, even hedonic ones, than those with few eudaimonic projects; such increased enjoyment was not experienced by people with frequent hedonic pursuits. These results are consistent with theories that hedonic activities produce immediate satisfaction but that it fades with time, whereas eudaimonic strivings are challenging but increase well-being in the long run. Eudaimonic activities may promote well-being by building personal capital, e.g., coping skills, improved life circumstances, and deeper appreciation of life experiences.

These findings suggest that the modern preoccupation with enjoyment and comfort is an incomplete ideal. People probably need significant eudaimonic pursuits to experience meaningful and lasting fulfillment.
Résumé

Deux concepts du bien-être sont préconisés à travers l’histoire. L’idéal hédoniste, qui prédomine souvent dans les sociétés occidentales, prône le plaisir et l’évitement de la douleur. Selon le point de vue de l’eudémonisme, un sentiment de contentement provient de la croissance personnelle et de la poursuite de l’excellence. Ce travail de recherche est l’une des premières comparaisons empiriques des poursuites eudémoniques et hédoniques en termes de leur relation actuelle avec le bonheur.

Une première étude a été réalisée en utilisant un seul questionnaire (117 participants), tandis qu’une seconde étude a employé une méthodologie d’échantillonnage détaillé des expériences quotidiennes (100 participants). La majorité des analyses ont démontré que les activités hédoniques étaient reliées à un affect positif plus important et un affect négatif moins important comparativement aux activités eudémoniques, alors que les activités eudémoniques étaient associées à un sens de la vie plus important et à une plus grande expressivité personnelle (c.-à-d. l’authenticité, l’engagement, le contentement, et le sentiment d’être en vie). Ces résultats suggèrent que les affects positif et négatif (plus émotionnels et viscéraux) pourraient être désignés par bien-être hédonique, tandis que la signification et l’expressivité personnelle (subtiles, requièrent plus de réflexion, et mènent à se sentir mieux intégré et juste plutôt que bien) pourraient être désignés par bien-être eudémonique. Les résultats soulignent aussi les limitations d’évaluer uniquement le bonheur hédonique, comme il est coutume de le faire – et qui peut mener à des conclusions erronées relativement aux bienfaits des poursuites eudémoniques.
Les résultats suggèrent aussi une différence dans le temps entre les bienfaits des activités hédoniques et eudémoniques. Les liens entre les activités hédoniques et le bien-être étaient plus forts lors de l’activité mais s’affaiblissaient souvent avec le temps. En revanche, les liens entre les activités eudémoniques et le bonheur étaient plus faibles lors de l’activité mais devenaient plus forts suite à des efforts eudémoniques répétés. De plus, les gens ayant des intérêts eudémoniques fréquents étaient d’autant plus heureux lors de diverses activités, incluant des activités hédoniques, comparativement aux gens n’ayant que peu de projets eudémoniques; un tel surcroît de joie n’était pas éprouvé par les gens ayant des poursuites hédoniques fréquentes. Ces résultats sont en accord avec les théories qui préconisent que les activités hédoniques produisent une satisfaction immédiate qui diminue avec le temps, tandis que les efforts eudémoniques représentent souvent un défi, tout en augmentant le bien-être à long-terme. D’ailleurs, les activités eudémoniques peuvent promouvoir le bien-être par l’accumulation d’un capital personnel, ex. talents d’adaptation, meilleures circonstances de vie, et une appréciation plus profonde des expériences de la vie.

Ces résultats suggèrent que la préoccupation moderne avec le plaisir et le confort constitue un idéal incomplet. Les gens doivent probablement réaliser des poursuites eudémoniques importantes afin de vivre un contentement signifiant et soutenu.
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Statement of Original Contributions

The topic of this thesis is quite new to the domain of empirical investigation. There are several seminal works related to eudaimonia and hedonia on which the present research builds. These include: Csikszentmihalyi’s (1975) work on flow, Ryff’s (1989) theory of psychological well-being, Waterman’s (1993) research on eudaimonia, Ryan and Frederick’s (1997) work on vitality, Ryan and Deci’s (2001) review of eudaimonia and hedonia, Seligman’s (2002) book on eudaimonia and hedonia, Vittersø’s (2004) research on eudaimonia and hedonia, and Schooler, Ariely, and Loewenstein’s (2003) review of the drawbacks of hedonia. However, to my knowledge, the present work is one of only two empirical studies that have explicitly contrasted eudaimonia and hedonia as ways of acting and examined their relationships with well-being. (The other study is by Park, Peterson, and Seligman, as reported in Huta, Park, Peterson, and Seligman, 2005.)

This topic deserves detailed study, for it addresses a central question in our lives: Which activities can a person choose to achieve personal fulfillment?

This research also makes steps forward in terms of methodology and data analysis. Some of its hypotheses were previously tested in Waterman (1993), but the present work makes several contributions. These are all or parts of Hypotheses 1, 2, and 3; they address the links between eudaimonia, positive affect, and personal expressiveness, a form of well-being that Waterman expected to arise from eudaimonia. While Waterman used a single-item measure of eudaimonia, the present work introduces a multi-item scale which describes the concept in more detail and has high internal consistency. Because a scale of hedonic pursuits had not been developed, a multi-item scale was also devised to measure this construct. The latter scale had high internal
consistency and represented a distinct factor from the eudaimonia scale, so that the two measures show promise for use in future research. Furthermore, when possible, constructs were assessed using well-established measures rather than scales created in Waterman (1993), i.e., the measures of positive affect, flow, and feeling intensely alive. The present research also contributed important support for Waterman's (1993) theory of personal expressiveness, by showing that most of its facets loaded onto a separate factor from positive affect and that it related to eudaimonia and hedonia differently over time.

Furthermore, the data for one of the present studies were collected using experience-sampling. Studies directly on eudaimonia have thus far relied on one-time global questionnaires that asked people to estimate what they usually did or how they felt during their activities. Experience-sampling has many advantages over one-time questionnaires, including a minimization of biases due to retrospective recall and the possibility of conducting analyses over time.

Also, many analyses in this research used hierarchical linear modeling, the method of choice for regression analysis when multiple observations are collected for each participant. This method makes it possible to assess the typical relationships between variables at a given moment (which can differ from relationships between peoples' mean scores on the variables), how much the strengths of these relationships vary from person to person, and whether certain characteristics of people are linked with the differences in the strengths of these relationships.

In addition to studying hypotheses which have been tested before, this research determined whether the data were consistent with several arguments that have been proposed but not yet tested. These are Hypotheses 5, 6, 9, and 10. They make important predictions about the cumulative well-being effects of eudaimonia versus hedonia over
time, the causal directions between these pursuits and well-being, and the effects of these pursuits on a sense of meaning and value in life.

The present research also makes a number of theoretical contributions to the literature on eudaimonia and hedonia. Several previous hypotheses are developed further, including Hypotheses 1, 2, 5, 6, 9, and 10. For each one, this work gives a more detailed discussion of how the prediction applies to eudaimonia or to its distinction from hedonia, develops further arguments in support of the hypothesis, proposes additional implications, and/or extends the hypothesis to make additional or more detailed predictions, which are then tested. Furthermore, several new predictions are made in this thesis: Hypotheses 4, 7, and 8. They address the relationships of eudaimonia versus hedonia with distress, and the influence of general tendencies to be eudaimonic or hedonic on the well-being derived from any activity, be it eudaimonic or hedonic.

Together, the theoretical contributions add to the development of a systematic, detailed, and empirically verifiable theory on the links between eudaimonia, hedonia, and well-being. Combined with the use of experience-sampling and hierarchical linear modeling, these contributions help to open the door to rigorous empirical study of a topic that long remained in the domains of philosophy and untested debate.
Increasingly throughout the world and particularly in wealthy nations, people are seeking happiness largely through pleasures and comforts. Much of Western economics and many Western institutions reflect and encourage this pursuit (Franks & Heffernan, 1998; Kitayama & Markus, 2000; Schooler, Ariely, & Loewenstein, 2003). This means of seeking happiness can be called the *hedonic* path or simply *hedonia*. More specifically, hedonia will be defined here as the pursuit of pleasure, enjoyment, and comfort along with the avoidance of negative emotion and pain. Hedonic ends can range from physical experiences to more cognitive ones like the enjoyment of entertainment, social interaction, or art. The belief that hedonia is the crucial means to well-being has a long history. As early as the third century B.C., Aristippus argued that personal pleasure is the sole good of life, regardless of its source (Tatarkiewicz, 1976).

Yet there is an alternative way of life called the *eudaimonic* way or *eudaimonia*. This approach has also been advocated throughout history, receiving its most famous treatment in Aristotle’s *Nichomachean Ethics* in the fourth century B.C. Aristotle considered hedonia to be a vulgar ideal which makes people slaves to their pleasures (Ryan & Deci, 2001). Instead, he argued that the highest human good consists of the eudaimonic life, which involves recognizing and developing the best in oneself and actively exercising virtue (Aristotle, 2001).

More recently, psychologists have also taken an interest in contrasting the hedonic life with eudaimonia, pointing out that these approaches represent the two general views of happiness or the good life (Keyes, Shmotkin, & Ryff, 2002; Ryan & Deci, 2001; Seligman, 2002; Vittersø, 2004). The present research focuses on the distinction between
hedonia and eudaimonia and is among the first empirical studies to explicitly compare their links with well-being. The characterization of eudaimonia that will be used here is based on the work of Alan Waterman, who first reported research on the concept in 1993. Eudaimonia will be defined as striving to develop one’s potential and to achieve excellence and virtue, in ways that are congruent with one’s true self (i.e., one’s values and personality).

Such strivings often have several additional characteristics. They tend to be challenging and require effort, care, and skill; also, they often require an extended time perspective and a willingness to forego immediate gratification for the sake of long-term goals (Seligman, 2002). Furthermore, though eudaimonia has been defined as the pursuit of personal development and excellence, Waterman (1981) reviews literature showing that such interests tend to be positively associated with a concern for others and for matters beyond oneself.

Eudaimonia is therefore a common theme in a variety of psychological theories. These include theories about: flow, i.e., personal evolution through engagement in challenging activities that require skill (Csikszentmihalyi 1990, 2000); the good life, or daily application of the best in oneself (Seligman, 2002); the meaningful life, or belonging to and serving institutions greater than the self (Seligman, 2002); the will to meaning, or seeking and actualizing a meaningful path in life (Frankl, 1963); self-actualization, or striving for self-identity and growth (Maslow, 1970); individuation, or growing to become fully oneself (Jung, 1933); psychological well-being, or thriving in terms of the existential challenges of life, e.g., growing as a person, pursuing meaningful goals (Keyes et al., 2002; Ryff, 1989; Ryff & Singer, 1998a); being fully functioning, or using all aspects of oneself (Rogers, 1961); and the holistic principle of motivation, or serving
something larger than oneself, as well as other concepts in self-determination theory (Ryan & Deci, 2001; Sheldon & Schmuck, 2001).

Empirical Findings Differentiating Eudaimonic and Hedonic Constructs

The works of several authors suggest that the theoretical distinction between hedonia and eudaimonia exists in practice. McGregor and Little (1998) had participants list the ten personal projects of theirs (i.e., activities or concerns they were engaged in or starting over the next month) which provided the most complete view of their lives, and then rate each project on various dimensions. The authors found that dimensions reflecting the integrity of a personal project (e.g., commitment, self-identity, value congruence) loaded onto a separate factor from measures of how fun the project was (e.g., fun, pleasure, enjoyment). McGregor and Little also conducted a factor analysis of various well-being scales and found that what they called meaning measures (e.g., personal growth, purpose in life, autonomy) represented a separate factor from happiness measures (e.g., positive affect, negative affect).

Compton and colleagues conducted a factor analysis of various well-being measures and found that concepts reflecting personal growth (e.g., self-actualization, maturity, openness to experience) loaded onto a separate factor from concepts reflecting subjective well-being (e.g., happiness, affect balance) (Compton, Smith, Cornish, & Qualls, 1996); the two factors had a correlation of .36, p < .01.

Ryff and colleagues have also found that measures assessing what they term psychological well-being (e.g., personal growth, purpose in life) load onto a separate factor from measures of subjective well-being (e.g., positive affect, negative affect); these two factors had an estimated correlation of .45 (Keyes et al., 2002; Ryff, 1989).
Vittersø (2004) performed structural equation modeling showing that latent variables representing openness to experience (which he used as an indicator of eudaimonia) and subjective well-being (indicated by life satisfaction, positive affect, and negative affect) were unrelated. He also showed that subjective well-being was related to the level of pleasantness in one’s life, whereas openness to experience was related to the levels of interest and challenge.

*Waterman’s (1993) Research on Eudaimonia*

In addition to the authors cited above, Waterman (1993) has also conducted research on eudaimonic concepts. The research that will be presented here employs his definition of eudaimonia and tests a number of his hypotheses. His research is therefore reviewed here in more detail. Waterman’s goal was to study the relationship between eudaimonic activity and well-being and to introduce a form of well-being, which he termed *personal expressiveness*, that he expected to be linked especially strongly with eudaimonia. As discussed in more detail later, Waterman (1993) defined personal expressiveness as a combination of what might be called authenticity and engagement (e.g., feeling that “this is who one really is” and being intensely involved), feeling really alive, and feeling complete or fulfilled. He contrasted this form of well-being with simple positive affect or *hedonic enjoyment*, as he called it (e.g., enjoyment, pleasure, feeling good) (see Appendix A for a complete description of the measures he used). Waterman predicted that eudaimonic activity would be especially conducive to personal expressiveness, while drive-satisfying activities (e.g., eating, relaxation, sexual activity) would be more conducive to positive affect. He conducted two studies in which he asked participants to list the five activities of theirs that best characterized their lives and were
of greatest importance to them. Participants then rated how much each activity provided them with the opportunity to be eudaimonic (i.e., to “develop my best potentials”) and to satisfy their drives. Participants also rated items reflecting how much they experienced positive affect and personal expressiveness during each activity. Waterman found evidence that eudaimonia is a distinct type of activity, differing from drive-satisfying activity in terms of its relation to the two types of well-being. As he predicted, while drive-satisfying activity was linked with more positive affect than personal expressiveness, eudaimonic activity was linked with more personal expressiveness than positive affect.

The Purpose of the Present Research

Many have therefore discussed the eudaimonic life. However, surprisingly little empirical work has directly contrasted eudaimonic pursuits with hedonic ones. Given that the eudaimonic-hedonic distinction delineates a fundamental difference in the ways that people live their lives and pursue gratification, it is important and timely to conduct systematic research on the topic. If eudaimonic and hedonic pursuits turn out to have different impacts on momentary or global well-being, or if they produce different kinds of well-being, this information will be useful to people in choosing their life pursuits. Research on this topic is also timely because, in many ways, there is a trend away from eudaimonia and towards hedonic ideals in modern times. This trend raises the question: Are there forms of well-being that hedonia fails to produce? The goal of the present research, therefore, is to shed light on how eudaimonia and hedonia affect different aspects of personal well-being.
More specifically, the following topics will be addressed. In Study 1, the psychometric properties of scales developed specifically for this research will be examined and a number of hypotheses will be investigated. The majority of these hypotheses are derived from Waterman's (1993) theory and focus on the state of personal expressiveness, which he proposed as a signifier of eudaimonic activity. Also investigated will be simple positive affect, the most widely used measure of a positive state, and the one that Waterman compared with personal expressiveness. The links between eudaimonia versus hedonia and the two forms of well-being will be contrasted. Also discussed will be Waterman's hypotheses about the relationship between personal expressiveness and positive affect, regarding the possibility of a causal relationship between them and how much they should be correlated. While the focus will be on contrasting personal expressiveness and positive affect, two positive states, the effects of eudaimonic versus hedonic activities on negative affect will also be discussed, for a more comprehensive picture of their links with well-being.

While Study 1 will employ a one-time retrospective questionnaire, Study 2 will test the same hypotheses but with the more rigorous experience-sampling method. In addition, several new hypotheses will be tested. Prospective analyses will determine whether the data are consistent with expectations about the cumulative effects of eudaimonia versus hedonia over time, and about the causal direction of the link between peoples' activities and well-being. (Though prospective analyses cannot confirm causality, they provide more compelling evidence than cross-sectional analyses do.) Predictions will also be tested about the links between global traits, including a general eudaimonic orientation and general intrinsic motivation, and the strengths of relationships between eudaimonic or hedonic acts and concurrent well-being. Furthermore, two global
or long-term well-being outcomes will be studied. The first is life satisfaction, perhaps the most widely used index of global subjective well-being. The second is a sense that one’s life pursuits have been meaningful and valuable, which may be more specifically tied to the benefits of eudaimonia. Study 2 will also include psychometric analyses of scales introduced in that study, and an analysis to test whether self-reports of eudaimonic activity are contaminated by self-presentation bias.

The forms of well-being and types of analyses focused on in the present research are intended to compare the relative well-being benefits of eudaimonia and hedonia. For example, while eudaimonic activity is expected to be more strongly linked with personal expressiveness and meaning, hedonic activity is expected to be the surer path to positive affect and reduced negative affect, at least in the short run. Another kind of trade-off is expected to emerge when contrasting short and long time periods. It will be hypothesized that hedonia should produce greater immediate gratification, at least in the forms of greater positive affect and decreased negative affect. On the other hand, the well-being benefits of eudaimonia should become increasingly apparent over time, after one has accumulated a history of eudaimonic behavior. In the long run, eudaimonia should have effects on positive and negative affect which match or surpass the effects of hedonic activity, and eudaimonia should produce more global well-being, as reflected by concepts like life satisfaction and life meaning. The present research is therefore a first step towards mapping out the strengths and weaknesses of each type of activity.

It should be noted that the present research attempts to differentiate as clearly as possible between activities and well-being. Previous works on topics related to eudaimonia have often discussed concepts that were combinations of an activity or style of living and well-being. For example, Csikszentmihalyi (1990) described the
eudaimonic concept of flow as both an activity that is challenging and requires skill and as an optimal well-being state. Seligman (2002) described eudaimonic gratification as both the process of acting out one's strengths and a positive mental state of such deep absorption that time seems to stop. Ryff (1989) has proposed a theory in which certain styles of thinking and acting (e.g., personal growth, purpose in life, autonomy) are considered synonymous with well-being.

In contrast, Waterman (1993) distinguished much more clearly between a person's activities and the ensuing well-being – it is partly for this reason that the present research draws on his work. Though it is impossible to perfectly separate a way of acting from a way of feeling, an effort has been made here to do so more than is usually done. The aim was to study the relationships between the activities one chooses and the well-being one experiences which are, at least sometimes, separated in time. In the present research, eudaimonia and hedonia are defined as activities, while variables closer to subjective states or perceptions – including positive affect, negative affect, personal expressiveness, life satisfaction, and meaning in life – are treated as the forms of well-being which may result from those activities. Because flow will be assessed in terms of the challenges of one's activity and the skills one brings to the activity, it will be treated here as an activity.²

A Review of the Concept of Personal Expressiveness

Because several of the hypotheses proposed below involve the concept of personal expressiveness, it will be reviewed here in some detail. Personal expressiveness was defined by Waterman (1993) and is a particularly comprehensive and clear description of a form of eudaimonic well-being.³ Interestingly, though other authors have also
described eudaimonic forms of well-being, many of their descriptions are captured by Waterman’s definition. Waterman’s definition of personal expressiveness consists of the following six facets:

1. A feeling that this is who one really is.
2. An impression that this is what the person was meant to do.
3. A feeling of being complete or fulfilled while engaged in the activity.
4. A feeling of intensely being alive.
5. A feeling of a special fit or meshing with the activity that is not characteristic of most daily tasks.
6. An unusually intense involvement in the undertaking.

Waterman contrasted personal expressiveness with simple positive affect, which consists of pleasant emotions such as joy, enjoyment, and fun. According to Waterman, while positive affect arises from a variety of activities, personal expressiveness should arise from eudaimonia in particular. He therefore termed personal expressiveness a signifier of the eudaimonic process.³

Other conceptions of eudaimonic well-being. As noted earlier, authors other than Waterman have also described well-being states that should arise from eudaimonic activities. The following is a brief review of these descriptions and their similarities to personal expressiveness.

Among the leading advocates of a more comprehensive assessment of well-being are researchers in self-determination theory. This theory considers self-realization as key to well-being and argues that the satisfaction of three basic needs (autonomy, competence, and relatedness) is essential for psychological growth (Ryan & Deci, 2001).
Researchers in this area have asserted that autonomy and self-realization should produce feelings of being intensely alive – one of the six facets of Waterman’s definition of personal expressiveness. When conducting research on well-being, they have begun to include the vitality scale by Ryan and Frederick (1997), which measures a “positive feeling of aliveness and energy” (p. 529). (Some studies which use the measure are Kasser & Ryan, 1996, 2001; Nix, Ryan, Manly, & Deci, 1999; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon & Kasser, 1995; Sheldon, Ryan, & Reis, 1996.) Self-determination theory researchers are including this measure because vitality has been distinguished from other forms of well-being in factor analyses and because they believe it is a key indicant of eudaimonia; they therefore wish to capture a more comprehensive definition of well-being (Kasser & Ryan, 2001; Nix et al., 1999; Ryan & Deci, 2001; Ryan & Frederick, 1997). Several studies have already found that vitality is indeed positively linked with eudaimonic variables like self-actualization (finding, expressing, and developing the real self) and intrinsically or autonomously motivated action (see Nix et al., 1999 for a review). For example, Nix and colleagues (1999) showed that autonomous motivation during a task increased vitality following the task but did not raise happiness (e.g., feeling “pleasant,” “comfortable”).

