

THE MEANING OF LIFE: PART II

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The question — what's the meaning of life? — usually is posed for humans, but it also should be relevant to our very close relatives, the extinct species of *Homo*. And if those, why not also chimps, gorillas, and orangutans, and dogs, which are capable of communication and emotions like love and compassion. Then, the question might refer as well to the whole spectrum of life on Earth (humans, butterflies, trees, bacteria, viruses). We all have come into existence on Earth, the distinctions among us developing through natural processes (see Part I). If the question is further broadened to “What's the meaning of existence?” then sand grains and every atom in the universe are included.

Most people aren't agitated by the question, and a coherent and explicit view of meaning doesn't seem to be required to live a full and happy life, or a meaningful life. To those struggling just to stay alive, the question may not occur at all, and to those it does occur, the sense of it may differ among cultures. At least, so many have thought about it that it seems to be a real concern.

I've begun by trying to frame the question in a way that it can be answered, arriving at these two formulations — What is the purpose of an individual life and life in general? What is the value of an individual life and life in general? In considering answers, I've tried to be consistent and stay as close as possible to the form of these questions.

MEANING, PURPOSE, AND VALUE

The senses of these words are central in what's being considered.

Meaning. This term is mainly used in three general ways, the first two in reference to symbols, the third in an existential sense, which is the direction here.

1. In reference to a simple symbol, such as a word or road sign — to the prescribed relationship between the symbol and what it refers to.
2. In reference to a aggregation of symbols, such as a paragraph or poem, a painting, or a dream – – to an idea (explanation, message, or thought) that the symbol-complex conveys and that may not be immediately apparent or explicitly prescribed.
3. In description of the (a) purpose or the (b) value of a thing or a basic reality — for example an activity, a life, life in general, a butterfly, a flower, the Universe, gravity.

Purpose. Purpose is the reason for which something is done or the reason it's done in a particular way. Purpose implies that an action is undertaken with the endpoint in mind and guided by it. It's future-oriented; it has a direction. Butterflies and flowers have functions in the sense that they play an part in the way nature operates, but they don't have intentional purpose.

Value. Value is a quality that renders something desirable, useful, or significant. A description of value implies the existence of standards for evaluation. Whether implicitly or explicitly, values underlie decisions that set purpose, so purposeful activity cannot be considered apart from values and the standards by which they're judged.

VALUE AND EVALUATION

There seem to be two general kinds of value: **intrinsic value**, independent of any kind of action, and **extrinsic value**, dependent on choices and actions (which imply purpose). Victor Frankl (1946/2006) saw these as "being valuable in the sense of dignity [intrinsic] and being valuable in the sense of usefulness [extrinsic]."

1. **Intrinsic value.** Everything, animate and inanimate and without making a choice or doing anything, can be seen as having intrinsic value. The peculiar rocks on my desk as paper weights and the colorful ones on the shelf are beautiful and hold my awe. To look at a tree or a landscape, the night sky or the Hubble Deep Field view, brings similar feelings. Varieties of weather are beautiful. Daisies are beautiful and so are even more abstract things like species of daisies. Whatever intrinsic value that I feel applies to me also applies to everyone else and in this sense, all lives are equally valuable. It follows, too, that in this sense the existential meaning of humans would be the same as the meaning of all life, and in a broader sense it would be the same as the meaning of the Universe.

"Biophilia" is the term used by biologist E.O. Wilson (1984) for this innate emotional connection between humans and the rest of nature, including other species. Presumably it's at least part of the reason that pets evoke such love, that conservationists can be so passionate about preserving seemingly insignificant species, and that we find natural settings so peaceful and beautiful. Some may sense these connections more deeply than others, but their roots are in our evolutionary past and all of us surely have inherited them. In the section below, "Mechanisms of happiness," it's noted that all mammals share a basic set of emotions, arising in the limbic system of our brains.

Would this feeling of kinship and affection, the sense of unity and commonality, intrinsic value, be the same on another planet among species of an independent origin? We still would all have our origins in the same galaxy and universe, from the same basic kinds of matter and same physical laws. In science fiction, human characters develop affectionate relationships with forms of Artificial Intelligence and alien life forms with patterns of thought similar to ours. It's not unimaginable and it doesn't seem implausible. But it's by no means certain that all intelligent alien species would feel the same way.

Even though appreciation for experiences is subjective from one individual to another — some are thrilled by music, others by visual art, others by religion or nature — people throughout unwritten and written history have recognized intrinsic value. Literature, art, and religious experience tell us this, as does our own experience.

What's the basis for holding beauty, love, and a sense of unity with existence as valuable? Why is the sound of a melody and a sequence of chords so pleasurable? Appreciation of intrinsic value seems beyond rationality and beyond expression, but the basis for it lies within our neural circuitry and the evolutionary origins and mechanisms can be and will be better understood with time (see Mechanisms of happiness, p. 13). At least that's the way it appears from a naturalistic perspective.

Connection is the term I'm using here to describe encounters and experience with things of intrinsic value. Broadly it includes love and personal relationships, a sense of relationship with all of existence and respect for it, encounters with beauty, and a sense of wonder. The experience of connection in this sense is not purposeful, but a path toward the experience might be, if it involves a conscious opening of awareness or placing one's self in a position where the experience would be more likely. Finally, not only do these kinds of connections give pleasure and happiness but they also form the foundation of values that guide decisions of purpose (Fig. 1).

2. **Extrinsic value** is assessed by contributions (or subtractions) of good to other individuals, society, culture, and our species and to the Earth and the Universe (beneficence) and by comparisons of what an individual might be doing or might have done, in his judgement, versus his actual actions. Such judgements can be made by an individual with respect to himself or with respect to others. Criteria for these kinds of evaluations are **personal values**, which are preferences for what is good, right vs. wrong, beneficial, important, useful, beautiful, desirable, constructive, etc. Such standards have a basis in intrinsic value but they also may be strongly subjective, as they vary between cultures and between individuals within a culture, but a set of common personal values may be prevalent within a culture. Moral values, if recognized as distinct from personal values, can be both subjective (cultural) and objective (to the extent that intrinsic values are recognized across cultures) — see further comments below under [Meaningfulness — Objective and Subjective].

Purpose is reflected in choices and actions that arise from perceptions of intrinsic and personal values. This is the heart of the sense of meaning that's considered here.