Another form of eudaimonic well-being that has been discussed by various authors might be characterized as authenticity. Seligman (2002) argued that truly eudaimonic pursuits produce a sense of authenticity, a feeling that one is doing exactly what one wants to be doing and a sense of being completely “at home” with oneself; he also described a feeling of inevitability when one is engaged in a eudaimonic pursuit. Norton (1976) emphasized that eudaimonic activity leads to a feeling of integrity and harmony with one’s true self, and a sense of “being where one wants to be, doing what
one wants to do” (p. 216). Becker (1992) conducted a comprehensive review of philosophical views of the good life and reported that they tend to be linked with a sense of inner harmony and integrity. Researchers in self-determination theory similarly state that eudaimonic pursuits, by virtue of their intrinsic nature and the fact that they satisfy fundamental human needs for autonomy, competence, and relatedness, increase personal integrity and self-congruence (Ryan & Deci, 2001; see also Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). These concepts are related to what Waterman describes as expressing one’s true self and feeling that one is doing what one was meant to do.

Researchers besides Waterman have also described eudaimonic activities as involving deep absorption and engagement. The best known of these researchers is Csikszentmihalyi, who has studied the eudaimonic concept of flow. One of the subjective experiences accompanying flow activity is deep immersion in the activity, to the degree that one loses both self-consciousness and an accurate perception of time (Csikszentmihalyi, 1990). Seligman (2002) similarly characterized eudaimonic pursuits as those in which a person is fully engaged and absorbed. These descriptions are similar to Waterman’s notion of being intensely involved and feeling a special fit or meshing with one’s activity.

In addition, the work of several authors suggests that eudaimonic endeavors should be particularly fulfilling, to a deeper degree than is sometimes true of hedonic pursuits. One important reason is that the drive to self-actualize may be a fundamental human need. It is commonly believed that people are driven primarily by a selfish desire for personal benefit and hedonic satisfaction (Sheldon & Schmuck, 2001). However, a growing number of psychologists and even biologists now assert that the desire to grow, exercise the best in oneself, care about things beyond oneself, and transcend natural urges
(e.g., for rest or sexual activity) for the sake of meaningful goals is also a part of human nature and may ultimately serve survival and adaptation (Baumeister & Vohs, 2002; Csikszentmihalyi & Rathunde, 1993; de Waal, 2001; Frankl, 1963; Maslow, 1970; Schmuck & Sheldon, 2001; Seligman, 2002). Fromm (1981) has similarly argued that eudaimonic motives are fundamental to human nature and has used this to explain why eudaimonia should produce greater fulfillment than hedonic pursuits sometimes do. He stated that eudaimonic strivings fulfill objectively valid needs that are rooted in human nature, while hedonic pursuits satisfy transient subjectively felt needs which may not be as objectively valid. Additional reasons why eudaimonia should be fulfilling, including the way that it promotes meaning in life and activates many aspects of the person, will be discussed later in the section on meaning.

In sum, therefore, Waterman’s notion of personal expressiveness captures much of what has been characterized as particularly eudaimonic well-being. Below are a number of hypotheses that emerge from his theory that personal expressiveness is indeed especially eudaimonic. They contrast eudaimonic activities with hedonic pursuits, in terms of their effects on personal expressiveness versus positive affect. Note that eudaimonic and hedonic activities will not be treated as mutually exclusive – for example, an activity could receive a high rating on both the eudaimonic and the hedonic dimensions. Note also that Waterman (1993) contrasted eudaimonic pursuits with drive-satisfying activities (e.g., eating, relaxing, sexual activity), whereas the present research compares eudaimonia with hedonic activities. Hedonic pursuits are engaged in with the hope of achieving hedonic satisfaction, be it pleasure or relief of distress. Drive-satisfying activities are related to but not identical to hedonic pursuits – only sometimes are they pursued with the explicit intention of achieving hedonic gratification. At other
times, they may simply be part of a daily routine or be sought to replenish one’s energy. A direct focus on hedonia in this research makes it possible to specifically compare eudaimonia with the pursuit of hedonic gratification, which are considered the two general ways of seeking happiness.

The importance of measuring personal expressiveness. While the primary purpose of this research is to compare hedonia and eudaimonia in terms of their links with well-being, a secondary purpose is to examine whether forms of well-being like personal expressiveness warrant broader attention in well-being research. Personal expressiveness is subtler than the “raw feels” of hedonic pleasure, as Seligman (2002) calls them, and is therefore more easily overlooked in well-being assessment. However, a nearly exclusive focus on measures that simply assess hedonic valence, like positive affect, may have lead to skewed conclusions in our research literature. For example, it is commonly accepted that extraverts are “happier” than introverts (e.g., Costa & McCrae, 1980; Diener, Sandvik, Pavot, & Fujita, 1992; Francis, 1999). However, this conclusion may depend very much on how happiness is measured. While introverts may experience less positive affect than extraverts, they may experience equal levels of other forms of well-being such as personal expressiveness and meaning in life. Similarly, if one measures only positive affect, one may arrive at faulty conclusions about the well-being benefits of eudaimonic versus hedonic pursuits. In the moment, hedonic activity likely provides immediate and strong hedonic enjoyment. Eudaimonic activity, on the other hand, may not be pleasurable while it is performed. If one expands the definition of well-being, however, one may find that eudaimonia is accompanied by special kinds of well-being. These might be characterized as feeling right or integrated rather than feeling good. In sum,
one reason why the present research examines personal expressiveness in such detail is to see if it proves to be an important form of well-being in its own right.

**The Link Between Eudaimonic Activity and Flow Activity**

Before proceeding to a study of the relationships between eudaimonia and various forms of well-being, the relationship between eudaimonic activity and flow activity will be examined. To date, flow is perhaps the best studied and best known type of eudaimonic activity (Csikszentmihalyi, 2000). It is therefore important to demonstrate that eudaimonia is related to but not redundant with flow.

The present research employs the core definition of a flow activity proposed by Csikszentmihalyi, the leading researcher on flow: an activity which is highly *challenging* and to which one brings commensurate *skill* (Csikszentmihalyi & Rathunde, 1993). These defining criteria as well as many of the other characteristics of flow are conceptually related to eudaimonia. Central to both concepts is the notion of using one's abilities to the fullest, both involve deep involvement in one's activity, and both types of activity are conducive to personal growth (Csikszentmihalyi, 2000; Vittersø, 2003a; Waterman, 1993). Flow should therefore have a strong relationship with eudaimonia. On the other hand, the two concepts should not be synonymous. Eudaimonia, as it is defined here, involves striving to apply and develop the best in oneself, in ways that are congruent with one's true self and values; flow is engaging in an activity which is challenging and requires skill. Therefore, eudaimonia is defined by the *motives* for an activity whereas the definition of flow describes the *activity itself*. Also, eudaimonia differs from flow by requiring that one’s activity be constructive and rooted in one’s meaning system, personality, and life purpose. In sum, the degree to which an activity is eudaimonic
should correlate positively with the degree to which it is flow-like, but this correlation
should not approach unity. A test of this prediction as well as psychometric analyses of
the scales developed for this research will be conducted before proceeding to tests of the
hypotheses. The hypotheses are presented below.

_Hypotheses for Studies 1 and 2_

_Links with positive affect and personal expressiveness (Hypothesis 1)._ The first
hypothesis to be tested contrasts eudaimonic and hedonic pursuits in terms of how they
relate to personal expressiveness versus positive affect. If personal expressiveness is a
signifier of eudaimonia, as Waterman (1993) asserted, one would expect eudaimonia to
be better than hedonia at concurrently evoking this form of well-being. Hedonic pursuits
may sometimes produce personal expressiveness if they share characteristics with
eudaimonia, for example, if they are congruent with authentic needs and values.
However, eudaimonia should elicit personal expressiveness more consistently. On the
other hand, hedonic activities are probably pursued precisely because they provide
immediate and strong positive affect. One would therefore expect hedonic activity to be
better at producing concurrent positive affect. Indeed, eudaimonic activities are not
always enjoyable and can even be quite stressful.

Together, the above predictions are about relationships at the _within-subjects_
level, i.e., at the level of a single activity. In addition, the links with positive affect and
personal expressiveness can be addressed at the _between-subjects_ level. For example, one
can ask whether people who typically engage in more eudaimonic activities also typically
experience more personal expressiveness. Within- and between-subjects analyses can
therefore reveal very different things about people.
At the between-subjects level, when studying personal expressiveness, it is again predicted that eudaimonia will be the stronger source of this outcome. Indeed, the link between eudaimonia and personal expressiveness may be stronger at this level. It is possible that well-being emerges most strongly only after a eudaimonic task is completed – both Csikszentmihalyi (2000) and Seligman (2002) argue that absorption in a eudaimonic act is accompanied by little emotion or awareness of one’s well-being state – the person becomes one with the activity, and typically only reports that the experience was fulfilling once it has ended. Also, a sense of personal expressiveness may only be earned after a history of eudaimonic achievements, rather than a single growth-promoting activity. In general, therefore, eudaimonic activity is predicted to be the stronger source of personal expressiveness at both the within-subjects and the between-subjects levels, though possible differences in the strengths of the effects at these two levels will be explored.

At the between-subjects level, it is also possible to make predictions about the impact of mean hedonic and eudaimonic activity on typical levels of positive affect. Hedonic activity should produce strong positive affect each time a one engages in it, so that frequent hedonic activity should elevate mean positive affect. However, the positive affect produced by hedonic activity should fade fairly quickly (as discussed later in the section on life satisfaction), and should therefore diminish when one is no longer doing something hedonic. On average, therefore, the effect of hedonic activity on positive affect is expected to be weaker at the between-subjects level than at the within-subjects level. Daily eudaimonic activity should raise one’s levels of not only personal expressiveness but also positive affect because personal expressiveness is expected to produce positive affect, and because eudaimonia is predicted to enhance one’s capacity
for enjoyment and to build resources which promote pleasant feelings (as discussed in more detail later). Thus, a eudaimonic way of life should raise one’s mean level of positive affect and should do so more than a hedonic way of life.

The above hypotheses can be summarized as follows:

**Hypothesis 1**: Eudaimonia will be a stronger source of personal expressiveness than will hedonia, at both the within-subjects level (i.e., for a given activity) and the between-subjects level (i.e., on average). Hedonia will be the stronger source of positive affect at the within-subjects level; at the between-subjects level, eudaimonia will promote more positive affect.

**Causal relationship between personal expressiveness and positive affect** *(Hypothesis 2)*. In addition to examining the differences between personal expressiveness and positive affect in terms of how they relate to eudaimonic and hedonic activities, the present research will examine the direct relationship between these forms of well-being. Waterman (1993) made some interesting hypotheses about this relationship. These are reviewed below, along with his empirical findings when testing them. They will similarly be tested here, to determine whether Waterman’s findings can be replicated and to provide a more complete picture of the similarities and differences between the two forms of well-being.

Waterman (1993) drew on the work of Telfer (1980), who believed that a personally expressive activity is a sufficient but not necessary condition for positive affect. Based on this theory, Waterman predicted that a state of high personal expressiveness should concurrently elicit positive affect as well, that is, it should be perceived as pleasant. However, Waterman predicted, variables other than personal
expressiveness could also elicit positive affect. Waterman tested these predictions by choosing cut-points between high and low scores on his personal expressiveness and positive affect scales. Though the cut-points were somewhat arbitrary, so that one could not expect the frequency of activities high on personal expressiveness but low on positive affect to be precisely zero, Waterman expected to find an asymmetry in the proportion of activities high on one form of well-being but low on the other. His findings supported his hypothesis: the proportion of activities high on positive affect that were low on personal expressiveness was significantly higher than the proportion of activities high on personal expressiveness that were low on positive affect.

Telfer’s theory can be taken one step further. An asymmetry in the effects of personal expressiveness and positive affect could also be seen as evidence that personal expressiveness is, on average, a deeper form of well-being than positive affect, i.e., that it has more pervasive effects on the person (perhaps because it is more linked with one’s sense of identity and purpose). This would be a further reason for treating personal expressiveness as an important form of well-being in its own right.

The hypothesis that will be tested is summarized as follows:

**Hypothesis 2:** The state of personal expressiveness is a sufficient but not necessary condition for the state of positive affect.

*Correlation between personal expressiveness and positive affect (Hypothesis 3).*

Another expectation that Waterman (1993) derived from Telfer’s (1980) theory was that personal expressiveness and positive affect should have a strong positive correlation. This correlation should be strong because activities high in personal expressiveness should also be high in positive affect, and activities low on positive affect should also be
low on personal expressiveness; the correlation should not be perfect, however, because activities high in positive affect should not always be high in personal expressiveness. As predicted, Waterman found high correlations between personal expressiveness and positive affect for a given activity.

In addition to testing Telfer’s theory, determining the correlation between personal expressiveness and positive affect is important for psychometric reasons. A correlation that approaches unity would indicate that personal expressiveness and positive affect cannot be distinguished empirically.

The hypothesis to be tested is therefore as follows:

**Hypothesis 3**: The states of personal expressiveness and positive affect during a given activity will have a strong positive correlation.

*Links with negative affect (Hypothesis 4)*. The dominant theory of subjective well-being asserts that well-being consists of three elements: positive affect, negative affect (i.e., unpleasant emotions such as anxiety, frustration, and unhappiness), and life satisfaction (i.e., a global cognitive assessment of the conditions of one’s life) (Diener, Suh, Lucas, & Smith, 1999). In their recent review of research on this theory, Diener and colleagues (1999) concluded that the three components behave quite differently and should be assessed separately. Positive affect has already been discussed and predictions about life satisfaction will be made later. Here, predictions will be made about the relationships of eudaimonia versus hedonia with negative affect, to address all three elements of the dominant theory of well-being, and to include a measure of negative well-being.
It is to be expected that, the more an activity is pursued for pleasure or relaxation, the lower the negative affect experienced during that activity. As for eudaimonic activity, it is unclear how it should relate to concurrent negative affect. Eudaimonic activity is sometimes unpleasant but at other times it may bring a sense of composure and harmony, as reported by people who experienced flow (Csikszentmihalyi, 2000). On average, therefore, the relationship between eudaimonic activity and negative affect is probably weak, and it may be either positive or negative. These predictions apply to the within-subjects level.

At the between-subjects level, on the other hand, long-term eudaimonic activity is predicted to reduce negative affect. Eudaimonic growth should eventually help a person to cope better with difficulties and may therefore buffer him or her against negative affect. A eudaimonic outlook also leads one to actively tackle and surmount obstacles, which alleviates the stresses they produce.

At the between-subjects level, repeatedly engaging in hedonic activity probably still predicts lower negative affect, because of the times when one is engaged in hedonic pursuits. However, the effect should be weaker than it is at the within-subjects level. The well-being benefits of hedonic activity are, on average, not expected to last long beyond the end of the activity. Consequently, the negative affect experienced when one is not engaged in hedonic activity should have little relation to how much hedonic activity one engages in. On the whole, therefore, eudaimonia is expected to have a stronger negative link to negative affect at the between-subjects level.

The above predictions therefore parallel the ones made earlier about the effects of hedonic and eudaimonic activities on positive affect, except that the relationships are
expected to be negative rather than positive. The predictions can be summarized as follows:

**Hypothesis 4:** At the within-subjects level, hedonic activity will have a stronger negative relationship with negative affect than will eudaimonic activity. At the between-subjects level, eudaimonic activities will have a stronger negative relationship with negative affect.

**Hypotheses for Study 2**

The above hypotheses, regarding the links between eudaimonic versus hedonic pursuits and personal expressiveness, positive affect, and negative affect, will be tested in Study 1. The study will also be used to examine the psychometric properties of the new scales developed for this research. In Study 2, the above hypotheses will also be tested and then the comparison of eudaimonia and hedonia will be expanded considerably. Several additional hypotheses will be proposed regarding personal expressiveness and positive affect: about their relationships with eudaimonia and hedonia *over time*, and about individual differences that are expected to alter the strengths of their relationships with eudaimonia and hedonia. Furthermore, specific predictions will be made about the relationships of eudaimonic versus hedonic activities and other forms of well-being, including life satisfaction and a sense of meaning and value in life.

*Links with well-being over time (Hypothesis 5).* It has already been stated that hedonic activity is expected, almost by definition, to be the stronger route to well-being at a given moment in time, at least in terms of high positive affect and low negative affect. It was also noted that eudaimonic activity is not always pleasant while it is being carried
out. In the long run, however, it is proposed here that eudaimonia will trump the effects of hedonia in providing happiness. The benefits of hedonia are expected to often be transient, though sometimes they may last, e.g., if one has much needed rest or a fun bonding experience with friends. Eudaimonic activity, in contrast, is predicted to have a more lasting and cumulative effect on well-being, such that its benefits become increasingly apparent over time (see a similar prediction in Seligman, 2002). Indeed, eudaimonia is predicted to build up not only personal expressiveness but also positive affect over time. This prediction is made because personal expressiveness is expected to boost positive affect, and because eudaimonia should build psychological capital which increases one’s capacity for enjoyment and composure (as discussed in more detail later). There may therefore be a trade-off in time between the benefits of eudaimonic and hedonic activities, such that hedonia is the surer path to good feelings in the short run, but eudaimonia is the champion source of happiness in the long run. This prediction will be tested by conducting a prospective analysis over time.

In addition, such a prospective analysis would provide suggestive, though not conclusive, evidence about the expected causal direction between eudaimonia and well-being. As implied in the hypotheses thus far, the causal arrow is expected to go from eudaimonia to well-being.

The forms of well-being focused on in the prospective analyses will be personal expressiveness and positive affect. The hypothesis is summarized as follows:

**Hypothesis 5**: Frequent eudaimonic activity over a period of time will cause a greater increase in personal expressiveness and positive affect than will frequent hedonic activity; frequent hedonic activity will have a weak positive effect on these forms of well-being.
The reverse causal direction: Well-being as a cause of eudaimonia (Hypothesis 6). While eudaimonia is expected to increase well-being over time, the causal arrow probably operates in the other direction as well. People could therefore find themselves in upward spirals, such that their eudaimonic pursuits enhance well-being, and this in turn motivates further eudaimonic interests. Several other researchers have made the same prediction about concepts related to eudaimonia (Cantor and Sanderson, 1999; Fredrickson, 1998, 2001; Sheldon & Houser-Marko, 2001; Waterman, 1984).

Fredrickson (1998, 2001) has developed an entire theory on the effects of well-being — she calls it the broaden and build model. She asserts that positive emotions, including positive affects such as joy and personally expressive variables such as interest, lead to a momentary broadening of cognitive resources. These resources include broadened attention and increased motivation to take action, which help to build lasting resources in the psychological, social, and physical domains. According to Fredrickson's theory, therefore, positive states should promote the kinds of mental processes that encourage eudaimonic behaviour, including the ability to engage in complex thinking and the motivation to invest in long-term projects.

While Fredrickson and others have discussed the benefits of positive well-being states, they have not differentiated the states into hedonic ones and personally expressive ones. It would therefore be informative to compare the relative impact of personal expressiveness and positive affect on eudaimonic activity. Both personal expressiveness and positive affect are expected to motivate eudaimonic activity. It is likely, however, that personal expressiveness will do so more strongly than positive affect can. This prediction is made because personal expressiveness may affect people more deeply and
pervasively, as suggested earlier, and because people may be aware that this well-being arose from their eudaimonic activities and therefore seek to experience further personal expressiveness. Though no specific predictions will be made about the effects of personal expressiveness and positive affect on hedonic activity, an exploratory analysis will be conducted to examine these effects. In sum, the following hypothesis is proposed:

**Hypothesis 6:** Both positive affect and personal expressiveness will cause an increase in eudaimonic activity, but the effect of personal expressiveness will be stronger.

*A eudaimonic orientation and well-being during any activity (Hypothesis 7).* Thus far, we have focused on hypotheses at the within-subjects level or the between-subjects level. In addition, some important predictions will be made about the ways that between-subjects variables affects within-subjects relationships. First, it is predicted that *generally* being high on eudaimonia (a between-subjects variable or individual difference) will enhance the well-being experienced during *any* activity (i.e., will strengthen this within-subjects relationship). A general eudaimonic orientation means having a history of eudaimonic growth and a eudaimonic approach to tasks, and it is predicted to diversify and deepen one’s ways of appreciating life. Personal growth leads one to understand things from more perspectives, so that one appreciates more facets of a given activity; it also leads to discovery of how a greater variety of activities can be gratifying. In addition, a eudaimonic mind-set is focused away from instant gratifications, which opens the person to perceiving subtler aspects of events and enriches one’s experience of them. A eudaimonic orientation also leads one to understanding events as part of a broader process or purpose, so one appreciates them more deeply than activities devoid of
context. This greater appreciation is predicted to translate into higher well-being during any activity (eudaimonic or hedonic), in terms of both personal expressiveness and positive affect. In contrast, a general hedonic orientation often involves repeated use of the same pleasure-producing or comfort-producing strategies and therefore does not stimulate growth in one's ways of appreciating life. Also, approaching an activity purely with the aim of achieving pleasure or relaxation, without situating it within a broader meaning system, raises the likelihood that one's enjoyment will be superficial. The following hypothesis is therefore proposed:

**Hypothesis 7:** A general eudaimonic orientation will lead one to appreciate both eudaimonic and hedonic activities more deeply, in terms of both personal expressiveness and positive affect. A general hedonic orientation will not enhance the well-being derived from these activities.

*Relative intrinsic/extrinsic motivation and well-being during any activity (Hypothesis 8).* In addition to a general eudaimonic orientation, one other variable will be studied in terms of how it relates to well-being during daily activities: one's global level of relative intrinsic/extrinsic motivation. This concept is one of the key qualities of eudaimonic strivings, which are defined as being congruent with personal values and interests (Ryan & Deci, 2000). Relative intrinsic/extrinsic motivation will be studied because it is among the best researched concepts related to eudaimonia. Intrinsically motivated people engage in activities with genuine personal interest and the activities they choose correspond well with their values and needs. In contrast, extrinsically motivated people can engage in the same activities but for very different reasons – to obtain external rewards or avoid punishment, or because they feel they ought to and
would feel guilt, anxiety, or shame if they didn’t (Ryan & Deci, 2000). Consequently, individuals who are high on intrinsic motivation and low on extrinsic motivation should find their activities (both eudaimonic and hedonic) especially personally expressive and enjoyable. The predictions here therefore parallel those that were made regarding a global eudaimonic orientation. The hypothesis is as follows:

**Hypothesis 8:** Having high intrinsic and low extrinsic aspirations will lead one to derive greater well-being, in terms of both personal expressiveness and positive affect, from one’s activities, both hedonic and eudaimonic.