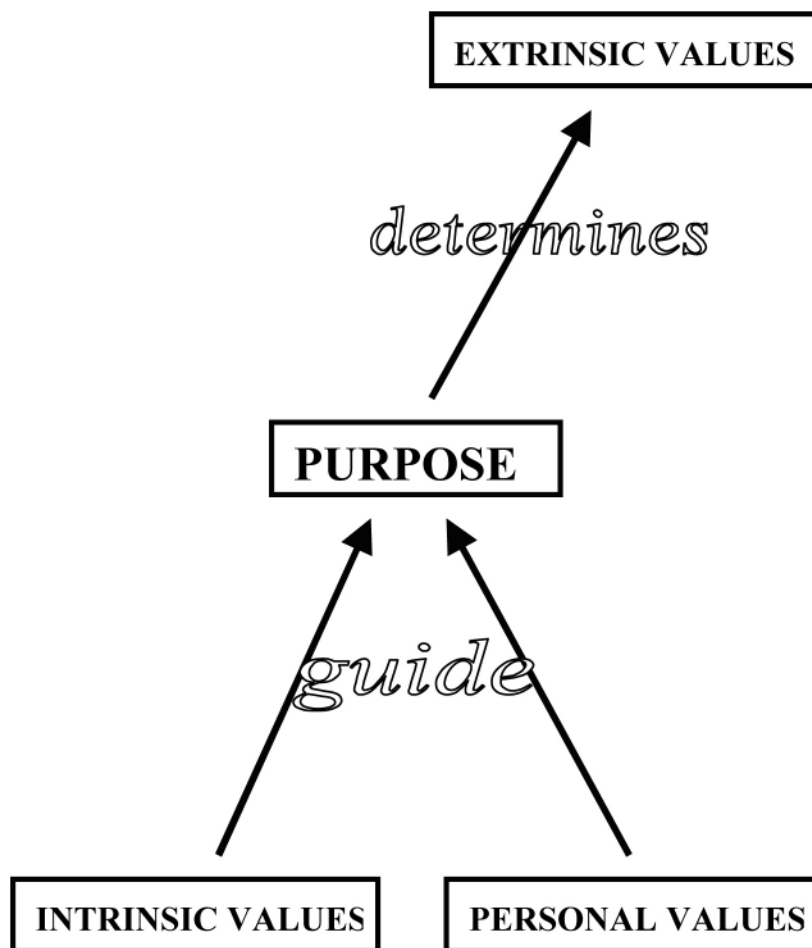


Figure 1. Relationship between values and purpose.

INTRINSIC MEANING (AS PURPOSE) IS NOT FOUND IN THE UNIVERSE AND LIFE

The known Universe originated about 14 billion years ago from a minute singularity via the Big Bang (Part I). The forces arising in that event have determined the nature and distribution of matter and energy that we can observe. The Universe itself is not conscious and has no way of

determining its own future, and it has seemed that there was no way of even approaching a knowledge of what might have initiated the Big Bang, leaving an opening for theists to postulate an act of God in the birth of existence.

A cyclic model, however, in which a universe (or multiple universes) arises and rearises (Part I), has been provided in realistic and plausible form mostly in the last 10 years. Advances by physicists and cosmologists in string theory and observations of irregular distributions and movement of matter and energy across the Universe underlie this kind of cosmological model. In this view, matter and energy are released anew through a Big Bang event, but they arise from circumstances of earlier existence. This is a model that regards existence as eternal (our universe may be just one among an infinite number), but this is no more problematic than one in which "something arises from nothing." In any event, there is no reason to interpret the origin of the Universe as purposeful and thus intrinsic meaning is not to be found.

Knowledge of the origin of life on Earth is more secure since we know roughly when life first appeared and what conditions were like before it existed. From the point of its beginning, almost all natural scientists find evidence from genetics, natural history, and fossils in support of the idea that new forms of life have arisen from earlier ones through the process of evolution. Even the origin of the first cells can be accounted for by natural processes without invoking the necessity for an ordained purpose in their inception.

The simplest forms of life on Earth began through natural processes and more complex forms came into existence the same way. In a real and immediate sense, we humans are one with all of life and not far-removed in time or evolution from all of our relatives, even the most humble. Even with our ability to think about meaning and to sense it in our lives, we are directly connected with the rest of life. Since the same processes apparently characterize the entire Universe, we expect that life has appeared elsewhere, perhaps millions of times and that the libraries of the Universe are replete with volumes of philosophy and theology, written by beings who also arrived at intelligence and consciousness through independent evolutionary paths.

The relative significance of a human life, perhaps even the human species, has been brought to intensely clear perspective only over the last 90 years, starting in 1925 with Edwin Hubble's discovery of galaxies outside our own and his subsequent insights into the nature of the Universe — beginning with its expansion and then calculation of its age and its probable beginning as a singularity. Launch of the Hubble Space Telescope in 1990 has brought views of literally billions of galaxies. To know that the Earth is vanishingly small and that life here is no more than a mote in space and time may invoke feelings of meaninglessness for some, but it's a privileged view not previously available, and however we feel about meaning, it can be most fully appreciated with an awareness that best matches what's known about reality.

Humility comes with such a thoroughly naturalistic point of view. If the Earth and everything on it were suddenly relegated to non-entity, it might be possible for astronomers in a few nearby star systems to make the observation, but there would barely be even a blink in the Milky Way Galaxy, much less in the rest of the Universe. And is ours just one universe among an infinite number of universes? There's nothing negative about that, it's just what is. Does my view of where we are and what we are necessitate that my life is less filled with happiness, love, and beauty than that of someone with a theistic belief or some other religious belief? I don't see evidence for it. Nor do I find that my view makes it impossible or even difficult to lead a moral life or meaningful life.

EXTRINSIC MEANING AND PURPOSE

If meaning is predicated on activity (even if limited to thoughts), and if choice of actions implies purpose (orientation toward the future), then realization of meaning is based on purposeful activity. If we assume that *Homo sapiens* alone of species on Earth is able to act consciously with purpose (perhaps unjustifiably eliminating our closest relatives, extinct and extant), in this sense we are the only species capable of living with meaning. Or at least we are the only species where it makes sense to speak of meaningfulness. Meaning in this sense is referred to here as **extrinsic meaning**, since it's not an innate or inherent part of us, not assigned to us.

We have it from the Ecclesiastes writers to the Existentialists that meaning in life has to be supplied by the user, even if the meaning is mostly personal and limited by our lifetimes. Since we are responsible for setting our own purposes, meaning comes the same way. For some, goals and purposes might appear to lie only on the periphery of consciousness and those individuals may appear to move randomly through lives, but each of us sets our own direction even if choices are to be blown in whatever direction the wind takes us.

A meaningful life can be followed by many paths, but happiness and contentedness seem to be closely associated with most of them. Paths of happiness aren't revealed as automatic knowledge, and life doesn't present everyone with equal opportunity. Possibilities for meaningfulness may be made easier or more difficult by situations of life, some determined by chance and events and periods that we have no control over. Different personalities may be motivated to find meaning in different ways. Some may have distinct goals and purposes and their lives may have personal meaning in that sense, but their particular goals may contribute little to their own happiness and contentment.

What an individual considers his personal meaning might in a sense become intrinsic if his purposes continue through their influence on culture. The life of many if not most individuals reverberates at least for a generation or two after their death, usually in its influence on other lives, and a few individuals may have a profound effect on future cultures. Cultures themselves have an extrinsic influence and humans as a species also may set conscious purposes — to continue into the future, to live in freedom, happiness, and fulfillment, and even to choose and partially control our own direction of biological development as a species.

POSSIBILITIES FOR MEANINGFULNESS

There appear to be two broad paths toward meaningfulness.

1. **Beneficence** (other-oriented activity). Promotion of the well-being of others through service and contributions to individuals, society, culture, and our species and to the Earth and the Universe.

- * contributions to knowledge in science and culture broadly interpreted, and particularly as they may increase our longevity as a species
- * contributions to art and beauty
- * contributions to justice and fairness in existence, including concern for other species and the environment
- * promotion of friendship and love, happiness, health, societal function, peace, freedom, education — things involved with increasing an overall quality of life. Providing for and raising a family is a meaningful part of life when it includes activities like these.

Beneficence has meaning in this sense if its consequences contribute toward an increased quality in a sphere outside of one's self, where the source of the values is from outside of one's self. Achievements (the intended consequences) may contribute to a sense of meaningfulness, but feelings of achievement fade quickly. The meaningfulness may be more in the process than the endpoint.

By focusing one's attention and energies on these kinds of other-oriented activities, according to Wolf (2010), it's implicitly acknowledged that "we are specks in a vast and value-filled universe and that none of us is the source or possessor of all objective value." Thus by choosing among alternatives to emphasize those that seem to be more positive activities, it's possible to align our purpose with what seems to be a fundamental truth about the world.