**Links with life satisfaction (Hypothesis 9).** The remaining two hypotheses focus on the relative effects of hedonia and eudaimonia on very global measures of well-being: life satisfaction and a sense of meaning and value in life. Life satisfaction will be discussed first. In addition to positive affect and negative affect, it is the third component of the dominant conception of well-being (Diener et al., 1999) and is worth studying for this reason. Life satisfaction is also of interest because it is such a global measure: it reflects the long-term effect of one’s daily activities and experiences. Given that eudaimonic projects are expected to be particularly important for building well-being in the long run, examining their link with life satisfaction would be another way to test this prediction, in addition to the prospective analyses discussed earlier.

There are several reasons why eudaimonic activity should produce greater life satisfaction than hedonia. Eudaimonic endeavours should promote longer-lasting well-being than do hedonic activities. They should be less susceptible to hedonic adaptation because personal growth provides ongoing novelty of experience, new perspectives, and varied ways of acting (Sheldon & Lyubomirsky, 2003). On the other hand, in many
hedonic activities, one repeatedly resorts to the same pleasure-producing mechanisms; these vehicles can grow tiresome and routine and cease to deliver much satisfaction.

Also, hedonic well-being usually arises from one’s interaction with an external stimulus (e.g., watching a film or munching a chocolate bar) and therefore dissipates once the stimulus ends. Eudaimonic pursuits are less dependent on external stimuli because they produce well-being through self-initiated actions.

In addition, the long-term perspective associated with many eudaimonic projects may lead to more efficient and thoughtful use of one’s time. This too should translate into a more satisfying life in the long run (Sheldon & Schmuck, 2001).

A eudaimonic orientation also helps a person to react more constructively to obstacles. Hedonic motivation involves focusing on the well-being one expects to obtain from an activity, producing disappointment or regret if that well-being is not forthcoming (Schooler et al., 2003). A eudaimonic mind-set entails more interest and absorption in the process of a pursuit rather than monitoring whether it delivers enjoyment. With this attitude, one is less vulnerable to disappointment when faced with obstacles and more likely to respond with curiosity, interest, and perseverance (Vittersø, 2003b).

Furthermore, while a eudaimonic outlook often includes seeing oneself as part of a larger system, hedonia is inherently self-focused. Such self-absorption is a recipe for depression when one fails, because one lacks a broader framework to fall back on for meaning, consolation, and hope (Seligman, 1990).

Through time, eudaimonic efforts build more of what is called personal capital, which can be drawn on later in life to produce positive experiences and to protect against distress (Shernoff, Csikszentmihalyi, Shneider, & Shernoff, 2003). As noted earlier, eudaimonic growth is expected to diversify the ways in which one knows how to
appreciate life, and a long-term perspective leads to more effective use of time. In addition, by tackling rather than avoiding challenges, eudaimonia builds coping skills. One is therefore better equipped to surmount later obstacles. Eudaimonia can also build capital in other domains, such as interpersonal relationships and social support, career advancement, and even physical health. In contrast, the pure hedonist is interested in immediate consumption and comfort rather than laying down capital for the future.

There is some empirical support for the prediction that repeatedly engaging in eudaimonic activities enhances global happiness. Park, Peterson, and Seligman (see Studies 1 and 2 in Huta, Park, Peterson, & Seligman, 2005) recently studied two eudaimonic ways of living that Seligman (2002) termed the meaningful life (belonging to and serving institutions larger than oneself) and engagement (absorption in activities that produce the state of flow). These researchers found that leading a life of meaning or engagement was robustly linked with greater life satisfaction. Ryff (1989), who viewed personal growth as part of the very definition of well-being, linked it with global life satisfaction, affect balance, self-esteem, and lower depression. Other researchers have found that practicing virtues such as forgiveness and gratitude is associated with elevated well-being (Emmons & McCullough, 2003; McCullough, Pargament, & Thorsen, 2000). In a study of elderly individuals, striving for self-realization (e.g., improving oneself, living life to the fullest) was positively linked with life satisfaction (Lapierre, Bouffard, Dube, Labelle, & Bastin, 2001). Also, compared to people with short-term agendas, those with long-term perspectives have been shown to have greater life satisfaction and sense of meaning in life, and lower emotional distress and helplessness (Lapierre et al., 2001; Zaleski, Cycon, & Kurc, 2001). Furthermore, there is a large literature demonstrating the benefits of intrinsic motivation, a defining feature of eudaimonia. Such
motivation has been shown to enhance a variety of well-being indices, including positive affect, vitality, self-esteem, physical health, and positive coping, and to be negatively related to variables such as negative affect, depression, anxiety, and physical symptoms (see Ryan & Deci, 2000 for a review).

Seeking the hedonic life, in contrast, does not necessarily secure happiness. For example, Schooler and colleagues (in press) did an extensive review of literature showing the potential drawbacks of hedonic pursuits and reported their own research showing that engaging in activities with the explicit aim of maximizing happiness can actually reduce the enjoyment experienced. The study by Park and colleagues (2004) mentioned above also examined lives of pleasure (i.e., striving to maximize one’s hedonic state). The data showed that the relationship between a life of pleasure and life satisfaction was only weakly positive. Also, in the study of elderly individuals cited above, having leisure as a personal goal (e.g., playing cards, going on vacation to Florida) failed to promote life satisfaction (Lapierre et al., 2001).

In sum, eudaimonic pursuits are predicted to produce greater life satisfaction than are hedonic pursuits. As for hedonic pursuits, an absence of these would probably reduce one’s life satisfaction. However, beyond a certain basic level of hedonic engagement, it is proposed here that further increases in hedonia will do little to raise life satisfaction. Hedonic pursuits are therefore expected to have a weak positive relationship with life satisfaction. The hypothesis can be stated as follows:

**Hypothesis 9:** Eudaimonic pursuits will produce greater life satisfaction than will hedonic pursuits, and hedonic pursuits will have a weak positive relationship with life satisfaction.
Links with meaning (Hypothesis 10). In addition to life satisfaction, the other
global outcome that will be studied is a sense that one’s pursuits and experiences have
been meaningful, valuable, and worthwhile. For the sake of simplicity, these concepts
will together be referred to as meaning.

These concepts are becoming increasingly recognized as important aspects of
well-being which traditional measures, such as positive affect and life satisfaction, do not
adequately capture (McGregor & Little, 1998; Ryff, 1989; Ryff & Singer, 1998b). While
meaning does correlate with traditional measures of well-being (see King & Napa, 1998
for a review), factor analyses have shown that meaning (and the closely related concept of
purpose) is distinguishable from them (McGregor & Little, 1998; Keyes et al., 2002;
Ryff, 1989).

Hedonists would declare that relaxing and having fun are definitely worthwhile
and of value, while eudaimonists would argue that the path of personal growth and
excellence is the better source of meaning. Yet which of these lifestyles actually does
result in a sense of meaning remains an empirical question. This question will be studied
in the present research. It is predicted that long-term eudaimonia will create more
meaning than will a history of hedonia.

Quite a few psychologists and philosophers have generally spoken of eudaimonic
constructs, such as self-realization and personal growth, together with the notion of
achieving meaning in life – these include Aristotle, Jung, Frankl, Rogers, Maslow,
Norton, and Ryff (see Ryff & Singer, 1998b for a review; see also Ryan & Deci, 2001,
Seligman, 2002). Some have gone so far as to assert that eudaimonia is the only way to
live a meaningful and worthwhile life, and that hedonic pursuits are sometimes unworthy
because pleasure can accompany both worthwhile and valueless activities (Aristotle, 2001; Norton, 1976).

Though most authors have spoken of the relationship between eudaimonia and meaning in very general terms, some have discussed the relationship in some more detail. Aristotle (2001) characterized eudaimonia as doing not what is pleasant but what is worth doing. Waterman (1984) emphasized that eudaimonia involves pursuing a personally meaningful ideal and is accompanied by a conviction that one is striving for what genuinely matters. He stated that striving towards this ideal gives purpose and meaning to one’s life. In his review of philosophies of the good life, Becker (1992) concluded that one criterion of such a life is meaningful activity, the active pursuit of projects which make one’s life valuable. Furthermore, McGregor and Little (1998) demonstrated empirically that integrity (pursuing projects that are consistent with core aspects of the self), a key aspect of eudaimonia, was associated with meaning in life.

There is therefore a general consensus that eudaimonic pursuits should be conducive to meaning. However, few authors have discussed in detail why eudaimonia and meaning should be so closely linked or examined this link empirically. Here a preliminary attempt is made at specifying some reasons for the link. First, eudaimonic endeavours arise from one’s deep values and therefore have an important place in one’s meaning system; hedonic activities may or may not be congruent with one’s values. Second, a eudaimonic striving typically activates and affects more aspects of oneself (e.g., it requires more complex skills and benefits more of one’s roles) and is therefore significant from a greater number of perspectives. The activity’s meaning is similarly enriched when it benefits more individuals than merely oneself. Third, one may value a eudaimonic achievement more highly than many hedonic experiences because it was
earned through greater effort and required more time and skill. Finally, eudaimonic activity develops something that lasts and has meaning beyond the moment. Hedonic pursuits do not necessarily build something.

As for hedonic activities, these would be expected to promote meaning to the degree that they have the meaningful characteristics described above. Because hedonic activities do not have these characteristics as consistently as do eudaimonic activities, hedonia is expected to only have a weak effect on meaning.

The following is therefore proposed:

**Hypothesis 10**: Eudaimonic activity will be more important than hedonic activity in building a sense of meaning and value in life; hedonic activity will have a weak positive effect on these.
Study 1: Eudaimonic Versus Hedonic Pursuits and Well-being:

Psychometric Analyses of New Scales and Tests of Several Hypotheses

Study 1 served two purposes. First, it was used to assess the psychometric properties of the scales developed for this research. These were the measures of eudaimonic activity, hedonic activity, and personal expressiveness. This assessment was important to determine whether the scales were psychometrically sound, before proceeding to use them to test the hypotheses. Also, because little research exists on the distinction between eudaimonic and hedonic activities or on the difference between positive affect and personal expressiveness, it was important to determine whether these conceptual distinctions can be demonstrated empirically.

The second purpose of Study 1 was to test the first four hypotheses proposed earlier. Several of these are based on the work of Waterman (1993), who conducted two studies using one-time questionnaires. Like Waterman's (1993) research, Study 1 was also conducted in a single session. However, while Waterman asked people to globally describe their main activities and the well-being elicited by them, Study 1 inquired about peoples' specific activities and the accompanying well-being at a recent time – the previous day. This method was used to determine more accurately the relationship between one's activities and well-being at a given moment and to reduce the influence of personal theories on peoples' self-reports (e.g., beliefs about how hedonic a highly eudaimonic activity should be). Study 1 also served as a stepping-stone between the kind of method used in Waterman (1993) and Study 2. The latter study used a full experience-sampling design to assess peoples' activities and well-being at the time they took place and therefore further reduced the bias introduced by factors like inaccurate memories,
personal theories about the relationships between variables, or a desire to appear consistent or well-rounded.

The analyses focused on in Study 1 were as follows. It was investigated whether, at the same moment in time, eudaimonic activity was more positively associated with personal expressiveness, whereas hedonic activity was more positively related to positive affect and more negatively related to negative affect. Also tested were hypotheses about the relationship between personal expressiveness and positive affect, such that personal expressiveness was expected to be a sufficient but not necessary condition for positive affect, and that the correlation between these forms of well-being should be high.

Method for Study 1

Participants

Participants were 117 undergraduates (18 males and 99 females) recruited from psychology courses at McGill University. Their mean age was 21.0 years (SD = 2.8, range = 18 to 36). They were compensated either by receiving course credit or $10.

Procedure

Participants attended a 40-minute session during which they completed several questionnaires; those relevant to the present study are described below.

Measures

Previous day's activities. Participants were first asked to give one-line written descriptions of the six activities, not including sleeping, which had taken up most of their
time on the previous day. If they had engaged in the same activity, such as studying, at several different times that day, participants were instructed to list the activity only once. Appendix B provides the exact questionnaire used to assess the previous day’s activities.

The remaining questionnaires which were administered are described below. A complete description of the exact measures used to assess eudaimonic activity, hedonic activity, personal expressiveness, positive affect, and flow is provided in Appendix C.

In addition, to aid the reader, Appendix D lists all of the items used for all measures, in both Study 1 and Study 2.

**Eudaimonic nature of previous day’s activities.** For each of their six main activities on the previous day, participants rated how much they pursued eudaimonic ends through the activity. Whereas Waterman (1993) used a single item for his measure of eudaimonic pursuits, which asked how much the activity offered “the opportunity to develop my best potentials,” a new scale was developed here. This scale had a greater number of items to enhance reliability and to give participants a more detailed description of the construct being assessed. Participants rated how much they pursued each of the following through their activity: “developing your potential,” “pursuing excellence or a personal ideal,” “developing a skill, learning, or gaining insight into something,” and “doing something you believe in.” These items were rated on a 7-point Likert-type scale from 1 (not at all) to 7 (very much). A eudaimonic activity score was obtained by taking the mean of the four items.

**Hedonic nature of previous day’s activities.** Participants were asked to rate the degree to which they pursued hedonic ends through each of the six activities on the
previous day. The hedonic interests included on the scale were: “experiencing pleasure,” “enjoying yourself,” “being entertained,” and “relaxing.” The items were rated on a 7-point Likert-type scale from 1 (not at all) to 7 (very much). A hedonic activity score was obtained by taking the mean of the four items.

Flow activity measure. For each of the six activities a participant had described, he or she was also asked to rate items indicating the degree to which the activity was flow-like. These were the two defining items from the Csikszentmihalyi and Larson (1987) experience-sampling form. The items are “challenges of the activity” and “your skills in the activity,” rated on a 10-point Likert-type scale from 0 (low) to 9 (high). Because Csikszentmihalyi emphasizes that flow is a function of the relationship between challenges and skills, flow was computed as the product of the scores on the challenges item and the skills item, after a score of 1 was added to each item to eliminate all scores of zero, because these would otherwise make any product zero. The flow scores therefore could range from 1 to 100. The product of the two scores was used in the present research because it captures well both the concept that flow involves a match between levels of challenge and skill (highly dissimilar scores will produce a low product) and the concept that a high flow activity is highly challenging and demands high skill (high scores on both items, when they are well matched, produce a particularly large product).5

Personal expressiveness scale, positive affect scale, and negative affect scale. For each of their six activities, participants rated the degree to which they had experienced various subjective states during the activity, including items reflecting personal expressiveness, positive affect, and negative affect.
The personal expressiveness items closely followed the six facets in the definition of Waterman (1993), who introduced the concept of personal expressiveness. Five of the items were adapted from the five corresponding items on Waterman’s personal expressiveness scale, being reworded slightly so that they could be used to inquire about one activity at a time. Four of these items were “that this is what you were meant to do,” “a special fit or meshing with your activity,” “intensely involved,” and “fulfilled and complete.” The fifth was elaborated in an attempt to reflect its corresponding facet more clearly: “that you were expressing your true self, that this is who you really are.” The sixth facet, which involves feeling intensely alive, was not represented by a single item, as in Waterman’s (1993) paper. Rather, the mean score on the six-item version of the Vitality scale by Ryan and Frederick (1997) was used. Sample items are “at this moment, I feel alive and vital” and “I feel energized right now.” The vitality scale was used because of its frequent use in recent studies and because it is well-validated (see Nix et al., 1999; Ryan & Deci, 2001; Ryan & Frederick, 1997); using a more established measure made it possible to compare the present research more directly with other studies on well-being. The six-item vitality scale is an improved version of the full 7-item scale – it represents a single factor and has good internal consistency and construct validity (Bostic, Rubio, & Hood, 2000). The vitality items are rated on a 7-point Likert-type scale from 1 (not at all true) to 7 (very much true), and the remaining five personal expressiveness items are rated on a seven-point Likert-type scale from 1 (not at all) to 7 (very much or extremely). An overall personal expressiveness score was obtained by taking the mean of the scores on the six personal expressiveness items/facets.

To assess positive affect, Waterman (1993) developed his own set of “pleasant affect” items. Instead of adapting these, the present research employed a set of positive
affect items already used in many daily diary studies (e.g., Emmons, 1991; Reis et al., 2000; Cote & Moskowitz, 1998): “happy,” “joyful,” “pleased,” and “enjoyment/fun.” They are rated on a Likert-type scale from 1 (not at all) to 7 (extremely). A positive affect score was obtained by taking the mean score on the four items.

The negative affect scale consisted of the five negative affect items used in the daily diary studies cited above: “unhappy,” “depressed,” “worried/anxious,” “angry/hostile,” and “frustrated.” They are rated on the same scale as the positive affect items.

Results for Study 1

Psychometric Properties of New Scales

Exploratory principal factors analyses were conducted on the daily activity items and on the well-being state items, using deviation scores (in SPSS). Each deviation score was obtained by taking an item’s raw score for a given activity for a given participant and subtracting from it the item’s mean score (across all six activities) for that participant. Participants’ mean scores were subtracted in this way to permit the study of within-subjects variation. The focus was on within-subjects variation to reflect the fact that daily activities and well-being were measured repeatedly within participants and in order to study the moment-by-moment distinctions between the items (see Thompson & Bolger, 1999, for a similar within-subjects factor analysis). Of a possible 702 deviation scores (117 participants x 6 observations per participant = 702 observations), 698 activity scores and 700 well-being scores were available for analysis. Coefficient alphas for the daily
activities and well-being state scales were similarly computed using deviation scores (in the same way as in Thompson & Bolger, 1999). The results were as follows.

**Eudaimonic vs. hedonic daily activities.** Principal factors analysis clearly showed a two-factor solution. Two factors had eigenvalues above 1 and the scree pattern also indicated precisely two factors. The first two factors accounted for 76% of the variance. The data were Varimax rotated. As shown in Table 1, every item loaded more highly on the factor it was designed to represent and all items had clear-cut loadings except for one (the item “doing something I believe in” loaded only slightly higher on the eudaimonic factor that it was designed to represent). The within-subjects unstandardized alphas of the scales were high: .85 for eudaimonic activity and .89 for hedonic activity. The means, standard deviations, and ranges of scores on these scales, and for the other key measures used in Studies 1 and 2, are found in Table 2.  

**Personal expressiveness vs. positive affect.** Principal factors analysis showed a two-factor solution. Two factors had eigenvalues above 1 and the scree pattern also indicated that the selection of no more than two factors would be justified. The first two factors accounted for 74% of the variance. The data were Varimax rotated. As shown in Table 3, eight of the ten items/facets had clear-cut loadings and loaded more highly onto the factor they were designed to represent. Two of the items/facets had similar loadings on the two factors (“fulfilled and complete” and the vitality composite). Nevertheless, these two items were retained on the personal expressiveness scale because of previous theoretical work which links their content with eudaimonic activity, and for consistency
with Waterman’s work. The within-subjects unstandardized alphas of the scales were high: .88 for personal expressiveness and .94 for positive affect.\(^9\)

The relationship between eudaimonic activity and flow. To determine the correlation between how eudaimonic and how flow-like a given activity was, a within-subjects correlation was computed. This and all other within-subjects correlations were computed by standardizing the regression coefficient for the within-subjects regression, where one of the two variables (say, eudaimonic activity) is treated as the dependent variable and the other (say, flow activity) is treated as the only independent variable. This regression was performed with multilevel modeling using the HLM computer program by Bryk, Raudenbush, Seltzer, & Congdon (1989).\(^10\)

As expected, flow had a strong positive correlation with eudaimonic activity but this correlation was not so strong as to imply that the concepts are interchangeable: \(r = .51, p < .01.\)\(^11\) This correlation was very similar in magnitude to those reported in a recent study by Waterman and colleagues between measures of flow and self-actualization for an activity (these were \(r = .49, p < .01\) and \(r = .58, p < .01\)) (Waterman, Schwartz, Goldbacher, Green, Miller, & Philip, 2003). (Incidentally, the correlation between flow and hedonia for a given activity was actually negative: \(r = -.33, p < .01.\))

Tests of Hypotheses for Study 1

**Hypothesis 1:** Eudaimonia will be a stronger source of personal expressiveness than will hedonia, at both the within-subjects level (i.e., for a given activity) and the between-subjects level (i.e., on average). Hedonia will be the stronger source of positive affect at the within-subjects level; at the between-subjects
level, eudaimonia will promote more positive affect. In Study 1, this hypothesis was only tested at the within-subjects level. In other words, the analyses focused on a particular activity at a given moment and the well-being experienced during that activity. Six observations per participant was deemed too small a sample to adequately estimate the person’s mean or typical levels of activities and well-being, which would be needed for between-subjects analyses.

The hypothesis was tested using within-subjects multiple regressions to compare the links of eudaimonic versus hedonic activities with personal expressiveness or positive affect. The program used was HLM. The two models were as follows:

**Personal Expressiveness** = β₀ + β₁(Eudaimonic Activity) + β₂(Hedonic Activity) + r

and

**Positive Affect** = β₀ + β₁(Eudaimonic Activity) + β₂(Hedonic Activity) + r

where r is the error term.

As hypothesized, hedonic activity was associated with greater concurrent positive affect than was eudaimonic activity. Also as expected, eudaimonia was accompanied by significant personal expressiveness. An unexpected finding, however, was that hedonic activity was also positively associated with personal expressiveness, and to about the same degree as eudaimonia (see Table 4).

It is worth noting that the correlation between hedonic activity and positive affect was probably inflated by the fact that some of the items were similar semantically to the ones used to measure positive affect. Nevertheless, if hedonic activity was only measured using the two items which are relatively distinct from the positive affect items – “relaxing” and “being entertained” – it still had a significantly stronger relationship with
positive affect (unstandardized coefficient = .68, p < .01) than did eudaimonic activity (unstandardized coefficient = .19, p < .01) ($\chi^2_{1df}$ of difference = 169, p < .01).

A parallel supplementary analysis was carried out to rule out the possibility that hedonic activity might have appeared considerably related to personal expressiveness because of its similarity to the positive affect scale, which is highly correlated with personal expressiveness, as shown when testing Hypothesis 3 below. When hedonic activity was measured using only the items reflecting relaxation and being entertained, eudaimonic activity did have a significantly stronger positive relationship with personal expressiveness (unstandardized coefficient = .51, p < .01) than did hedonic activity (unstandardized coefficient = .35, p < .01) ($\chi^2_{1df}$ of difference = 15, p < .01), as predicted in the hypothesis. The confounding role of the overlap between hedonic activity and positive affect could also be explored by conducting a partial correlation between hedonic activity and concurrent personal expressiveness, while controlling for positive affect. (The correlation was conducted on deviation scores whereby the mean for a given participant was subtracted from each observation for that participant; the data for all participants were then pooled together.) While the original correlation had been $r = .52$, $p < .01$, it entirely disappeared when positive affect was controlled for: $r = -.12$, $p > .05$.

**Hypothesis 2:** The state of personal expressiveness is a sufficient but not necessary condition for the state of positive affect. Waterman (1993) tested this prediction by determining whether the proportion of activities high on positive affect that are low on personal expressiveness was higher than the proportion of activities high on personal expressiveness that are low on positive affect. The hypothesis was tested in the
same way here. A high score on personal expressiveness or positive affect was defined as a score of 6 or greater (recall that the range of possible scores was 1 to 7), just as in Waterman’s research (where the items were also rated from 1 to 7). As in Waterman’s work, a low score on personal expressiveness or positive affect was defined as a score below 6.

It was rare for participants to report low positive affect when they were in a state of high personal expressiveness (2 of 23 instances or 9% of the time), whereas participants usually still had low personal expressiveness even in a state of high positive affect (148 of 169 instances or 88% of the time). The difference between these proportions was significant ($z = 8.59$, $p < .01$). The data were therefore consistent with the hypothesis that personal expressiveness is a sufficient but not necessary condition for positive affect.

**Hypothesis 3:** The states of personal expressiveness and positive affect during a given activity will have a strong positive correlation. To determine the correlation between personal expressiveness and positive affect at a given moment in time, a within-subjects correlation was computed in HLM. The correlation was indeed high ($r = .68$, $p < .01$).

**Hypothesis 4:** At the within-subjects level, hedonic activity will have a stronger negative relationship with negative affect than will eudaimonic activity. At the between-subjects level, eudaimonic activities will have a stronger negative relationship with negative affect. This hypothesis was only tested at the within-subjects
level in Study 1, for the same reason as noted regarding Hypothesis 1. A multiple regression was conducted in HLM as follows:

\[
\text{Negative Affect} = \beta_0 + \beta_1(\text{Eudaimonic Activity}) + \beta_2(\text{Hedonic Activity}) + r
\]

As predicted, negative affect had a significant negative relationship with hedonic activity and this link was significantly more negative than the link with eudaimonic activity. Eudaimonic activity actually had a small but significant positive association with concurrent negative affect (see Table 4), (though this was an artefact of slight multicollinearity in the regression because the correlation was non-significant, \(r = .03, p > .10\)).

**Discussion for Study 1**

Factor analysis of the eudaimonic activity and hedonic activity items clearly confirmed the difference between the two scales, and both scales had high internal consistencies.

Factor analysis of the personal expressiveness and positive affect items also supported the differentiation of these items into two scales. Although two of the items had similar loadings on the personal expressiveness factor and the positive affect factor, they were retained in the scale for which they were originally designed (personal expressiveness), for consistency with previous literature on eudaimonia. Both well-being scales had high internal consistencies.
The correlation between eudaimonic activity and flow activity was strong but did not approach unity, indicating that eudaimonia is related to flow but warrants study as a separate concept.

As predicted, hedonic activity was concurrently associated with more positive affect and less negative affect than was eudaimonic activity. Eudaimonic activity had a weak positive link with positive affect and also had a weak positive link with negative affect. While eudaimonia was expected to have the stronger link with personal expressiveness at the time of the activity, both eudaimonia and hedonia were accompanied by personal expressiveness and to about the same degree. Supplementary analyses, however, suggested that the relationship between hedonic activity and personal expressiveness may be weaker when its overlap with positive affect, which correlates with personal expressiveness, is reduced or controlled for.

Finally, the results of Study 1 clearly replicated Waterman’s (1993) findings regarding the relationship between personal expressiveness and positive affect. A state of high personal expressiveness was usually accompanied by high positive affect as well, whereas the reverse occurred significantly less often. The within-subjects correlation between personal expressiveness and positive affect ($r = .68$) was lower than those reported by Waterman ($r = .74$ and .82 in his two studies), but it was still high, as predicted.
Study 2: Eudaimonic Versus Hedonic Pursuits and Well-being: Replication and Extension with Experience-sampling Data

Study 2 tested the same hypotheses as did Study 1 but it used the more rigorous experience-sampling method. Because this method assessed peoples' activities and well-being at the time they took place or shortly afterward (the median delay was 3 minutes), it reduced the biases associated with retrospective reports. Thus, the study could determine the relationships between variables at a given moment (i.e., within-subjects relationships) even more accurately than Study 1 could. Furthermore, the number of observations collected per participant (up to 49 and 43.35 on average) was considered large enough to obtain a reasonable estimate of each participant's mean or typical levels of the activity and well-being variables. Consequently, it was possible to conduct between-subjects analyses, i.e., to study the relationships between general tendencies to be eudaimonic or hedonic and usual or baseline levels of well-being.

Briefly, the hypotheses which had been tested in Study 1 and were again addressed in Study 2 compared eudaimonia and hedonia in terms of their relationships with personal expressiveness, positive affect, and negative affect. The direct relationship between personal expressiveness and positive affect was also studied again, including the correlation between these states and the likelihood of experiencing one state if the other is known to be high.

Study 2 also extended beyond Study 1 by testing a number of additional hypotheses. Because data were collected over time, prospective analyses could be carried out. These tested whether repeated eudaimonic efforts would be linked with greater increases in well-being over time than would frequent hedonic activities. Also

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investigated was the link between general tendencies to be eudaimonic or intrinsically motivated and the strengths of relationships between daily activities and the accompanying well-being. It was predicted that these global tendencies would enhance well-being during any activity, be it eudaimonic or hedonic.

Finally, the links between eudaimonic versus hedonic pursuits and two additional well-being variables were studied. These variables were life satisfaction and a sense of meaning and value in life. Eudaimonia was expected to build well-being over time more effectively than hedonia would. This was expected to translate into higher levels of life satisfaction and meaning in life, because these global self-perceptions reflect the long-term or cumulative effects of one’s activities.12

Before proceeding to tests of the hypotheses, new psychometric analyses of several scales were conducted. A measure of socially desirable self-presentation was correlated with the scale of eudaimonic activities because these pursuits are considered virtuous in our society. The analysis was therefore performed to rule out the possibility that the eudaimonia scale simply reflects a tendency to present oneself in a positive light. Also examined were the psychometric properties of a newly introduced scale of meaning in life that was developed for this research.

Method for Study 2

Participants

Participants were 100 undergraduates (66 females and 34 males) at McGill University (one additional person began the study but did not complete it and the person’s data are therefore not included). The mean age of the participants was 20.2 years (SD =
1.4, range = 18 to 25). They were recruited through advertisements in campus newspapers and represented a broad distribution of disciplines (40% were in the social sciences and 16% were majoring in Psychology in particular; 23% were in other arts; 27% were in the sciences, mathematics, or engineering; and 10% were in economics or management or related fields). Participants were compensated $50 for their participation.

Procedure

Participants attended an initial 90-minute session in groups of two to five individuals. During the session, they completed several questionnaires and were instructed on how to carry out the experience-sampling part of the study, which began either the next day or the day after that. Cohorts of 12 to 18 individuals began the experience-sampling part of the study at the same time.

During the experience-sampling part of the study, participants carried pagers for seven days. The pagers prompted them to complete an experience-sampling form at seven randomly selected times on each day. The forms were bound in a booklet which was unmarked on the cover and which participants carried with them throughout their day. Each individual within a cohort of participants was paged at the same times, but different cohorts were paged at different sets of times. Different cohorts began the study on different days of the week to minimize the impact of weekly cycles in peoples' activities and mood (as have been observed in previous research, e.g., Moskowitz, Brown, & Cote, 1997). Each paging time was selected at random from an interval of 105 minutes – there were seven such intervals back to back between 9:30 and 21:45 on each day. Participants were asked to complete an experience-sampling form as soon as possible after their pager went off and to report what they had been feeling and doing at the time.
that they received the page. The delay between the time participants were paged and the
time they completed the forms had a median of 3 minutes and a mean of 16 minutes. The
number of items on the experience-sampling form was similar to the number in the
experience-sampling research of Csikszentmihalyi, one of the leading researchers in the
use of this method (Csikszentmihalyi & Larson, 1987). Participants were timed while
they completed a practice form during the initial session and it rarely took them more
than 3 minutes to complete it. The mean number of experience-sampling forms
completed by each participant, out of a maximum of 49, was 43.35. The format of the
experience-sampling form and the experience-sampling procedure were similar to those
used in previous research with this method (see Csikszentmihalyi & Larson, 1987).

Initial Session Measures

Of the questionnaires completed during the initial session, those relevant to the
present study are listed below.

Socially desirable responding. A tendency to present oneself in an overly positive
light was assessed using the 20-item version of the Marlowe-Crowne Social Desirability
Scale (Strahan & Gerbasi, 1972, original scale developed by Crowne & Marlowe, 1960).
This scale has shown adequate internal consistency (with K-R 20 ranging from .73 to .83)
and correlates above .90 with the full 33-item scale. The scale consists of statements
describing minor flaws that are true of most people or overly virtuous self-descriptions,
e.g., “I sometimes feel resentful when I don’t get my way,” “I’m always willing to admit
it when I make a mistake.” The items are rated True or False and a person’s score on the
scale is the total number of items scored in the direction of an overly positive self-presentation. The mean score among university students is 9.1 (standard deviation = 3.9).

*Life satisfaction.* This construct was measured using the Satisfaction With Life Scale by Diener, Emmons, Larsen, and Griffin (1985). It contains five items which inquire about one's global satisfaction with one's life. They are "in most ways, my life is close to my ideal," "the conditions of my life are excellent," "I am satisfied with my life," "so far I have gotten the important things I want in life," and "if I could live my life over, I would change almost nothing." They are rated on a 7-point Likert-type scale from 1 (strongly disagree) to 7 (strongly agree); scores are summed and thus can range from 5 to 35. The scale is widely used, highly reliable (alpha = .90), and well-validated (Diener et al., 1985; Pavot & Diener, 1993).

*Meaning.* Participants were asked to make a global evaluation of how meaningful, valuable, and worthwhile their activities and experiences typically were. Three items were used to assess these concepts, each simply consisting of the corresponding adjective: "meaningful," "valuable," and "worthwhile." One filler item, "enjoyable," was included. The items were rated on a 7-point Likert-type scale from 1 (not at all) to 7 (extremely) (see Appendix E for details). An overall meaning score was obtained by taking the mean across the three items.13

*Relative intrinsic/extrinsic aspirations.* For this measure, participants first reported the strivings that were of greatest importance to them, by completing an adaptation of the *Striving List* measure by Emmons (1999). Emmons has defined a
striving as something a person is “typically or characteristically trying to do.”

Participants were asked to give brief written descriptions of their “seven most typical strivings.”

Participants then completed a global measure of relative intrinsic/extrinsic aspirations adapted from the six-item scale used in Sheldon and Kasser (1995). This scale was originally developed by Kasser and Ryan (1993, 1996) – it measures how much the content of one’s main strivings reflects intrinsic versus extrinsic motives. It has been used in a variety of studies (e.g., Kasser & Ryan, 1993, 1996, 2001; Sheldon & Kasser, 1995, 1998), though the wording of the items has varied somewhat from study to study, and a seventh item has sometimes been included. The version adapted for this research is the one in Sheldon and Kasser (1995). Specifically, for each striving, participants were asked “To what degree is this striving important to you because . . . .” and made ratings on various intrinsic and extrinsic reasons that were presented to them. The intrinsic reasons were “it will allow you to help make the world a better place,” “it will allow you to have close and caring relationships with others,” and “it will make you happy and make your life more meaningful”; the extrinsic reasons were “it will help you have a job that pays well and a lot of nice possessions,” “it will make you known and admired by other people,” and “it will make you look good and be attractive to others.” Ratings were made on a 9-point Likert-type scale from 1 (not at all for this reason) to 9 (completely for this reason). A single index of relative intrinsic/extrinsic aspirations was obtained by subtracting the mean score on the three extrinsic items from the mean score on the three intrinsic items (as done in Kasser & Ryan, 2001 and Sheldon & Kasser, 1998).
Experience-sampling Measures

The experience-sampling form included a number of different measures. Appendix F provides the complete experience-sampling form used; the measures relevant to the present study are discussed here.

The items used to assess eudaimonic activity, hedonic activity, personal expressiveness, positive affect, and negative affect were the same as in Study 1. To minimize the role of response set, the items on the experience-sampling form were administered in four different orders (which were labelled as Form 1, Form 2, Form 3, or Form 4 on the questionnaire), and these orders were rotated. That is, the first form a person completed was presented in order 1, the form completed at the next time point was in order 2, then order 3, then order 4, and then again order 1, and so on. The items from each measure were intermixed with the items from at least one other scale. The scales used in both Study 1 and Study 2 will be reviewed here again briefly.

Hand-written description of current activity. Similarly to the experience-sampling forms used by Csikszentmihalyi (Csikszentmihalyi & Larson, 1987), the form in this study asked participants to give a short written description of their activities at the time they received the page.

Eudaimonic and hedonic nature of current activity. Participants were then asked to rate the degree to which their activities were being pursued for eudaimonic ends and for hedonic satisfaction. As noted in Study 1, the eudaimonic and hedonic activity scales were developed specifically for this research. Sample items from the four-item eudaimonic activity scale are “developing your potential” and “pursuing excellence or a
personal ideal.” Sample items from the four-item hedonic activity scale are “enjoying yourself” and “relaxing.” Both sets of items were rated on a 7-point Likert-type scale from 1 (not at all) to 7 (very much). Eudaimonia and hedonia scores for a given activity were obtained by taking the means of the items on the two scales.

**Personal expressiveness, positive affect, and negative affect.** Participants also rated the degree of personal expressiveness, positive affect, and negative affect they were experiencing when they were paged. Again, five of the personal expressiveness items were adapted from Waterman’s (1993) scale, e.g., “that this is what you were meant to do” and “that you were expressing your true self, that this is who you really are.” The sixth facet of Waterman’s definition of personal expressiveness was represented by the mean score of items from the Vitality scale by Ryan and Frederick (1997), e.g., “at this moment, I feel alive and vital” and “I feel energized right now.”

Rather than including all six vitality items on each experience-sampling form, to keep the number of items comparable to the number reported in Csikszentmihalyi and Larson, (1987), only three items appeared on each form. Three of the items appeared on the first form, the remaining three items appeared on the second form, the first group of items appeared on the third form, and so on, alternating between the two groups of items. The decision on how to separate the six items into two groups was based on data from a pilot study with 93 undergraduate and graduate volunteers at McGill University who completed all six items. That data set revealed that two groups of items could be treated as parallel measures – Appendix F shows which items were interchanged with each other. The vitality items were rated on a 7-point Likert-type scale from 1 (not at all true) to 7 (very much true), and the remaining five personal expressiveness items were rated on
a seven-point Likert-type scale from 1 (not at all) to 7 (very much or extremely). An overall personal expressiveness score at a given time was obtained by taking the mean of the scores on the six personal expressiveness items/facets.

Positive affect and negative affect were measured using the same items as in Study 1, e.g., “happy” and “enjoyment/fun” for positive affect, and “unhappy” and worried/anxious” for negative affect. They were rated on a Likert-type scale from 1 (not at all) to 7 (extremely). The mean of the four positive affect items produced the positive affect score and the mean of the five negative affect items produced the negative affect score.

Results for Study 2

Psychometric Properties of New Scales

Relationship of self-reported eudaimonia with socially desirable responding.

Mean eudaimonic activity scores (across all the experience-sampling forms completed by a participant) were correlated with scores on the 20-item Marlowe-Crowne Social Desirability scale. These variables were found to be uncorrelated ($r = .04$, $p > .10$), indicating that self-reported eudaimonic activity was probably not contaminated by a positive self-presentation bias. (Self-reported hedonic activity was also unrelated to socially desirable responding, $r = .01$, $p > .10$.)

Meaning scale. The meaning scale had good internal consistency, with an unstandardized alpha of .80.\textsuperscript{15}
Tests of Hypotheses for Study 2

**Hypothesis 1:** Eudaimonia will be a stronger source of personal expressiveness than will hedonia, at both the within-subjects level (i.e., for a given activity) and the between-subjects level (i.e., on average). Hedonia will be the stronger source of positive affect at the within-subjects level; at the between-subjects level, eudaimonia will promote more positive affect. In Study 2, this hypothesis could be tested at both the within-subjects level (i.e., for a single activity by a participant) and the between-subjects level (i.e., for the relationships between mean scores on variables for each participant, such that there is one observation per individual). As already noted, between-subjects analyses were performed because the number of observations per participant was considered large enough to estimate the person’s mean or typical levels of eudaimonic and hedonic activities and typical levels of personal expressiveness and positive affect.

The within-subjects regressions were performed in exactly the same way as for Study 1. Once again, it was found that hedonic activity was associated with greater concurrent positive affect than was eudaimonic activity, while eudaimonic and hedonic activities were positively linked with concurrent personal expressiveness to about the same degree (see Table 4).

Paralleling the supplementary analyses conducted in Study 1, the above analyses were repeated when measuring hedonic activity using only the items reflecting relaxation and being entertained, to reduce its overlap with the positive affect scale. Once again, the hypothesis was supported. Hedonic activity had a stronger relationship with concurrent positive affect (unstandardized coefficient = .56, p < .01) than did eudaimonic activity (coefficient = .07, p < .01), ($\chi^2_{1df}$ of difference = 451, p < .01), whereas eudaimonic
activity was accompanied by greater personal expressiveness (coefficient = .35, p < .01) than was hedonic activity (coefficient = .26, p < .01) ($\chi^2_{1df}$ of difference = 21, p < .01). In addition, a correlation was computed between hedonic activity and concurrent personal expressiveness when controlling for positive affect. This analysis produced the same result as did Study 1: controlling for positive affect changed the correlation from positive (r = .47, p < .01) to non-significant (r = .13, p > .05).

In hierarchical linear modeling, before proceeding to treat within-subjects dependent variables (i.e., variables measured repeatedly for each participant) as between-subjects dependent variables (i.e., variables where the mean score for each person varies from person to person), it is important to first demonstrate that a significant proportion of their variance actually occurs at the between-subjects level. In other words, it is important to demonstrate that the mean scores actually do vary from person to person, so that a between-subjects analysis is justified. Therefore, the models tested for personal expressiveness and positive affect (in HLM) were as follows:

**Personal Expressiveness** = $\beta_0 + r$

$\beta_0 = \gamma_0 + u_0$

and

**Positive Affect** = $\beta_0 + r$

$\beta_0 = \gamma_0 + u_0$

where r and $u_0$ are the error terms. The between-subjects variances (i.e., the variances of the $\beta_0$ values) were significant for both personal expressiveness ($\chi^2_{99df} = 2125$, p < .01) and positive affect ($\chi^2_{99df} = 2028$, p < .01). Between-subjects analyses were therefore justified.
At the between-subjects level, multiple regressions were conducted with mean eudaimonic activity and mean hedonic activity (across all experience-sampling forms completed) entered simultaneously as independent variables. Because the dependent variables, personal expressiveness and positive affect, were within-subjects variables, it was possible to use multilevel modeling (using HLM) to obtain more accurate estimates of the coefficients than would be obtained if mean personal expressiveness and mean positive affect were simply used as the dependent variables. (Multilevel models would provide slightly more accurate estimates because they would take into account the reliability of the mean personal expressiveness or mean positive affect value for each participant, which is a function of the number of observations for that participant.) The two models were as follows:

**Personal Expressiveness** = $\beta_0 + r$

$\beta_0 = \gamma_0 + \gamma_{01}(\text{mean Eudaimonic Activity}) + \gamma_{02}(\text{mean Hedonic Activity}) + u_0$

and

**Positive affect** = $\beta_0 + r$

$\beta_0 = \gamma_0 + \gamma_{01}(\text{mean Eudaimonic Activity}) + \gamma_{02}(\text{mean Hedonic Activity}) + u_0$

At the between-subjects level, the hypothesis was clearly supported. Both daily eudaimonic activity and daily hedonic activity were associated with higher personal expressiveness in one’s life, but the link with eudaimonia was stronger. When studying mean positive affect, both eudaimonia and hedonia were associated with positive affect, though the link with hedonia was stronger (see Table 5).

This pattern of results was replicated when hedonic activity was measured using items that reduced overlap with positive affect. Mean eudaimonic activity was more
strongly related to mean personal expressiveness (unstandardized coefficient = .57, p < .01) than mean hedonic activity was (coefficient = .16, p < .05) (χ²₁df of difference = 13, p < .01). On the other hand, mean hedonic activity was more strongly related to mean positive affect (coefficient = .75, p < .01) than mean eudaimonic activity was (coefficient = .28, p < .01) (χ²₁df of difference = 21, p < .01). The correlation between mean hedonic activity and mean personal expressiveness, when controlling for their links with positive affect, was non-significant (r = .04, p > .05) (while it was positive, r = .52, p < .01, when positive affect was not controlled for).