Also in potential explanation of why other-oriented activity is significant for meaning are these thoughts from Baggini (2005). There seems to be "a widespread, if not universal, human urge to achieve transcendence. Life seems unsatisfactory when it concerns only our individual existence." Transcendence in this sense is "simply escaping the confines of one's own individual, subjective existence and somehow partaking of something greater. It is simply to transcend — to rise above — our nature as finite particulars."

Work (what one does for a living) commonly takes most of a person's time and energy and may be a main focus for potential meaning in life (see quotes in the Epilogue by Freud and Whitehead). Mechanic, entrepreneur, salesman, restaurateur, gardener, technician, administrator, fiction writer, professional athlete — these are examples of jobs that don't appear to have such a direct connection to beneficence, but they may not be explicitly self-oriented activities except in the sense that the work is done in one's self-interest (for pay). Aspects of all them, though, may have a connection to beneficence and can be undertaken as meaningful activity, and all of them offer potential for developing one's own potential. On the other hand, even if work is no more than a critical sustaining activity (toward food and shelter), it might be sensed as meaningful for no other reason.

For a person in a primitive or subsistence culture, possibilities for purpose would center on caring for family and village and becoming proficient in whatever his/her main activities were. Struggle simply to exist makes it difficult to have purposes outside of food and shelter, but even so, artisans of primitive cultures have produced strikingly beautiful and refined objects, and the paleolithic artists of Lascaux must have felt satisfaction with their wall paintings. Millions of our forebearers in centuries and millenia past surely have lived lives they sensed to be meaningful and connected.

2. Self-development (self-oriented activity). Realizing and expressing one's own potential and capacities and maintaining aspiration for improvement.

- * development of authenticity — having goals, commitments, and achievements truthfully represent one's own personality and to be the result of one's own personal effort and ability, despite external pressures and influences toward adopting external standards or models of living that might seem to lead to greater happiness
- * development of self knowledge and self discipline
- * development of knowledge and wisdom in how to use the knowledge
- * development of rational abilities, social abilities, ethical sense, and creative talents
- * development of physical abilities and skills
- * development of a sense of efficacy, that one can make a difference and have some control over one's environment
- * development of a sense of self-esteem
- * developing an awareness of the unity of all existence and a sense of beauty (connection).
- * enabling (through practice) moral and ethical choices (and other kinds of choices leading to a full and harmonious life) to arise naturally/spontaneously from our personality as well as from rational decisions

A high degree of self-development is generally equivalent to Abraham Maslow's state of self-actualization. This is the uppermost level in Maslow's hierarchy of needs, where lower order needs must be fulfilled before high order needs can be satisfied — the five sets of needs are **physiological**, **safety**, **belongingness and love**, **esteem** (a sense of competence, recognition of achievement by peers, and respect from others), and finally **self-actualization** (the motive to realize one's full personal potential, to become everything that one is capable of becoming, including development of morality, creativity, spontaneity, problem solving ability, lack of prejudice, and acceptance of facts). Others maintain that an individual must progress through two more phases of need satisfaction before self-actualization can take place — **cognitive** (knowledge and understanding) and **aesthetic** (symmetry, order, and beauty). While these all are basic needs, recent research indicates that they may be more simultaneous than hierarchical.

Play (self-oriented activities seemingly without 'value') may contribute toward self-development as it engages a significant part of an individual's activities and as it may allow development of creative and other abilities. Comic book collection, model trains, photography, cooking, reading, fishing, participation in sports, aficionado-following and expertise in sports lore — these examples offer opportunities for personal growth and all can be activities that can deeply absorb an individual's interest and provide an integrating focus. Many of them offer opportunities that could be interpreted as beneficent — for example, a comic book collector could chronicle the development of cultural themes, overlapping with the activities of an avowed historian.