**Hypothesis 2:** The state of personal expressiveness is a sufficient but not necessary condition for the state of positive affect. The findings paralleled those from Study 1. There was a significantly smaller proportion of instances when people were experiencing high personal expressiveness but low positive affect (101 of 223 instances or 45% of the time) than when they experienced high positive affect but low personal expressiveness (237 of 359 instances or 66% of the time) (z = 4.92, p < .01).

**Hypothesis 3:** The states of personal expressiveness and positive affect during a given activity will have a strong positive correlation. The within-subjects correlation was lower than in Study 1, though it was still strong (r = .52, p < .01).

**Hypothesis 4:** At the within-subjects level, hedonic activity will have a stronger negative relationship with negative affect than will eudaimonic activity. At the between-subjects level, eudaimonic activities will have a stronger negative
**relationship with negative affect.** The within-subjects regression was performed in the same way as for Study 1. The results again showed that negative affect had a significant negative relationship with hedonic activity and this link was significantly more negative than the link with eudaimonic activity. Unlike Study 1, where eudaimonia had a small positive relationship with concurrent negative affect, in Study 2 there was no relationship between these variables (see Table 4).

In Study 2, it was also possible to test the hypothesis at the between-subjects level (for the same reason as noted earlier). The between-subjects variance of negative affect was significant ($\chi^2_{99\text{df}} = 2501, p < .01$), so that a between-subjects analysis was justified.

At the between-subjects level, as predicted, daily hedonic activity was associated with lower average negative affect. While a eudaimonic lifestyle was expected to have an even stronger negative link with negative affect, was no relationship between these variables (see Table 5).

**Hypothesis 5:** Frequent eudaimonic activity over a period of time will cause a greater increase in personal expressiveness and positive affect than will frequent hedonic activity; frequent hedonic activity will have a weak positive effect on these forms of well-being. This hypothesis was tested over the longest period that the study would permit – seven days. Though one week may not be long enough for the cumulative benefits of eudaimonia to become strongly apparent, there may at least be trends in line with the hypothesis. Between-subjects multiple regressions (in SPSS) were therefore conducted as follows.
The first regression tested whether a change in personal expressiveness from day 1 to day 7 was associated with eudaimonic or hedonic activities on the intervening five days. Though this could not prove a causal relationship between one’s activities and well-being, it would show whether the data were consistent with the causal prediction and would provide more compelling evidence than concurrent analyses could. Specifically, the dependent variable was mean personal expressiveness on the seventh day of the study. The simultaneous independent variables were mean personal expressiveness on the first day (to control for the baseline level of personal expressiveness), mean eudaimonic activity on days two to six, and mean hedonic activity on days two to six. The model was therefore as follows:

\[ \text{day 7 Personal Expressiveness} = \beta_0 + \beta_1(\text{day 1 Personal Expressiveness}) + \beta_2(\text{day 2 to 6 Eudaimonic Activity}) + \beta_3(\text{day 2 to 6 Hedonic Activity}) + r \]

The overall regression was significant \( (F_{3,95} = 24.00, p < .01) \). As shown in Table 6, the data were consistent with the hypothesis and the results were in fact statistically significant. Engaging in eudaimonic activities during the middle days of the study was associated with a significant increase in personal expressiveness over the one-week period, whereas engaging in hedonic activities played no role. (The regression coefficient for day 1 personal expressiveness was significant, as would be expected.)

The second regression tested whether a change in positive affect from day 1 to day 7 of the study was associated with eudaimonic or hedonic activities on the intervening five days. The model was as follows:

\[ \text{day 7 Positive Affect} = \beta_0 + \beta_1(\text{day 1 Positive Affect}) + \beta_2(\text{day 2 to 6 Eudaimonic Activity}) + \beta_3(\text{day 2 to 6 Hedonic Activity}) + r \]
The overall regression was significant ($F_{3,95} = 21.58$, $p < .01$). As predicted, eudaimonic activity was associated with a significant increase in positive affect over the seven-day period. Hedonic activity was also linked with increased positive affect and this relationship was stronger than expected. While hedonic activity was predicted to only weakly boost positive affect over time, it was related to positive affect as much as eudaimonic activity was. (Day 1 positive affect had a significant coefficient, as would be expected.) Table 6 details the regression coefficients.\(^{16}\)

Hypothesis 6: Both positive affect and personal expressiveness will cause an increase in eudaimonic activity, but the effect of personal expressiveness will be stronger. This hypothesis was also tested with a between-subjects multiple regression (in SPSS). Here, the dependent variable was mean eudaimonic activity on the seventh day. The simultaneous independent variables were mean eudaimonic activity on the first day (to control for baseline eudaimonic activity), mean personal expressiveness on days two to six, and mean positive affect on days two to six. The model was as follows:

$$\text{day 7 Eudaimonic Activity} = \beta_0 + \beta_1(\text{day 1 Eudaimonic Activity}) + \beta_2(\text{day 2 to 6 Personal Expressiveness}) + \beta_3(\text{day 2 to 6 Positive Affect}) + r$$

The overall regression was significant ($F_{3,95} = 18.31$, $p < .01$). As shown in Table 7, the experience of personal expressiveness was linked with a significant increase eudaimonic activity over time, and the experience of positive affect also had a marginal positive coefficient. (Day 1 eudaimonic activity had a significant coefficient, as would be expected.)\(^{17}\)
In addition, as an exploratory analyses, the relationship between change in hedonic activity over one week and well-being on the intervening days was studied. The model was:

\[
\text{day 7 Hedonic Activity} = \beta_0 + \beta_1(\text{day 1 Hedonic Activity}) + \\
\beta_2(\text{day 2 to 6 Personal Expressiveness}) + \beta_3(\text{day 2 to 6 Positive Affect}) + \epsilon
\]

The overall regression was significant (F\(_{3,95}\) = 27.34, p < .01). As shown in Table 7, the experience of both personal expressiveness and positive affect was linked with increased hedonic activity over time. (Day 1 hedonic activity had a significant coefficient.)

**Hypothesis 7:** A general eudaimonic orientation will lead one to appreciate both eudaimonic and hedonic activities more deeply, in terms of both personal expressiveness and positive affect. A general hedonic orientation will not enhance the well-being derived from these activities. The regression analyses that tested this hypothesis examined whether the relationship between a dependent variable (personal expressiveness or positive affect) and a within-subjects independent variable (eudaimonic activity or hedonic activity) was stronger or weaker in the presence of a between-subjects variable (general eudaimonic orientation). Before proceeding with these analyses, it was first determined whether the strength of the relationship between the dependent variables and the within-subjects independent variables actually changed from person to person. If there were no variability from person to person, one would not be justified in testing whether an individual difference accounts for this variability. Therefore, the preliminary models (in HLM) were as follows:
Personal Expressiveness = $\beta_0 + \beta_1$(Eudaimonic Activity) + $\beta_2$(Hedonic Activity) + r

$\beta_0 = \gamma_{00} + u_0$

$\beta_1 = \gamma_{10} + u_1$

$\beta_2 = \gamma_{20} + u_2$

and

Positive affect = $\beta_0 + \beta_1$(Eudaimonic Activity) + $\beta_2$(Hedonic Activity) + r

$\beta_0 = \gamma_{00} + u_0$

$\beta_1 = \gamma_{10} + u_1$

$\beta_2 = \gamma_{20} + u_2$

The between-subjects variances of the slopes (i.e., of the $\beta_1$ and $\beta_2$ values) were indeed significant when predicting both personal expressiveness ($\chi^2_{99\text{df}} = 289, p < .01$ and $\chi^2_{99\text{df}} = 382, p < .01$, respectively) and positive affect ($\chi^2_{99\text{df}} = 207, p < .01$ and $\chi^2_{99\text{df}} = 366, p < .01$, respectively). Multilevel analyses, with independent variables at both the within-subjects and the between-subjects level, were therefore justified.

The measures of general eudaimonic orientation and general hedonic orientation were the mean eudaimonic activity and mean hedonic activity scores for each participant.

The findings when personal expressiveness was the dependent variable will be reported first. The hypothesis was tested using multilevel modeling (with HLM). Mean eudaimonic activity and mean hedonic activity were entered simultaneously as independent variables at the between-subjects level (i.e., as variables that differed from person to person), and eudaimonic activity and hedonic activity at a given moment were entered simultaneously as independent variables at the within-subjects level, in predicting
personal expressiveness at the within-subjects level (i.e., at the time of the activities). The model was therefore as follows:

**Personal Expressiveness** = β₀ + β₁(Eudaimonic Activity) + β₂(Hedonic Activity) + r

β₀ = γ₀₀ + γ₀₁(mean Eudaimonic Activity) + γ₀₂(mean Hedonic Activity) + u₀

β₁ = γ₁₀ + γ₁₁(mean Eudaimonic Activity) + γ₁₂(mean Hedonic Activity) + u₁

β₂ = γ₂₀ + γ₂₁(mean Eudaimonic Activity) + γ₂₂(mean Hedonic Activity) + u₂

where r, u₀, u₁, and u₂ are the error terms. The above model was used to determine whether one’s general orientation (eudaimonic or hedonic) was linked with significantly greater personal expressiveness during eudaimonic and/or hedonic activity. The coefficients representing these increments in personal expressiveness were γ₁₁ and γ₂₁ for a general eudaimonic orientation and γ₁₂ and γ₂₂ for a hedonic orientation.

As predicted, being eudaimonically oriented was associated with incremental personal expressiveness during both eudaimonic and hedonic activities, while being hedonically oriented did not produce an increment personal expressiveness. The differences between the increments for eudaimonic and hedonic orientation were not significant, though (see Table 8).

When positive affect was the dependent variable, the multilevel model was as follows:

**Positive affect** = β₀ + β₁(Eudaimonic Activity) + β₂(Hedonic Activity) + r

β₀ = γ₀₀ + γ₀₁(mean Eudaimonic Activity) + γ₀₂(mean Hedonic Activity) + u₀

β₁ = γ₁₀ + γ₁₁(mean Eudaimonic Activity) + γ₁₂(mean Hedonic Activity) + u₁

β₂ = γ₂₀ + γ₂₁(mean Eudaimonic Activity) + γ₂₂(mean Hedonic Activity) + u₂
As expected, having a eudaimonic orientation was linked with greater positive affect during hedonic activities, though the increment in personal expressiveness was not significantly greater than the increment for hedonically oriented people. Contrary to expectations, a eudaimonic orientation did not increase positive affect during eudaimonic activities. A hedonic orientation did not raise positive affect during either type of activity, as hypothesized (see Table 9).

**Hypothesis 8:** Having high intrinsic and low extrinsic aspirations will lead one to derive greater well-being, in terms of both personal expressiveness and positive affect, from one’s activities, both hedonic and eudaimonic. Recall that the predictions regarding relative intrinsic/extrinsic motivation paralleled those made for a global eudaimonic orientation. The multilevel models were therefore as follows:

**Personal Expressiveness**

\[
\beta_{0} = \gamma_{00} + \gamma_{01}(Relative\ Intrinsic/Extrinsic\ Aspirations) + u_{0} \\
\beta_{1} = \gamma_{10} + \gamma_{11}(Relative\ Intrinsic/Extrinsic\ Aspirations) + u_{1} \\
\beta_{2} = \gamma_{20} + \gamma_{21}(Relative\ Intrinsic/Extrinsic\ Aspirations) + u_{2} \\
\]

and

**Positive Affect**

\[
\beta_{0} = \gamma_{00} + \gamma_{01}(Relative\ Intrinsic/Extrinsic\ Aspirations) + u_{0} \\
\beta_{1} = \gamma_{10} + \gamma_{11}(Relative\ Intrinsic/Extrinsic\ Aspirations) + u_{1} \\
\beta_{2} = \gamma_{20} + \gamma_{21}(Relative\ Intrinsic/Extrinsic\ Aspirations) + u_{2} \\
\]

As expected, having highly intrinsic aspirations was associated with greater personal expressiveness during eudaimonic activities. Contrary to expectations, however,"
an intrinsic orientation did not contribute to positive affect during eudaimonic activities or to either type of well-being during hedonic activities. Note that people high in relative intrinsic/extrinsic motivation generally experienced more personal expressiveness as well as more positive affect (see Tables 10 and 11).^{18}

**Hypothesis 9:** Eudaimonic pursuits will produce greater life satisfaction than will hedonic pursuits, and hedonic pursuits will have a weak positive relationship with life satisfaction. A person’s typical degree of eudaimonia or hedonia was estimated by the mean eudaimonic or hedonic activity score across all of the experience-sampling forms the person completed. A between-subjects multiple regression (in SPSS) was therefore conducted, where each person’s mean level of eudaimonic activity and mean level of hedonic activity were entered simultaneously as the independent variables, and the person’s overall level of life satisfaction was entered as the dependent variable. The model was as follows:

\[
\text{Life Satisfaction} = \beta_0 + \beta_1(\text{mean Eudaimonic Activity}) + \beta_2(\text{mean Hedonic Activity}) + r
\]

The overall regression was significant \(F_{2,97} = 4.93, p < .01\). As predicted, engaging in eudaimonic activities in one’s daily life had a significant positive relationship with life satisfaction. While hedonia was expected to have a weak positive effect on life satisfaction, no effect was found (see Table 12).

**Hypothesis 10:** Eudaimonic activity will be more important than hedonic activity in building a sense of meaning and value in life; hedonic activity will have a
weak positive effect on these. A person’s typical levels of eudaimonia or hedonia were again estimated by the person’s mean scores on eudaimonic and hedonic activities. The dependent variable was the self-report scale reflecting a global assessment of the meaning in one’s life. The model tested was therefore as follows:

typical level of Meaning = $\beta_0 + \beta_1$(mean Eudaimonic Activity) + $\beta_2$(mean Hedonic Activity) + r

The overall regression was significant ($F_{2,97} = 4.11, p < .05$). Consistent with the hypothesis, a high level of eudaimonic activity was associated with greater meaning in life. Although a hedonic lifestyle was expected to have at least a weak effect on meaning, it was found to have none (see Table 12).

Discussion for Study 2

A measure of socially desirable responding was included in Study 2 to rule out the possibility that the self-report measure of eudaimonia was contaminated by a tendency to exaggerate one’s positive qualities. The eudaimonia measure was indeed unrelated to socially desirable responding. Also, the new measure of meaning and value in life had high internal consistency.

Similarly to Study 1, hedonic activity was accompanied by greater positive affect and less negative affect than was eudaimonic activity. Eudaimonic activity was again accompanied by weak positive affect but this time was unrelated to negative affect. Both eudaimonic and hedonic activities had moderate positive relationships with concurrent personal expressiveness. The latter finding was contrary to the expectation that
eudaimonic activity would be the stronger source of concurrent personal expressiveness. (Again, however, supplemental analyses suggested that the relationship between hedonic activity and personal expressiveness may have been inflated by the confounding role of positive affect.)

At the between-subjects level, the prediction regarding personal expressiveness was clearly supported. That is, people who typically had high levels of eudaimonic activity also experienced greater daily personal expressiveness than did people who typically engaged in a lot of hedonic activity. As predicted, positive affect was positively linked with both hedonic activity and eudaimonic activity. However, contrary to expectations, its link was stronger with hedonic activity than with eudaimonic activity. Negative affect was linked only with hedonia though it was expected to be linked more strongly with eudaimonia.

Waterman’s findings on the relationship between personal expressiveness and positive affect were once again confirmed. High personal expressiveness was often accompanied by high positive affect, while high positive affect was not necessarily accompanied by elevated personal expressiveness. This finding suggests, among other things, that personal expressiveness is a deeper form of well-being than positive affect. The within-subjects correlation between personal expressiveness and positive affect (r = .52) was even lower than in Study 1, though still strong, as predicted. The correlation showed that personal expressiveness was related to positive affect, the dominant measure of well-being state, but could still be treated as a distinct concept.

Prospective analyses were consistent with the hypothesis that eudaimonic pursuits have a cumulative effect on well-being, so that they build up well-being over time. A high level of eudaimonic activity over a period as short as one week was linked with
increases in both personal expressiveness and positive affect over that time. Repeatedly engaging in hedonic activities, on the other hand, was not expected to build up well-being through time. The data were consistent with this prediction when the dependent variable was change in personal expressiveness, but not when it came to hedonic well-being. Frequent hedonic activity was linked with increased positive affect over one week to about the same degree as high eudaimonic activity was.

Prospective analyses were also consistent with the hypothesis that the causal arrow operates in the other direction. That is, the daily experience of well-being (both personal expressiveness and positive affect) was linked with increased eudaimonic activity over one week (though the effect of positive affect was only marginally significant).

There was a fair amount of support for the hypothesis that people who are generally eudaimonically oriented derive greater well-being (both personal expressiveness and positive affect) from any activity, be it eudaimonic or hedonic. In three out of four regressions, a global eudaimonic orientation was linked with increased well-being during daily activities.

There was weaker support for a similar expectation that people who are high on relative intrinsic/extrinsic aspirations will derive greater well-being from any activity, eudaimonic or hedonic. Relative intrinsic/extrinsic aspirations were only linked with an increase in personal expressiveness during eudaimonic activities. (As discussed in Footnote 12, however, there was stronger support for the hypothesis when intrinsic aspirations were studied alone, separately from extrinsic aspirations.)

Finally, as expected, daily eudaimonic activity had significant positive relationships with both life satisfaction and a sense of meaning in life. Though the
hedonic life was predicted to have at least a small effect on these outcomes, it turned out
to have none. Life satisfaction and life meaning can be viewed as long-term outcomes of
one’s daily activities. The findings therefore suggest that eudaimonia is important for
building well-being in the long run.
The present research is at the heart of the new field of positive psychology. This field is concerned with well-being and with building the best things in life rather than assessing and repairing pathology, as psychology traditionally has. One of its key questions is: Which life pursuits promote personal well-being? Throughout history, theories about this question have traditionally fallen into two camps. One is the hedonic view, which defines the happy life as one filled with enjoyment, pleasure, and one with minimal discomfort. From the eudaimonic perspective, however, true fulfillment is reached by applying and developing the best in oneself, even if it entails discomfort along the way.

Surprisingly little research has actually investigated the links between these two pursuits and well-being. Such a comparison was the aim of the present research. Rather than simply asking whether one pursuit produces happiness while the other does not, the questions addressed were more nuanced, with the expectation that the picture would be more complex. Specifically, the research investigated whether eudaimonic and hedonic pursuits are related to different kinds of well-being, whether their relationships with well-being change over time (i.e., whether one pursuit is linked with more immediate gratification while the other is more linked with long-term outcomes), and whether a general tendency to be eudaimonic or hedonic was associated with greater enjoyment of any activity, be it eudaimonic or hedonic.
Summary of Findings

Below we will first review findings about the psychometric properties of the newly developed scales. Subsequently, we will summarize the results of the hypothesis tests, compare them with the original expectations, and discuss some of their implications. The results will then be distilled into patterns that seem to emerge across different analyses.

Psychometric Properties of the New Scales

All the scales developed for this research – those assessing eudaimonic activity, hedonic activity, personal expressiveness, and meaning and value in life – showed high internal consistency. Furthermore, factor analysis demonstrated that the key concepts being contrasted, eudaimonia and hedonia, were clearly distinct empirically. This confirms previous findings that they warrant study as two different approaches to living. Correlational analysis with a scale of socially desirable responding also showed that the eudaimonia scale does not merely tap a desire to present oneself in a positive light. In addition, eudaimonic activity proved to be sufficiently different from flow to be treated as a separate concept. Finally, factor analysis showed that most of the concepts reflecting personal expressiveness were distinct from those representing positive affect, a more traditional index of well-being. Waterman (1993) did not report such an analysis, so this finding adds important evidence for the distinct nature of personal expressiveness.
Links with Positive and Negative Affect

As predicted, in the moment, hedonic activity was linked with greater positive affect and lower negative affect than eudaimonic activity was. Eudaimonia had weak or no relationships with concurrent positive affect and negative affect. These findings indicate that hedonic activity is associated with immediate gratification and immediate relief of distress. In contrast, eudaimonic endeavors may or may not be pleasant in the moment. The fact that hedonic activities are accompanied by so much more pleasant affect is probably a central reason why people often prefer hedonic activities over eudaimonic ones. There is also good reason to call positive affect “hedonic enjoyment,” as Waterman (1993) did – it is more associated with hedonic activity than it is with eudaimonic activity, and it is experienced to a stronger degree during hedonic activity than personal expressiveness is.

At the between-subjects level, people who frequently engaged in hedonic activity reported high mean levels of positive affect and low mean levels of negative affect, as predicted. People who engaged in many eudaimonic pursuits also had elevated positive affect, as expected, though they did not experience less negative affect than people with few eudaimonic pursuits.

Eudaimonia was indeed expected to be linked with elevated mean positive affect. Personal virtue and growth should build personal capital. This includes assets like insight and appreciation, good interpersonal relationships, a history of achievements, and so on, that eventually bring dividends in the form of well-being.

An unexpected finding was that mean eudaimonia was unrelated to mean negative affect. One would expect eudaimonists to accumulate coping skills that buffer them against negative affect and to work on resolving obstacles which are sources of distress.
Perhaps the daily stresses of struggling for personally meaningful goals counterbalanced these benefits, so that there was little effect on negative affect overall.