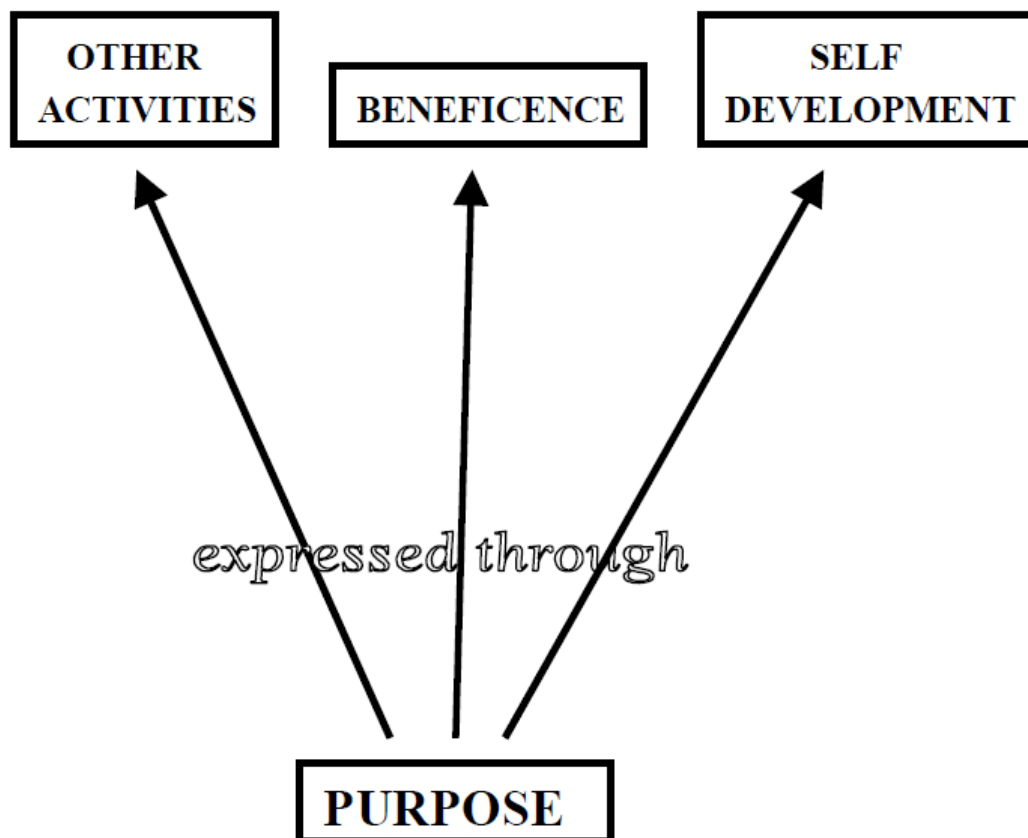


Figure 2. Beneficence and self-development are expressions of purpose that give a sense of meaning.

For realization of a meaningful life, Cottingham (2003) adds a criterion that seems to link beneficence and self-development. Life "must meet the standards of some pattern tailored to our human nature, rather than being a pure function of isolated individual choices." With recognition of the intrinsic value of all life, and with our evolutionary heritage as social creatures, we have "patterns of feeling that make us naturally disposed to have some minimal concern for our fellow creatures." Operating with love, kindness, and unselfishness implies recognition that all human lives are valuable and interwoven. Cottingham sees a meaningful life as necessarily a moral one (or at least not radically immoral).

Eagleton (2007) also sees the meaning of life as self-realization of human nature through loving-reciprocal relationships with others. "It may well be that the evolution of human beings was random and accidental, but it does not necessarily follow from this that they do not have a specific kind of nature. And the good life for them may consist in realizing that nature." Central in his view is the conception of love (agape) — "The prototype of it is loving strangers, not those you desire or admire." Love "is the way we can reconcile our search for individual fulfillment with the fact that we are social animals. For love means creating for another the space in which he might flourish, at the same time as he does this for you. The fulfillment of each becomes the ground for the fulfillment of the other. When we realize our natures in this way, we are at our best. This is partly because to fulfill oneself in ways which allow others to do so as well rules out murder, exploitation, torture, selfishness, and the like. In damaging others, we are in the long run damaging our own fulfillment, which depends on the freedom of others to have a hand in it. And since there can be no true reciprocity except among equals, oppression and inequality are in the long run self-thwarting as well." Love in this sense is purposeful and beneficent in its outcome, but Eagleton has linked it to "self-realization."