Also unexpected was the strong relationship between mean positive affect and mean levels of hedonic activity during the study, though this relationship was expected to be positive, as already noted. People who often engage in fun or relaxing activities would understandably report high positive affect during those activities. However, from the view presented here, one would not expect these people to be exceptionally happy during other activities – their hedonic happiness should have faded, they may not have much personal capital to draw on, and they may even be dissatisfied with activities they don’t expect to be pleasurable. On average, therefore, the positive affect of hedonically oriented people should only be somewhat elevated. Perhaps hedonic well-being lasted longer than expected, at least a matter of hours, so that it carried over into times when people were not doing something hedonic. It is also possible that the link between mean hedonic activity and mean positive affect seemed so strong because both variables were measured during the same week. Some participants probably had more or fewer enjoyable activities that week than usual, which inflated the apparent link between these variables. Research over a longer time would determine with more certainty how strongly mean hedonic activity and positive affect are related.19

Links with Personal Expressiveness

As hypothesized, people experienced elevated personal expressiveness during eudaimonic activities. This is consistent with the expectation of various authors that eudaimonic pursuits would elicit feelings of authenticity, deep connectedness with one’s activities, fulfillment, and being intensely alive.
Unexpectedly, however, hedonic activities were also accompanied by personal expressiveness and to about the same degree as eudaimonic ones were. When the hypotheses were introduced, it was argued that hedonic activity might occasionally elicit personal expressiveness if it shares certain properties with eudaimonia, e.g., if it is congruent with authentic needs and values. On average, however, the effect of hedonic activity on concurrent personal expressiveness was expected to be weak. As Waterman (1993) argued, this form of well-being was expected to arise primarily from eudaimonia.

A possible explanation for the unexpected results is that some of the hedonic activity items overlapped semantically with items on the positive affect scale, which in turn was strongly correlated with personal expressiveness. Therefore, the relationship between hedonic activity and personal expressiveness may have been inflated by this indirect link. Exploratory analyses provided support for this explanation. When partial correlations were carried out between hedonic activity and concurrent personal expressiveness, controlling for positive affect, the relationship between hedonic activity and personal expressiveness disappeared. When hedonic activity was measured using only items that were fairly distinct from positive affect, regression analysis showed that the concurrent link between hedonia and personal expressiveness became significantly weaker than the link between eudaimonia and personal expressiveness. Nevertheless, further research will be needed to determine the concurrent relationship between hedonic activity and personal expressiveness with greater certainty. Such research will need to assess hedonic activity in a way that is more clearly distinct from positive affect.

When studying the relationships between mean levels of peoples’ activities and personal expressiveness, the predicted relationships were confirmed. People who
generally engaged in many eudaimonic activities experienced greater daily personal expressiveness than did people who frequently sought hedonic satisfaction.

The Relationship Between Positive Affect and Personal Expressiveness

As predicted, the frequency of instances when people experienced high personal expressiveness but low positive affect was significantly smaller than the frequency of instances when they experienced high positive affect but low personal expressiveness. This was consistent with Telfer's (1980) prediction that personal expressiveness would concurrently elicit positive affect as well (though positive affect could be produced by other variables too). The reverse did not appear to be true — the majority of experiences high in positive affect were not experienced as personally expressive. These findings agree with the view that personal expressiveness cannot be elicited by merely feeling good but that it is the product of a more specific set of circumstances (i.e., of eudaimonic activity). The findings are also consistent with the argument that personal expressiveness is a deeper form of well-being which affects the person more pervasively than does positive affect.

Also as hypothesized, personal expressiveness and positive affect were highly but not perfectly correlated. Study 2 probably produced the most accurate estimate of this correlation to date, because it measured the variables at the time they were actually experienced and obtained such a large sample of experiences. While Waterman (1993) obtained correlations of .74, p < .01 and .82, p < .01 in his two studies, Study 2 in the present research produced a correlation of .52, p < .01. This correlation was still strong, as would be expected of concepts which both reflect well-being and where the presence of one is predicted to elicit the other. However, a correlation of .52 is much lower than
Waterman’s (1993) estimates. This shows that the two forms of well-being are even more distinct than originally believed. It would appear that, when people are asked to make retrospective and global judgments, they are biased by assumptions about how strongly personal expressiveness and positive affect should be correlated and overestimated the strength of the relationship.

*Relationships Over a One-week Period*

Over a one week period, as predicted, eudaimonia was linked with a greater increase in personal expressiveness than was hedonia. In fact, hedonia ceased to play any role in personal expressiveness. Over the seven days, eudaimonia also caught up to hedonia in terms of the strength of its relationship with positive affect, though it did not surpass hedonia.

These findings are consistent with the expectation that the well-being benefits of eudaimonia actually accumulate and increase with time. With eudaimonic endeavors, one can look back and see a product and draw on the resources built by that product.

In contrast, the well-being derived from hedonic activity was expected to be transient. The data on personal expressiveness were consistent with this expectation. This is understandable – repeated enjoyment or relaxation would not usually be expected to deepen one’s sense of authenticity or build feelings that one has accomplished something one was meant for. An unexpected result was the finding that engaging in hedonic activity for the week of the study was linked with increased positive affect over that time. Perhaps the positive affect associated with hedonic activity lingered long enough to be detected over the duration of the study and would have faded over a longer
time. Alternatively, perhaps hedonia remains a significant source of positive affect even in the long run.

Recall that a reverse model was also tested, such that a change in eudaimonic activity over seven days was regressed on well-being on the intervening days. An increase in eudaimonia proved to be significantly associated with high personal expressiveness and marginally with high positive affect. Again, though the data were correlational, these results are consistent with the prediction that happiness (measured as either personal expressiveness or positive affect) motivates people to invest in eudaimonic efforts. The findings also agree with the view that eudaimonia is self-reinforcing, such that the well-being it produces encourages further eudaimonia.

The Roles of Global Eudaimonia and Global Intrinsic Motivation

It was expected that eudaimonic activity would deepen one’s ability to appreciate many experiences. This was predicted because eudaimonic interests and pursuits should diversify one’s experiences and perspectives, increase one’s capacity to perceive subtleties, and situate activities within a meaningful framework. Consequently, a highly eudaimonic approach to life should increase the happiness derived from any activity, in terms of both personal expressiveness and positive affect. Three out of four analyses supported this prediction. People with frequent eudaimonic activity experienced greater personal expressiveness during both eudaimonic and hedonic activities, and greater positive affect during hedonic activities.

A general tendency to set intrinsic rather than extrinsic goals for oneself was similarly expected to enhance both types of well-being during both types of activities. However, only one of four analyses supported this prediction: relative intrinsic/extrinsic
motivation was only linked with greater personal expressiveness during eudaimonic pursuits. Perhaps the additional features of eudaimonia besides intrinsic motivation, such as the explicit goals of growth or virtue, contribute most strongly to increased understanding and appreciation of experiences; or, perhaps it is the combination of these other eudaimonic features with intrinsic motivation that best develops one’s appreciation of the meaning and even pleasure of experiences. It is also possible that extrinsic motivation does not play a role in the kind of effect hypothesized and that its inclusion in the intrinsic/extrinsic scale masked the effect of intrinsic motivation. When intrinsic motivation was studied alone (see Footnote 13), it did have marginal or significant coefficients in the same three analyses as global eudaimonia did, providing stronger support for the hypothesis.

Links with Life Satisfaction and Meaning in Life

Finally, while a high level of eudaimonia was positively associated with life satisfaction and with meaning and value in life, frequent hedonic activity promoted neither of these. These are important findings. They suggest that, looking back on one’s life, what matters in concluding that it was satisfying and meaningful is what one learned and built, not how much fun or comfort one had. The results are especially striking given that both eudaimonists and hedonists probably believe that their respective goals will be satisfying and have value. Schooler and colleagues (2003) argue that many people are in fact poor at estimating how much well-being they will actually derive from their pursuits and may therefore pursue fruitless avenues. If that is the case, research of the kind presented here becomes all the more important in elucidating, for both researchers and the public, how different ways of life actually affect well-being.
Patterns Across the Findings

We shall now turn to a discussion of several patterns that seem to emerge across the different analyses. They represent general arguments that might be made about the difference between eudaimonia and hedonia and about the difference between certain well-being variables.

Eudaimonic Versus Hedonic Types of Well-being

As various authors have asserted, there are important forms of well-being that are not captured by the concept of hedonic happiness. This is perhaps best illustrated if we think of people who sacrifice much personal enjoyment for meaningful causes and yet would still call their lives fulfilling (e.g., Mother Teresa, Mahatma Gandhi). Many types of activities can generate hedonic well-being, including entertainment, relaxation, eating, getting a back scratch, and even street drugs. Yet other forms of well-being are expected to arise primarily from pursuits that are virtuous and lead to self-transcendence – these might be called forms of eudaimonic well-being.

Waterman (1993) proposed that one such form of well-being is personal expressiveness. The present research provided some support for considering personal expressiveness a unique and particularly eudaimonic form of well-being. The facets of personal expressiveness separated from those of positive affect in factor analysis. There was also an asymmetry in the frequencies of experiences that were high in one form of well-being but low in the other. Moreover, the two forms of well-being related differently to eudaimonic and hedonic activities. Both in the moment and in the long run,
hedonic activity had either the same or the stronger relationship with positive affect, while eudaimonic activity had the same or the stronger relationship with personal expressiveness.

The other type of well-being included in the present research which has been conceptualized as particularly eudaimonic was a sense of meaning and value in life. Eudaimonia and hedonia clearly differed in their relationships with meaning: eudaimonia was linked with significantly elevated meaning, while hedonia failed to contribute to it.

The forms of well-being that have been proposed as eudaimonic are somewhat different qualities of experience from hedonic states. Hedonic well-being is more sensory and emotional, a "raw feel" as Seligman (2002) calls it. Eudaimonic well-being can be subtler and involves more thinking and interpretation (Seligman, 2002). Eudaimonic happiness is also more a matter of connectedness, integration, and harmony (within the self and with one's environment) and a sense of value, whereas the hedonic state is more a matter of emotional valence, positive or negative. Roughly speaking, eudaimonic happiness might be characterized as feeling right, whereas hedonic satisfaction is feeling good. From this point of view, it becomes clearer why personal expressiveness and a sense of meaning and value in life would be considered more eudaimonic, whereas positive affect would be a more hedonic form of well-being.

The above characterization of hedonic and eudaimonic types of happiness also suggests that negative affect is a hedonic state – we might call it hedonic distress. Note how negative affect differs from eudaimonic forms of distress. Examples of the latter are Frankl's (1963) concept of the existential vacuum or sense of emptiness when one lacks meaning in life, and Maslow's (1970) description of the boredom and aimlessness of individuals who gratify only lower hedonic needs (e.g., bodily needs) rather than striving
for something greater in life. The findings in the present research were consistent with a view of negative affect as hedonic. Only hedonic activity was associated with decreased negative affect; eudaimonia either had no relationship with it or was accompanied by slightly elevated negative affect.

Whether life satisfaction belongs in the hedonic or eudaimonic camp remains an open question. Life satisfaction shares certain characteristics with eudaimonic types of well-being because it involves some evaluation and interpretation of one’s life, and it was associated only with eudaimonic activity in the present research. However, the factor analyses conducted previously on eudaimonic and hedonic concepts have found that life satisfaction loads onto the same factor as positive affect and negative affect (Compton et al., 1996; Keyes et al., 2002; McGregor & Little, 1998; Ryff, 1989). Together, these considerations suggest that life satisfaction is either more of a hedonic form of well-being, or that perhaps it is neither hedonic nor eudaimonic but rather the end product of both types of well-being, being at the top of the well-being pyramid, so to speak. Future research could compare these two models.

In sum, the evidence is accumulating that different forms of well-being can be characterized as more hedonic or more eudaimonic. Moreover, the present research suggests that hedonic enjoyment should not be the sole criterion of happiness and that eudaimonic well-being should be assessed more regularly in well-being research. It was shown that eudaimonic well-being is empirically distinguishable from hedonic happiness, it is linked especially strongly with eudaimonic pursuits, at least in the long run, and it may affect the person more pervasively than hedonic enjoyment does. The present research therefore contributes to a growing literature on the importance of assessing well-being more comprehensively, including the work of Compton and colleagues (1996),

If one ignores eudaimonic forms of well-being, one can arrive at inaccurate conclusions about the benefits of eudaimonic and hedonic pursuits. Measures of eudaimonic happiness may also shed new light on other areas of research, such as the link between extraversion/introversion and well-being (introverts may be just as eudaimonically fulfilled as extraverts), the pervasiveness and duration of well-being, and the effects of well-being on other outcomes, such as persistence in the face of obstacles. A specific prediction for future research will be made here about the latter outcome. Globally having a high level of eudaimonic satisfaction may not prevent day-to-day stresses. However, it is predicted to have pervasive effects which will buffer a person against despairing and giving up at especially difficult times. High levels of hedonic enjoyment may not buffer a person as effectively.

A Short-term/Long-term Trade-off of Well-being Benefits

It was predicted that eudaimonia and hedonia would differ in how they affected well-being in time, such that hedonia would be more gratifying in the moment, while eudaimonia would be more fulfilling in the long run. A number of findings agreed with this expectation. When eudaimonia’s link with well-being changed over time, it increased. In contrast, when hedonia’s relationship with well-being changed with time, it decreased. At the moment of an activity, hedonia was accompanied by greater positive affect than eudaimonia was. Over a one week period, however, eudaimonia caught up with hedonia in terms of the strength of its relationship with positive affect. In the moment, both eudaimonia and hedonia were associated with personal expressiveness; yet
over one week, only eudaimonia continued to be linked with personal expressiveness. Eudaimonia was also the only pursuit associated with greater life satisfaction and meaning in life – hedonia had no effect. These forms of well-being reflect the cumulative effect of a history of pursuits and experiences and can therefore be seen as long-term outcomes. The only exceptions to the pattern suggested above were the links between mean hedonic activity and mean levels of positive and negative affect over the week of the study – these remained about as strong as they were at a given moment in time.

Many of the results are therefore consistent with a short-term/long-term trade-off between the advantages of hedonia and eudaimonia. Yet this pattern is observed across analyses that differed in their methodology (e.g., within-subjects versus between-subjects analyses) and even the variables that were included (e.g., personal expressiveness versus meaning). To confirm the predicted trade-off with greater certainty, future research will need to systematically measure the same well-being variables with the same type of analysis over several different time intervals.

Daily Benefits of a Global Eudaimonic Orientation

Compared to people with few eudaimonic pursuits, highly eudaimonic individuals experienced greater well-being during many activities, even those they described as hedonic. In contrast, people who sought frequent hedonic satisfaction did not derive any more well-being from their activities than people with few hedonic pursuits. If the causal arrow indeed goes in the predicted direction, these findings reveal an important benefit of eudaimonic interests that pays dividends on a daily basis.
The Drawbacks of a Purely Hedonic Life

As noted earlier, many people in Western and Westernized societies seek happiness in pleasures and comforts. This focus is evident, for example, in peoples’ purchases, retirement goals, and use of spare time. Yet it likely represents an incomplete ideal. The present research suggests that there are important forms of well-being which hedonia fails to promote in the long run, and that a hedonic approach to life does not deepen the ability to appreciate daily experiences. Beyond a certain amount of enjoyable activity, additional hedonic indulgence likely does little to further increase happiness. It may even take attention, energy, and time away from meaningful pursuits that would be fulfilling.

Today’s society is showing symptoms of its overemphasis on hedonic pursuits. In his book entitled The American Paradox: Spiritual hunger in an age of plenty, Myers (2000) has reviewed a vast literature showing that, while Americans have more comforts and luxuries than ever before, they are worse off morally. Among other things, they lack a sense of meaning in their lives and are suffering from unprecedented rates of depression. As Frankl (1963) so eloquently put it,

I consider it a dangerous misconception of mental hygiene to assume that what man needs in the first place is equilibrium or, as it is called in biology, “homeostasis,” i.e., a tensionless state. What man actually needs is not a tensionless state but rather the striving and struggling for some goal worthy of him.... Pleasure is, and must remain, a side-effect or by-product, and is destroyed and spoiled to the degree to which it is made a goal in itself. (pp. 166 & 194)
Hedonic pursuits do not appear to measure up to eudaimonia in their relationship with important forms of well-being like life satisfaction, a sense of meaning and value in life, and global personal expressiveness. Yet why do people so often opt for the hedonic route? A variety of factors likely come into play. First, as already discussed, hedonic pursuits are immediately gratifying, while well-being may emerge only gradually from eudaimonic efforts. Also, the well-being accompanying eudaimonia may be subtler than the “raw feels” of hedonic pleasure.

Second, hedonic ends are usually easier to achieve. Eudaimonic tasks demand more effort and skill, they take more time, they are sometimes stressful or painful while they are performed, and their outcome can be less certain than the outcome of hedonic activities. Also, the eudaimonic process of identifying one’s values and finding ways to express them is fragile. The process is easily trumped by external influences like social pressures or extrinsic rewards. It takes a certain level of psychological strength and maturity to pursue eudaimonic goals. Some people may even resort to hedonism as an escape from eudaimonia – responding to the call of conscience and growth is difficult and indulging in hedonism can deaden awareness of oneself (Maslow, 1970; Schmuck & Sheldon, 2001; Sheldon, 2001; Waterman, 1984).

Third, there is a widespread cultural assumption, salient in the social sciences, that humans are primarily motivated by the selfish pursuit of pleasure and avoidance of pain and effort. It is often believed that interests in personal growth, societal contribution, or meaning are less fundamental to human nature or somehow reducible to the pursuit of
personal gratification. Many people have internalized this assumption, so that it operates
as a self-fulfilling prophesy (Sheldon & Schmuck, 2001).

Finally, our economic system ceaselessly stimulates people to seek instant
hedonic gratifications. The economy may thrive on this strategy, but the present research
suggests that the individual consumer is left short-changed. Unfortunately, however, it is
economic indicators rather than measures of the well-being of individual citizens which
hold sway in policy decisions (Franks & Heffernan, 1998; Schooler et al., 2003).

Given the dogma of the primacy of hedonic motivation and given the interests of
the economic system, our society puts relatively little emphasis on the importance of
eudaimonia. It is therefore likely that many people are pursuing happiness through the
only means they know – seeking pleasure and comfort. People may simply need better
information about the benefits and drawbacks of different pursuits.

Limitations of the Present Research

Perhaps the most obvious limitation of the present research is that it was
correlational, not causal; even prospective analyses cannot confirm causality because a
third variable may account for the observed effects. In future research, it will be essential
to obtain true experimental evidence. One approach would be to ask participants to
increase their degree of hedonic activity or eudaimonic activity for a period of time and
then to measure how much their well-being changes over that time.

Another limitation of the studies is their reliance on self-report measures. Such
measures are susceptible to self-presentation biases, lack of insight, retrospective bias,
and biases motivated by cognitive dissonance. In Study 2, it was possible to address
some of these concerns. The experience-sampling method minimized the role of retrospective biases. Also, the measure of eudaimonia was shown to be unrelated to a scale of socially desirable responding, making it unlikely that positive self-presentation played a role. In future research, strategies such as peer ratings would provide further evidence that bypasses the limitations of self-report measures.

It is also possible that the participants were not fully representative of the population at large. Both studies were conducted with undergraduates and therefore represented a restricted age range and a highly educated group. However, a number of strategies were employed to maximize the diversity of the participants taken from this population. Though Study 1 only included students from psychology courses, Study 2 assembled a cross-section of individuals from departments across the university. Also, both studies were simply advertised as research on the activities people engage in and how much they enjoy them, to minimize self-selection biases that might attract only certain groups of people, such as those who highly value lives of eudaimonia or hedonia. Participants in both studies proved to have a wide range of scores on eudaimonia and hedonia and on the different forms of well-being, allaying an initial concern that undergraduates may have overly high or low scores on some of these variables.

Nevertheless, future research would benefit from studying people of a wider range of ages and levels of education. It would also be valuable to measure and control for other variables which might affect the relationship between one’s pursuits and well-being, such as income, profession, cultural background, and physical health and energy.

Other methodological improvements will be incorporated into future studies. An important one addresses a limitation already noted: the similarity of the measure of hedonic activity and the measure of positive affect. Though it is difficult to avoid
inquiring about the pursuit of pleasure and enjoyment when assessing hedonic activity, the instructions to the hedonic items could emphasize more strongly the difference between hedonic activity and positive affect. These instructions might read: "Please rate how much you pursued your activity with the intention of achieving the following, whether or not you actually experienced them."

Future research contrasting eudaimonia and hedonia also needs to be conducted over longer time periods. Some of the key hypotheses contrasting these ways of life address their impact on well-being through time. Though the results of a one-week analysis are suggestive, research over three or four months probably reflects more realistically the time scale over which significant growth and shifts in general well-being can take place.

*Other Directions for Future Research*

In future research, it would be valuable to study forms of well-being beyond those included in the present research. Two groups of variables would be of particular interest. One of these consists of additional types of well-being (and distress) that may be elicited especially strongly by eudaimonic pursuits or a eudaimonic approach to tasks. Several candidate variables are suggested by the characterization of eudaimonic well-being proposed earlier, by the expectation that eudaimonia increases appreciation of life experiences, and by the work of previous authors. These include feelings of self-transcendence and connection with a greater whole, connectedness and harmony with oneself, greater day-to-day awareness of oneself and the surrounding world, and feelings of awe (Csikszentmihalyi, 2000; Keltner & Haidt, 2003; Maslow, 1970; Seligman, 2002;
see also Footnote 2). Research on such forms of well-being is crucial to enhancing our understanding of the many ways that eudaimonia can benefit people, and to developing a more complete definition of human well-being, one that extends beyond mere hedonic enjoyment and distress.

The other group of variables which should be studied in relation to eudaimonia and hedonia are outcomes that can be measured more objectively and which are more meaningful to economists and policy-makers than subjective reports of well-being. These outcomes include physical well-being, including health promoting behaviour, immune functioning, physical illness, and even longevity. Also of interest are the effects of hedonic and eudaimonic perspectives on the workplace, including productivity, promotion, and loyalty.

Finally, the present research has emphasized the virtues of eudaimonia and the potential drawbacks of hedonia to bring some research to bear on the modern trend away from eudaimonia and towards hedonia. However, there is more to be said about the benefits of hedonia. The purely eudaimonic life can become an endless process of striving and investing, until vital energy is drained. Eudaimonic goals can be also so long-term or abstract that one risks losing perspective or contact with more basic personal needs. People need a certain amount of enjoyment and relaxation to let go of worries, rest and heal their bodies, let themselves think in unstructured ways that replenish creativity and produce new perspectives on issues, absorb pleasurable impressions that inspire them, and connect with aspects of themselves that are not linked with their eudaimonic projects. Yet the resources soaked up through hedonic activity may become stale and unsatisfying if they are not eventually reinvested in some eudaimonic and meaningful purpose. The optimal life is therefore probably an interplay between eudaimonia and
hedonia – what Seligman (2002) terms the full life. The challenge of future research will
be to map out how much eudaimonia and hedonia people need for healthy lives, when it
is better to choose one pursuit over the other, and how to alternate between them and
combine them for optimal flourishing.
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Appendix A

Waterman’s (1993) Measures

Waterman (1993) administered a one-time questionnaire to his participants. Below is a description of the parts of his questionnaire which are relevant to the present research.

Participants were asked “If you wanted another person to know about who you are and what you are like as a person, what five (5) activities of importance to you would you describe?” After listing the five activities, participants were asked the following about each activity: “To what extent do you agree with each of the following statements:”

1. This activity gives me my greatest feeling of really being alive.
2. This activity give me my strongest feelings that this is who I really am.
3. When I engage in this activity I feel more intensely involved than I do in most other activities.
4. When I engage in this activity I feel that this is what I was meant to do.
5. I feel more complete or fulfilled when engaging in this activity than I do when engaged in most other activities.
6. I feel a special fit or meshing when engaging in this activity.
7. This activity gives me my strongest sense of enjoyment.
8. This activity gives me my greatest pleasure.
9. When I engage in this activity I feel more satisfied than I do when engaged in most other activities.
10. When I engage in this activity I feel good.
11. When I engage in this activity I feel a warm glow.
12. When I engage in this activity I feel happier than I do when engaged in most other activities.

Items 1 to 6 measured personal expressiveness and items 7-12 measured positive affect, though on Waterman's questionnaire the personal expressiveness and positive affect items were intermixed. (In his Study 1, he only used items 1, 2, 7, and 8, while in his Study 2 he expanded his measures to include all of the above items). The items were rated from 1 (strongly disagree) to 7 (strongly agree).

Participants were also asked: “To what extent does this activity provide you with each of the following opportunities:”

1. The opportunity for me to develop my best potentials.
2. The opportunity for me to satisfy my drives (whether through increasing or decreasing levels of stimulation).

The first question was intended to assess how eudaimonic the activity was, while the second item measured how drive-satisfying the activity was. The items were rated from 1 (not at all) to 7 (very extensively).
Appendix B

Study 1 Measure of the Six Activities on the Previous Day Which Took the Most Time

Yesterday’s main activities

Please list the six activities that took up the most of your time yesterday. Give a brief description of each activity, just detailed enough so that the nature of the activity is clear. Here are some examples: rather than simply writing “reading,” please write “reading for school” or “reading for pleasure,” or rather than writing “eating” if you were out for dinner with friends please specify that you were “out for dinner with friends.” List only activities that you did while you were awake – therefore, “taking a nap” would not count as an activity, but “relaxing in bed” would count as an activity.

We realize that it is often hard to recall what you did yesterday. It may take you a few minutes before you begin recalling what you did – we have allowed for this time during this questionnaire session so please take the time to recall your activities accurately. It may be easy to recall three or four activities and more challenging to recall up to six, but please do your best to recall six, even if the last few didn’t take up very much time. Feel free to jot down notes for yourself in the margin if you find that helpful.

If there was an activity that took up a lot of your time yesterday but if you did not do it all at once (e.g., if you studied from 12:30 p.m. to 2:30 p.m. and then again from 5:00 p.m. to 6:00 p.m.), just list the activity once.

When you finish listing the six activities, for each activity please circle the number of hours that corresponds to the total time the activity took to the closest half hour – for the above example, studying took a total of 3 hours so you would circle 3.0.
The order in which you list the activities does not matter. Please feel free to ask the experimenter any questions you may have.

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<th><strong>Total time</strong> in hours the activity took (circle one only): 0.5 1.0 1.5 2.0 2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0 10.5 11.0</td>
</tr>
<tr>
<td></td>
<td>11.5 12.0 12.5 13.0 13.5 14.0 14.5 15.0 15.5 16.0 16.5 17.0 17.5 18.0</td>
</tr>
</tbody>
</table>
Activity #5:

Total time in hours the activity took (circle one only): 0.5 1.0 1.5 2.0 2.5
3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0 10.5 11.0
11.5 12.0 12.5 13.0 13.5 14.0 14.5 15.0 15.5 16.0 16.5 17.0 17.5 18.0

Activity #6:

Total time in hours the activity took (circle one only): 0.5 1.0 1.5 2.0 2.5
3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0 10.5 11.0
11.5 12.0 12.5 13.0 13.5 14.0 14.5 15.0 15.5 16.0 16.5 17.0 17.5 18.0
Appendix C

Study 1 Questionnaire Assessing Eudaimonic Activity, Hedonic Activity, Personal Expressiveness, Positive Affect, Negative Affect, and Flow

The questionnaire used to inquire about the first activity is provided on the following page; five other questionnaires, one for each of the remaining five activities, were also administered. Item scores were used to arrive at scale scores as follows:

Eudaimonic Activity score: mean (d, f, h, i)

Hedonic Activity score: mean (c, e, g, j)

Personal Expressiveness score: mean [k, l, m, n, u, mean (z, aa, ab, ac, ad, ae)]

Positive Affect score: mean (o, r, t, x)

Negative Affect score: mean (p, q, s, v, w)

Flow score: \((a + 1) \times (b + 1)\)
What were the activities like and how did you feel?

Below are a number of questions about each of the activities you described on the previous pages. Please recopy your written description of each activity on the line provided. For the questions that ask how you felt during an activity, try to recall as best you can how you felt in general at the time – your mood was probably related to the activity you were doing but it may have occasionally been affected by other things as well.

Activity #1:

Indicate how you felt about your activity:

<table>
<thead>
<tr>
<th>Activity</th>
<th>low</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Challenges of the activity</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>b) Your skills in the activity</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Through your activity, how much were you . . .

<table>
<thead>
<tr>
<th>Activity</th>
<th>not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>c) relaxing?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>d) doing something you believe in?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>e) experiencing pleasure?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>f) developing a skill, learning, or gaining insight into something?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>g) enjoying yourself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>h) pursuing excellence or a personal ideal?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>i) developing your potential?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>j) being entertained?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
During your activity, to what degree did you feel . . .

<table>
<thead>
<tr>
<th>k) intensely involved?</th>
<th>not at all</th>
<th>1 2 3 4 5</th>
<th>very much</th>
<th>6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>l) that you were expressing your true self,</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>very much</td>
<td>6 7</td>
</tr>
<tr>
<td>that this is who you really are?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m) a special fit or meshing with your</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>very much</td>
<td>6 7</td>
</tr>
<tr>
<td>activity?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n) that this is what you were meant</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>very much</td>
<td>6 7</td>
</tr>
<tr>
<td>to do?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please indicate how you were feeling during that particular activity:

<table>
<thead>
<tr>
<th>o) pleased</th>
<th>not at all</th>
<th>1 2 3 4 5</th>
<th>extremely</th>
<th>6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>p) worried/anxious</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>q) unhappy</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>r) enjoyment/fun</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>s) frustrated</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>t) joyful</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>u) fulfilled and complete</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>v) depressed</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>w) angry/hostile</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
<tr>
<td>x) happy</td>
<td>not at all</td>
<td>1 2 3 4 5</td>
<td>extremely</td>
<td>6 7</td>
</tr>
</tbody>
</table>

110
During your activity, to what degree were you feeling each of the following:

<table>
<thead>
<tr>
<th></th>
<th>not at all</th>
<th>somewhat</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>y) I have high self-esteem.</td>
<td>true 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>z) At this moment, I feel alive and vital.</td>
<td>true 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aa) At this moment, I feel alert and awake.</td>
<td>true 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ab) Currently I feel so alive I just want to burst.</td>
<td>true 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ac) I am looking forward to each new day.</td>
<td>true 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ad) At this time, I have energy and spirit.</td>
<td>true 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ae) I feel energized right now.</td>
<td>true 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

All Items Used in Studies 1 and 2 and Their Rating Scales

Eudaimonic Activity (each item rated from 1 to 7):
- Developing your potential
- Pursuing excellence or a personal ideal
- Developing a skill, learning, or gaining insight into something
- Doing something you believe in

Hedonic Activity (each item rated from 1 to 7):
- Experiencing pleasure
- Enjoying yourself
- Being entertained
- Relaxing

Personal Expressiveness (each item rated from 1 to 7):
- That this is what you were meant to do
- That you were expressing your true self, that this is who you really are
- A special fit or meshing with your activity
- Intensely involved
- Fulfilled and complete

Composite of the following (each item rated from 1 to 7):
- I feel energized right now and/or At this moment, I feel alive and vital
- At this time, I have energy and spirit and/or At this moment, I feel alert and awake
- I am looking forward to each new day and/or Currently, I feel so alive I just want to burst
Positive Affect (each item rated from 1 to 7):

- Happy
- Joyful
- Pleased
- Enjoyment/fun

Negative Affect (each item rated from 1 to 7):

- Unhappy
- Depressed
- Worried/anxious
- Angry/hostile
- Frustrated

Life Satisfaction (each item rated from 1 to 7):

- In most ways, my life is close to my ideal
- The conditions of my life are excellent
- I am satisfied with my life
- So far I have gotten the important things I want in life
- If I could live my life over, I would change almost nothing

Meaning (each item rated from 1 to 7):

- Meaningful
- Worthwhile
- Valuable

Flow Activity (each item rated from 0 to 9):

- Challenges of the activity
- Your skills in the activity
Relative Intrinsic/Extrinsic Motivation (each item rated from 1 to 9):

intrinsic motives:

It will allow you to help make the world a better place

It will make you happy and make your life more meaningful

It will allow you to have close and caring relationships with others

extrinsic motives:

It will help you have a job that pays well and a lot of nice possessions

It will make you known and admired by other people

It will make you look good and be attractive to others
Appendix E

Study 2 Questionnaire Assessing Global Sense of Meaning and Value in Life

Typically, my experiences and activities are . . .

<table>
<thead>
<tr>
<th></th>
<th>not at all</th>
<th></th>
<th>extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. meaningful</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. enjoyable</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. worthwhile</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. valuable</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The items used to assess meaning were 1, 3, and 4.
Appendix F

Study 2 Experience-sampling Form Assessing Eudaimonic Activity, Hedonic Activity, Personal Expressiveness, Positive Affect, and Negative Affect

A sample experience-sampling form begins on the following page. One of the three-item scales derived from Ryan and Frederick’s (1997) six-item scale consisted of the first statements listed under items ag, ah, and ai; the other three-item scale consisted of the second statements listed under these items. Item scores were used to arrive at scale scores as follows:

Eudaimonic Activity score: mean (h, j, l, m)

Hedonic Activity score: mean (g, l, k, n)

Personal Expressiveness score: mean [c, d, e, f, v, mean (ag, ah, ai)]

Positive Affect score: mean (o, s, ab, ad)

Negative Affect score: mean (p, r, w, z, ac)
Experience-sampling Report

Day 1  Time period 9:30 - 11:15 Form 1

Time pager went off (to nearest minute on 24-hour clock): ___ : ___

Time you completed the questionnaire (to nearest minute on 24-hour clock): ___ : ___

What was the MAIN thing you were doing as you were paged?

________________________________________________________________________

What other things were you doing or thinking about?

________________________________________________________________________

Please answer the following questions about the activity you were involved in as you were paged:

Indicate how you felt about your activity:

<table>
<thead>
<tr>
<th>low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

a. Challenges of the activity

b. Your skills in the activity

During your activity, to what degree did you feel . . .

<table>
<thead>
<tr>
<th>not at all</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

c. intensely involved?

d. that you were expressing your true self;
   that this is who you really are?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

e. a special fit or meshing with your activity?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

f. that this is what you were meant to do?
Through your activity, how much were you . . .

| g. relaxing? | 1 2 3 4 5 6 7 |
| h. doing something you believe in? | 1 2 3 4 5 6 7 |
| i. experiencing pleasure? | 1 2 3 4 5 6 7 |
| j. developing a skill, learning, or gaining insight into something? | 1 2 3 4 5 6 7 |
| k. enjoying yourself? | 1 2 3 4 5 6 7 |
| l. pursuing excellence or a personal ideal? | 1 2 3 4 5 6 7 |
| m. developing your potential? | 1 2 3 4 5 6 7 |
| n. being entertained? | 1 2 3 4 5 6 7 |

Please indicate how you were feeling as you were paged:

<p>| o. joyful | 1 2 3 4 5 6 7 |
| p. frustrated | 1 2 3 4 5 6 7 |
| q. like I belong to a greater whole | 1 2 3 4 5 6 7 |
| r. worried/anxious | 1 2 3 4 5 6 7 |
| s. enjoyment/fun | 1 2 3 4 5 6 7 |
| t. enchanted | 1 2 3 4 5 6 7 |
| u. peaceful | 1 2 3 4 5 6 7 |
| v. fulfilled and complete | 1 2 3 4 5 6 7 |
| w. unhappy | 1 2 3 4 5 6 7 |
| x. in tune with myself | 1 2 3 4 5 6 7 |
| y. in awe | 1 2 3 4 5 6 7 |</p>
<table>
<thead>
<tr>
<th>Feeling</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>z. depressed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aa. aware of subtle things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ab. happy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ac. angry/hostile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ad. pleased</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ae. proud of myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>af. carefree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As you were paged, to what degree were you feeling each of the following:

<table>
<thead>
<tr>
<th>Feeling</th>
<th>not at all</th>
<th>somewhat</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>true</td>
<td>true</td>
<td>true</td>
</tr>
<tr>
<td>ag. I feel energized right now.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At this moment, I feel alive and vital.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ah. At this time, I have energy and spirit.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At this moment, I feel alert and awake.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ai. I am looking forward to each new day.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently, I feel so alive I just want to burst.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aj. I have high self-esteem.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ak. I feel good about myself.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Footnotes

1. In contrast, there are cultures and life philosophies which do not give the pursuit of pleasure and comfort the central role which it occupies in Western and Westernized societies. Traditional African societies place priority on the preservation and promotion of one’s community (Ryff, C. D. & Singer, 1998a). East Asian cultures emphasize interpersonal harmony, self-discipline, self-criticism, and self-improvement rather than personal enjoyment. Rather than advocating the maximization of positive emotions and minimization of negative ones, these cultures are more accepting of negative emotions and view an excess of either negative or positive emotions as undesirable. Instead, they advocate a good balance of positive and negative feelings so as to stay calm (Diener & Suh, 1999; Kitayama and Markus, 2000). Zen Buddhism warns of the pitfalls of pleasure-seeking and teaches that one should transcend the pursuit of enjoyment rather than trying to maximize it (Gaskins, 1999). Even in Europe before the 16th century, the focus of life was on institutions such as religion, kingship, and family rather than on personal happiness (Franks & Heffernan, 1998).

2. Conceptually, the distinction between activities and well-being states is quite clear for eudaimonic pursuits versus most of the forms of well-being measured in this research – activities such as learning are clearly distinguishable from the positive affect or life satisfaction one may derive from them. The measure of personally expressiveness, though, includes some concepts which can be seen as descriptions of one’s activity, such as being intensely involved in what one is doing. To build upon Waterman’s theoretical foundation, rather than inventing a new one, the present research follows his definition of personal expressiveness. Future research, however, should investigate the value of
differentiating more clearly between the activity and well-being components of personal expressiveness. The other form of well-being which will be proposed as particularly eudaimonic, a sense that one’s pursuits have been meaningful and valuable, is quite distinct from striving for growth and excellence. The activity/well-being distinction can be more blurry for hedonic pursuits, though they are defined here in ways that emphasize the difference. Hedonic activities are defined as those pursued with the hope of achieving pleasure, enjoyment, or relaxation, regardless of how those activities actually make one feel. Positive affect is defined as actually experiencing hedonic well-being. The other forms of well-being studied, such as life satisfaction and personal expressiveness, are even more clearly distinct from hedonic strivings.

3. Personal expressiveness is also similar to a description of eudaimonic well-being that I developed before coming across Waterman’s work, so I have decided to build on his theory and hypotheses. My description is partly, but not entirely, captured by the concepts of personal expressiveness and meaning that were measured in the present research. The conception is a work in progress – here is a brief summary of the description at present. Eudaimonic well-being might be characterized as feeling: alive, composed, aware, true to oneself, in tune with oneself, connected with something greater that oneself or with an overarching purpose, in harmony with oneself and with the surrounding world, and deeply fulfilled; one also feels more strongly that one’s pursuits have been meaningful, valuable, and worthwhile, and that one’s life has been full and rich; and one has more of a sense of achievement, a job well done. It is not the agitated, distracted, and transient high of a roller-coaster ride.

In addition, I think that there is an even subtler experience associated with eudaimonia, one that may not always be recognized as a form of well-being. This is the
experience that eudaimonia is its own reward, is truly intrinsically rewarding. It might be described as the feeling of being fully functioning or participating fully in life, even life’s difficult and challenging aspects. It must be acknowledged that here it become difficult to separate eudaimonic activity from the associated well-being. It may be that eudaimonia has often been conceptualized as both an activity and well-being state precisely because people have observed that it is often its own reward.

4. While affect can be measured as a composite of positive and negative affect, to be consistent with Waterman’s (1993) work, this research contrasted personal expressiveness with positive affect. In addition, the authors of a recent review of the well-being literature recommend that positive and negative affect be studied separately (Diener, Suh, Lucas, & Smith, 1999).

5. In a personal communication on March 18, 2004, Mihalyi Csikszentmihalyi stated that taking the product of the challenges item and the skills item is an acceptable way of defining flow and that he has used this product in some of his own research on flow.

6. It should be acknowledged that deviation scores are not entirely independent of one another because they must sum to zero. The Study 1 analyses which used deviation scores assume that the observations are independent of one another. The degree of dependency between deviation scores is on the order of $1/N$, where $N$ is the number of observations per participant. In Study 1, the number of observations per person was 6, indicating that there was some dependency between the deviation scores, though the dependency was small. Ideally, a larger number of observations would have reduced this dependency; however, the number of observations obtained per participant was a trade-
off between statistical considerations and time constraints as well as the number of “main activities” that people were likely to have on a single day.

The principal factors analyses for the hedonic/eudaimonic items and for the positive affect/personal expressiveness items were also performed on the raw scores. This approach ensured that the observations were independent but it had its own drawbacks, e.g., it combined within-subjects and between-subjects variation, so that one could not look only at within-subjects relationships. Nevertheless, the pattern of results for both analyses remained similar and lead to the same conclusions.

7. The correlation between the degree to which an activity was eudaimonic and the degree to which it was hedonic was very low (r = .05, p > .05), indicating that these properties of activities were quite independent of each other. A given activity could therefore be high on both eudaimonia and hedonia, low on both, or high on one but low on the other.

8. Principal factors analyses with Varimax rotation were also carried out to see if the activity and well-being measures loaded onto separate factors.

One analysis was conducted with the eudaimonic activity and personal expressiveness items. It clearly showed a two-factor solution and all of the items loaded cleanly as predicted except for two: the item “intensely involved” loaded only slightly more on the factor it was expected to, and the item “doing something you believe in” loaded slightly less on the factor it was expected to.

A second analysis was conducted with the hedonic activity and positive affect items. Here, there was only a one-factor solution, with communalities high for all items except one, “relaxing.”
Another analysis was performed with all of the items for eudaimonic activity, hedonic activity, personal expressiveness, and positive affect. Here, the distinction between eudaimonic activity and personal expressiveness was overshadowed by the difference between eudaimonic and hedonic constructs. A two-factor solution was obtained, whereby the eudaimonic activity and personal expressiveness items loaded on one factor, while the hedonic activity and positive affect items loaded on the second factor. Most loadings were clear-cut except for one item ("that you were expressing your true self, that this is who you really are") which loaded only slightly more on the factor it was expected to, a few items/scores ("fulfilled and complete," the vitality composite, and "a special fit or meshing with your activity") which loaded slightly less on the factor they were expected to.

9. It may be that there are two kinds of vitality and only one of these is more closely linked with eudaimonia. It is proposed here that one type of vitality might better be called aliveness, and would be characterized as enhanced awareness of and connectedness with oneself and one's environment. The other kind of vitality is more visceral and exuberant. Eudaimonia may be the stronger source of aliveness, whereas hedonia may be the stronger source of the exuberant kind of vitality. Ryan and Frederick's (1997) measure may capture both kinds of vitality, which may explain why vitality loads onto both the eudaimonic factor and the hedonic factor.

10. Standardization was conducted by multiplying the regression coefficient from this analysis by the within-subjects standard deviation of the independent variable and then dividing by the within-subjects standard deviation of the dependent variable.

11. Even when flow was defined in the more common way (1 = activity is flow-like, i.e., is above median of all observations on challenges and above median of all
observations on skills, 0 = activity doesn’t meet criteria for a score of 1, Csikszentmihalyi & Larson, 1987), there was still a significant positive within-subjects correlation between flow and eudaimonic activity, \( r = .20, p < .01 \). Understandably, the magnitude of this correlation was smaller because of the dramatically reduced variability of this other flow measure, which was dichotomous rather than continuous.

12. Life satisfaction and meaning are the end product of a long history of pursuits and experiences. Though life satisfaction and meaning were measured in the same week as peoples’ activities, it was assumed that those who engaged in many eudaimonic (or hedonic) pursuits that week had also engaged in many eudaimonic (or hedonic) pursuits in the past. It was therefore assumed that the life satisfaction and meaning reported by participants could be conceptualized as the long-term consequences of their activities (with the recognition that the analyses remained correlational).

13. Other measures of meaning in life exist, the Life Regard Index (Battista & Almond, 1973) being perhaps the best among them. However, these measures tend to focus on having a purpose in life and a meaning structure which situates the self in the world, and do not emphasize feelings of value and worth as much as I wished to in this research.

14. The two groups of items were chosen based on the following information from the pilot study. Item 1 in the first group (“I feel energized right now”) and item 1 in the second group (“at this moment, I feel alive and vital”) had the highest loadings (.91 in both cases) onto the single factor representing vitality and they were more highly correlated with each other than with any other item \( (r = .82, p < .01) \). Item 2 in the first group (“at this time, I have energy and spirit”) and item 2 in the second group (“at this moment, I feel alert and awake”) were the next most highly loading items on the vitality
factor (with loadings of .88 and .85, respectively) and had the second strongest correlation with each other ($r = .72, p < .01$) than either did with another item (both correlated slightly more highly with the highest loading item of all). The third item in each group ("I am looking forward to each new day" and "currently, I feel so alive I just want to burst") had fairly high loadings on the vitality factor (.62 and .78, respectively) and had a correlation with each other ($r = .42, p < .01$) that was comparable to the magnitude of the correlations that each had with the other items. Scales consisting of the two groups of items had a very high between subjects correlation ($r = .87, p < .01$).

15. Study 2 assessed all of the key variables at the between-subjects level. That is, one could estimate peoples' typical levels of eudaimonia, hedonia, personal expressiveness, and negative affect. In addition, the variables life satisfaction, meaning in life, and relative intrinsic/extrinsic motivation were also measured as individual differences. It was therefore possible to determine whether males and females generally differed on these scales. No gender differences were found except on two measures: males scored higher on relative intrinsic/extrinsic motivation, and females scored marginally higher on life satisfaction.

16. For the sake of completeness, a third regression was carried out in which the dependent variable was negative affect on day 7. The overall regression was significant ($F_{3,95} = 4.98, p < .01$) but only the control variable, day 1 negative affect, had a significant coefficient (unstandardized coefficient = .40, $p < .01$). Neither eudaimonia on days 2 to 6 (coefficient = -.03) nor hedonia on days 2 to 6 (coefficient = -.13) was related to any change in negative affect.

17. For both the regression predicting change in eudaimonic activity and the regression predicting change in hedonic activity, the coefficients for personal
expressiveness and positive affect remained almost identical (not differing by more than .01) when negative affect was included as an independent variable. Negative affect itself had no relationship with changes in eudaimonic activity or changes in hedonic activity.

18. Recall that the hypothesis just tested was stated in terms of a single index of the degree to which one's aspirations are high on intrinsic content but low on extrinsic content. After the hypothesis was tested with this index, an exploratory analysis was conducted which treated intrinsic motivation and extrinsic motivation separately, as was done in several previous studies (Kasser & Ryan, 1996; Sheldon & Kasser, 1995). (Principal components analysis also supported treating the intrinsic motivation items as a separate scale: two eigenvalues had values above 1, and the three intrinsic items clearly loaded onto a separate factor from two of the extrinsic items; the item “it will make you look good and be attractive to others” loaded about equally on the two factors.)

The pattern of results was different for intrinsic and extrinsic aspirations. Extrinsic motivation did not have significant coefficients in the regressions predicting either personal expressiveness or positive affect. Intrinsic motivation, was linked with a significant ($p < .05$) increment in the coefficient between eudaimonic activity and personal expressiveness, a marginal increment in the coefficient between hedonic activity and personal expressiveness, and a marginal increment in the coefficient between hedonic activity and positive affect (all the coefficients had an unstandardized magnitude of .02). Intrinsic motivation did not contribute to the coefficient between eudaimonic activity and positive affect (unstandardized coefficient = .00). If we count the marginal effects, therefore, global intrinsic motivation was linked with higher well-being in the same three analyses as global eudaimonia. Thus, when studying intrinsic motivation only, there was stronger support for the hypothesis.
19. A supplementary analysis in Study 2 suggested that the link between mean hedonic activity and typical positive affect is not as strong as the original analysis suggested, though it is still positive. In the initial session, participants were given a questionnaire stating “Below, please indicate how you TYPICALLY feel” and then rated the four positive affect items, among others. Though this approach has its own drawbacks (e.g., is vulnerable to retrospective biases), it presumably reflects a longer time period than a single week. It is therefore an alternative way of measuring typical positive affect. When this measure of typical positive affect was simultaneously regressed (in SPSS) on mean eudaimonic activity and mean hedonic activity, the unstandardized regression coefficient for hedonic activity (.42, p < .01) became only moderately strong and of about the same magnitude as the coefficient for eudaimonic activity (.38, p < .01) (the overall regression was significant, F$_{2,97}$ = 17.18, p < .01). Unfortunately, participants were not similarly asked to report their typical levels of personal expressiveness, eudaimonic activity, or hedonic activity, so that parallel analyses with these variables could not be performed.
Table 1

Varimax Rotated Factor Matrix of Eudaimonic Activity and Hedonic Activity Items

(Study 1)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor I</th>
<th>Factor II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. enjoying yourself</td>
<td>.94</td>
<td>.14</td>
</tr>
<tr>
<td>2. experiencing pleasure</td>
<td>.92</td>
<td>.07</td>
</tr>
<tr>
<td>3. being entertained</td>
<td>.75</td>
<td>.07</td>
</tr>
<tr>
<td>4. relaxing</td>
<td>.70</td>
<td>-.28</td>
</tr>
<tr>
<td>5. developing your potential</td>
<td>-.10</td>
<td>.93</td>
</tr>
<tr>
<td>6. pursuing excellence or a personal ideal</td>
<td>.04</td>
<td>.87</td>
</tr>
<tr>
<td>7. developing a skill, learning, or gaining insight into something</td>
<td>-.04</td>
<td>.77</td>
</tr>
<tr>
<td>8. doing something you believe in</td>
<td>.36</td>
<td>.50</td>
</tr>
</tbody>
</table>

Notes: Items 1-4 are hedonic activity items; their loadings on Factor I are highlighted in bold. Items 5-8 are eudaimonic activity items; their loadings on Factor II are highlighted in bold.
Table 2

*Means, Standard Deviations, and Ranges of Key Measures Studied (Studies 1 and 2)*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>St. Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study 1</td>
<td>Study 2</td>
<td>Study 1</td>
</tr>
<tr>
<td>Eudaimonic Activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>within-subjects</td>
<td>3.17</td>
<td>3.59</td>
<td>1.57</td>
</tr>
<tr>
<td></td>
<td>1.00 - 7.00</td>
<td>1.00 - 7.00</td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>3.17</td>
<td>3.59</td>
<td>0.68</td>
</tr>
<tr>
<td></td>
<td>1.29 - 5.33</td>
<td>1.68 - 5.44</td>
<td></td>
</tr>
<tr>
<td>Hedonic Activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>within-subjects</td>
<td>3.82</td>
<td>3.10</td>
<td>1.57</td>
</tr>
<tr>
<td></td>
<td>1.00 - 7.00</td>
<td>1.00 - 7.00</td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>3.82</td>
<td>3.10</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>1.42 - 5.88</td>
<td>2.13 - 5.46</td>
<td></td>
</tr>
<tr>
<td>Personal Expressiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>within-subjects</td>
<td>3.41</td>
<td>3.64</td>
<td>1.38</td>
</tr>
<tr>
<td></td>
<td>1.00 - 7.00</td>
<td>1.00 - 7.00</td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>3.41</td>
<td>3.64</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>1.38 - 5.40</td>
<td>1.76 - 5.08</td>
<td></td>
</tr>
<tr>
<td>Positive Affect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>within-subjects</td>
<td>4.48</td>
<td>3.74</td>
<td>1.52</td>
</tr>
<tr>
<td></td>
<td>1.00 - 7.00</td>
<td>1.00 - 7.00</td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>4.48</td>
<td>3.74</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>1.92 - 6.33</td>
<td>1.80 - 5.37</td>
<td></td>
</tr>
<tr>
<td>Negative Affect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>within-subjects</td>
<td>2.01</td>
<td>2.02</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>1.00 - 7.00</td>
<td>1.00 - 7.00</td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>2.01</td>
<td>2.02</td>
<td>0.74</td>
</tr>
<tr>
<td></td>
<td>1.00 - 5.70</td>
<td>1.10 - 3.87</td>
<td></td>
</tr>
<tr>
<td>Rel. Intr./Extr. Motivation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>1.56</td>
<td>1.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-2.10 - 5.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>4.59</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.00 - 7.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meaning in Life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between-subjects</td>
<td>4.62</td>
<td>1.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.67 - 7.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3

Varimax Rotated Factor Matrix of Personal Expressiveness and Positive Affect Items

*(Study 1)*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor I</th>
<th>Factor II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. enjoyment/fun</td>
<td>.86</td>
<td>.26</td>
</tr>
<tr>
<td>2. happy</td>
<td>.85</td>
<td>.30</td>
</tr>
<tr>
<td>3. joyful</td>
<td>.84</td>
<td>.32</td>
</tr>
<tr>
<td>4. pleased</td>
<td>.80</td>
<td>.32</td>
</tr>
<tr>
<td>5. fulfilled and complete</td>
<td>.58</td>
<td>.54</td>
</tr>
<tr>
<td>6. a special fit or meshing with your activity</td>
<td>.37</td>
<td>.78</td>
</tr>
<tr>
<td>7. that you were expressing your true self, that this is who you really are</td>
<td>.32</td>
<td>.77</td>
</tr>
<tr>
<td>8. that this is what you were meant to do</td>
<td>.19</td>
<td>.72</td>
</tr>
<tr>
<td>9. intensely involved</td>
<td>.19</td>
<td>.58</td>
</tr>
<tr>
<td>10. vitality composite (6 items)</td>
<td>.52</td>
<td>.58</td>
</tr>
</tbody>
</table>

Notes: Items 1-4 are positive affect items; their loadings on Factor I are highlighted in bold. Items 5-10 are personal expressiveness items; their loadings on Factor II are highlighted in bold.
Table 4

Regressions of Well-being Variables at a Given Time on Eudaimonia and Hedonia at That Time (Studies 1 and 2)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Study 1</th>
<th>Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Expressiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eudaimonic Activity</td>
<td>.46**</td>
<td>.33**</td>
<td></td>
</tr>
<tr>
<td>Hedonic Activity</td>
<td>.44**</td>
<td>.32**</td>
<td></td>
</tr>
<tr>
<td>$\chi^2_{df}$ of difference</td>
<td>.26</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>Positive Affect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eudaimonic Activity</td>
<td>.09**</td>
<td>.03**</td>
<td></td>
</tr>
<tr>
<td>Hedonic Activity</td>
<td>.83**</td>
<td>.64**</td>
<td></td>
</tr>
<tr>
<td>$\chi^2_{df}$ of difference</td>
<td>588**</td>
<td>865**</td>
<td></td>
</tr>
<tr>
<td>Negative Affect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eudaimonic Activity</td>
<td>.06**</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Hedonic Activity</td>
<td>-.33**</td>
<td>-.33**</td>
<td></td>
</tr>
<tr>
<td>$\chi^2_{df}$ of difference</td>
<td>122**</td>
<td>293**</td>
<td></td>
</tr>
</tbody>
</table>

** p < .01, two-tailed

Notes: Eudaimonia and hedonia were entered simultaneously as independent variables in each of the three regressions. Regression coefficients are unstandardized.
Table 5

*Regressions of Peoples’ Mean Levels of Well-being Variables on Their Mean Levels of Eudaimonia and Hedonia (Study 2)*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean Personal Expressiveness</td>
<td>mean Eudaimonic Activity</td>
<td>.53**</td>
</tr>
<tr>
<td></td>
<td>mean Hedonic Activity</td>
<td>.21**</td>
</tr>
<tr>
<td></td>
<td>( \chi^2 _1 )df of difference</td>
<td>6.76**</td>
</tr>
<tr>
<td>mean Positive Affect</td>
<td>mean Eudaimonic Activity</td>
<td>.18**</td>
</tr>
<tr>
<td></td>
<td>mean Hedonic Activity</td>
<td>.84**</td>
</tr>
<tr>
<td></td>
<td>( \chi^2 _1 )df of difference</td>
<td>41**</td>
</tr>
<tr>
<td>mean Negative Affect</td>
<td>mean Eudaimonic Activity</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>mean Hedonic Activity</td>
<td>-.21*</td>
</tr>
<tr>
<td></td>
<td>( \chi^2 _1 )df of difference</td>
<td>2.56</td>
</tr>
</tbody>
</table>

* = p < .05, ** = p < .01, two-tailed

Notes: Eudaimonia and hedonia were entered simultaneously as independent variables in each of the three regressions. Regression coefficients are unstandardized.
Table 6

Regressions of Change in Well-being Variables Over One Week on Eudaimonia and Hedonia on the Intervening Days (Study 2)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Expressiveness on day 7</td>
<td>Eudaimonic Activity on days 2 to 6</td>
<td>.48**</td>
</tr>
<tr>
<td></td>
<td>Hedonic Activity on days 2 to 6</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>(Personal Expressiveness on day 1)</td>
<td>(.41**)</td>
</tr>
<tr>
<td>Positive Affect on day 7</td>
<td>Eudaimonic Activity on days 2 to 6</td>
<td>.34**</td>
</tr>
<tr>
<td></td>
<td>Hedonic Activity on days 2 to 6</td>
<td>.40**</td>
</tr>
<tr>
<td></td>
<td>(Positive Affect on day 1)</td>
<td>(.33*)</td>
</tr>
</tbody>
</table>

* = p < .05, ** = p < .01, two-tailed

Notes: Personal expressiveness or positive affect levels on day 1 were entered to control for baseline levels of well-being; eudaimonia and hedonia were then entered as simultaneous independent variables in each of the two regressions. The regression coefficients are unstandardized.
<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eudaimonic Activity on day 7</td>
<td>Personal Expressiveness on days 2 to 6</td>
<td>.52**</td>
</tr>
<tr>
<td></td>
<td>Positive Affect on days 2 to 6</td>
<td>.22 t</td>
</tr>
<tr>
<td></td>
<td>(Eudaimonic Activity on day 1)</td>
<td>(.24**)</td>
</tr>
<tr>
<td>Hedonic Activity on day 7</td>
<td>Personal Expressiveness on days 2 to 6</td>
<td>.44**</td>
</tr>
<tr>
<td></td>
<td>Positive Affect on days 2 to 6</td>
<td>.46**</td>
</tr>
<tr>
<td></td>
<td>(Hedonic Activity on day 1)</td>
<td>(.26*)</td>
</tr>
</tbody>
</table>

$t = p < .10, * = p < .05, ** = p < .01$, two-tailed

Notes: Eudaimonic activity or hedonic activity on day 1 were entered to control for baseline levels of activity; personal expressiveness and positive affect were then entered as simultaneous independent variables in each of the two regressions. The regression coefficients are unstandardized.
Table 8

**Regression Coefficient Increments Linked with Global Eudaimonia or Hedonia when Regressing Personal Expressiveness on Concurrent Eudaimonia and Hedonia (Study 2)**

<table>
<thead>
<tr>
<th>Personal Expressiveness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eudaimonic Activity:</strong></td>
<td></td>
</tr>
<tr>
<td>main effect ($\beta_1$)</td>
<td>.33**</td>
</tr>
<tr>
<td>increment associated with General Eudaimonic Orientation ($\gamma_{11}$)</td>
<td>.04*</td>
</tr>
<tr>
<td>increment associated with General Hedonic Orientation ($\gamma_{12}$)</td>
<td>.00</td>
</tr>
<tr>
<td>$\chi^2$ for difference between increments $\gamma_{11}$ and $\gamma_{12}$</td>
<td>1.66</td>
</tr>
<tr>
<td><strong>Hedonic Activity:</strong></td>
<td></td>
</tr>
<tr>
<td>main effect ($\beta_2$)</td>
<td>.32**</td>
</tr>
<tr>
<td>increment associated with General Eudaimonic Orientation ($\gamma_{21}$)</td>
<td>.04*</td>
</tr>
<tr>
<td>increment associated with General Hedonic Orientation ($\gamma_{22}$)</td>
<td>.01</td>
</tr>
<tr>
<td>$\chi^2$ for difference between increments $\gamma_{21}$ and $\gamma_{22}$</td>
<td>1.11</td>
</tr>
<tr>
<td><strong>Global Eudaimonic Orientation:</strong></td>
<td></td>
</tr>
<tr>
<td>main effect ($\gamma_{01}$)</td>
<td>.53**</td>
</tr>
<tr>
<td><strong>Global Hedonic Orientation:</strong></td>
<td></td>
</tr>
<tr>
<td>main effect ($\gamma_{02}$)</td>
<td>.21**</td>
</tr>
</tbody>
</table>

* = $p < .05$, ** = $p < .01$, two-tailed

Note: Regression coefficients are unstandardized.
Table 9

*Regression Coefficient Increments Linked with Global Eudaimonia or Hedonia when Regressing Positive Affect on Concurrent Eudaimonia and Hedonia (Study 2)*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Effect</th>
<th>Coefficient</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eudaimonic activity:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>main effect ($\beta_1$)</td>
<td></td>
<td>.03**</td>
<td></td>
</tr>
<tr>
<td>increment associated with General Eudaimonic Orientation ($\gamma_{11}$)</td>
<td></td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>increment associated with General Hedonic Orientation ($\gamma_{12}$)</td>
<td></td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>$\chi^2$ for difference between increments $\gamma_{11}$ and $\gamma_{12}$</td>
<td></td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td><strong>Hedonic activity:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>main effect ($\beta_2$)</td>
<td></td>
<td>.64**</td>
<td></td>
</tr>
<tr>
<td>increment associated with General Eudaimonic Orientation ($\gamma_{21}$)</td>
<td></td>
<td>.06**</td>
<td></td>
</tr>
<tr>
<td>increment associated with General Hedonic Orientation ($\gamma_{22}$)</td>
<td></td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>$\chi^2$ for difference between increments $\gamma_{21}$ and $\gamma_{22}$</td>
<td></td>
<td>2.45</td>
<td></td>
</tr>
<tr>
<td><strong>Global Eudaimonic Orientation:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>main effect ($\gamma_{01}$)</td>
<td></td>
<td>.18**</td>
<td></td>
</tr>
<tr>
<td><strong>Global Hedonic Orientation:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>main effect ($\gamma_{02}$)</td>
<td></td>
<td>.84**</td>
<td></td>
</tr>
</tbody>
</table>

** = p < .01, two-tailed

Note: Regression coefficients are unstandardized.
Table 10

*Regression Coefficient Increments Linked with Relative Intrinsic/Extrinsic Aspirations when Regressing Personal Expressiveness on Concurrent Eudaimonia and Hedonia (Study 2)*

<table>
<thead>
<tr>
<th></th>
<th>Personal Expressiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eudaimonic activity:</strong></td>
<td></td>
</tr>
<tr>
<td>main effect ($\beta_1$)</td>
<td>.34**</td>
</tr>
<tr>
<td>increment associated with Relative Intrinsic/Extrinsic Aspirations ($\gamma_{11}$)</td>
<td>.02*</td>
</tr>
<tr>
<td><strong>Hedonic activity:</strong></td>
<td></td>
</tr>
<tr>
<td>main effect ($\gamma_2$)</td>
<td>.33**</td>
</tr>
<tr>
<td>increment associated with Relative Intrinsic/Extrinsic Aspirations ($\gamma_{21}$)</td>
<td>.01</td>
</tr>
<tr>
<td><strong>Relative Intrinsic/Extrinsic Aspirations:</strong></td>
<td></td>
</tr>
<tr>
<td>main effect ($\gamma_{01}$)</td>
<td>.08*</td>
</tr>
</tbody>
</table>

* = p < .05, ** = p < .01, two-tailed

Note: Regression coefficients are unstandardized.
Table 11

Regression Coefficient Increments Linked with Relative Intrinsic/Extrinsic Aspirations when Regressing Positive Affect on Concurrent Eudaimonia and Hedonia (Study 2)

<table>
<thead>
<tr>
<th>Eudaimonic activity:</th>
<th>Positive Affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effect ($\beta_1$)</td>
<td>.03**</td>
</tr>
<tr>
<td>increment associated with Relative Intrinsic/Extrinsic Aspirations ($\gamma_{11}$)</td>
<td>.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hedonic activity:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effect ($\beta_2$)</td>
<td>.64**</td>
</tr>
<tr>
<td>increment associated with Relative Intrinsic/Extrinsic Aspirations ($\gamma_{21}$)</td>
<td>.01</td>
</tr>
</tbody>
</table>

Relative Intrinsic/Extrinsic Aspirations:

<table>
<thead>
<tr>
<th>Main effect ($\gamma_{01}$)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.13*</td>
</tr>
</tbody>
</table>

* = p < .05, ** = p < .01, two-tailed

Note: Regression coefficients are unstandardized.
Table 12

*Regressions of Peoples’ Global Life Satisfaction or Meaning in Life on Their Mean Levels of Eudaimonia and Hedonia (Study 2)*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Satisfaction</td>
<td>mean Eudaimonic Activity</td>
<td>.55**</td>
</tr>
<tr>
<td></td>
<td>mean Hedonic Activity</td>
<td>-.06</td>
</tr>
<tr>
<td>Meaning in Life</td>
<td>mean Eudaimonic Activity</td>
<td>.43*</td>
</tr>
<tr>
<td></td>
<td>mean Hedonic Activity</td>
<td>.07</td>
</tr>
</tbody>
</table>

* = p < .05, ** = p < .01, two-tailed

Notes: Eudaimonia and hedonia were entered simultaneously as independent variables in each of the two regressions. Regression coefficients are unstandardized.