ENGAGEMENT, FLOW, PASSION

Recent research in psychology has shown that quality of life is enhanced by periods of complete absorption (integrated focus) in what one is doing, a state referred to as "flow." Those in the flow are characterized by a general curiosity and interest in life, persistence, and low self-centeredness. Consistency in what characterizes flow has been confirmed through studies of art and science, aesthetic experience, sports, literary writing, and other activities. The experience is the same across lines of culture, class, gender, and age, as well as across kinds of activity (Nakamura & Csikszentmihalyi 2002).

Various discussions of meaningfulness in life also have embraced the concept of flow (or found a confluence with it) as one of complete involvement in the moment, usually calling it "engagement," where momentary experience is endowed with value. This is a central theme of existentialism, where a meaningful life can be found in an unconditional commitment to something finite. "Passion" is another term that may refer to the same kind of intense involvement.

An excellent discussion of "flow" by Nakamura & Csikszentmihalyi (2002) is quoted here:
"The conditions of flow include:

- Perceived challenges, or opportunities for action, that stretch (neither overmatching nor underutilizing) existing skills; a sense that one is engaging challenges at a level appropriate to one's capacities
- Clear proximal goals and immediate feedback about the progress that is being made

Being "in flow" is the way that some interviewees described the subjective experience of engaging just-manageable challenges by tackling a series of goals, continuously processing feedback about progress, and adjusting action based on this feedback. Under these conditions, experience seamlessly unfolds from moment to moment, and one enters a subjective state with the following characteristics:

- Intense and focused concentration on what one is doing in the present moment

- Merging of action and awareness
- Loss of reflective self-consciousness (i.e., loss of awareness of oneself as a social actor)
- A sense that one can control one's actions; that is, a sense that one can in principle deal with the situation because one knows how to respond to whatever happens next
- Distortion of temporal experience (typically, a sense that time has passed faster than normal)
- Experience of the activity as intrinsically rewarding, such that often the end goal is just an excuse for the process."

There's no direct connection between value and engagement, thus it's possible to be involved in valuable activities without being engaged, and it's possible to be engaged in activities where value is not so evident. It's possible to be intensely committed to no more than social respectability and economic success. A person may be engaged in one path of his life but not others, and a passion may be intense or not so much.

It's also possible that passion "can be all-consuming, making us too focused on one thing and neglectful of others. It can also be unruly, diverting us from our better judgments and undermining our more sober plans and ambitions. And it can be misplaced, directing too much energy into waste management when it would be better expended on friends and family. ... But perhaps most insidious of all is that it can be blinding, so we don't even notice that it is leading us astray" (Marcaro & Baggini 2012).

A MEANINGFUL LIFE

Meaning is predicated on purpose and a meaningful life is possible through purposes set toward beneficence (other-oriented activities) and self-development (self-oriented activities). Love and kindness are not separate from beneficence and self-development and provide a link between them. Active engagement in these activities, as the way in which goals are approached and attained, seems to be necessary for purposeful direction when sensed as most meaningful.

Meaning in life is not something given to us from the outside but is supplied by the user, even if the meaning is mostly personal and limited by our lifetimes. Human life doesn't exist to affirm or realize some condition of being that transcends our own existence. Each of us is responsible for setting his or her own purposes, and meaning comes the same way.

Why should it matter that life has some kind of value (as meaning)? The answer may be that an active approach to meaningfulness is closely related to the kinds of activities that are involved with self-development. Meaningful activity increases a sense of self-development, which in turn contributes to a sense of meaningfulness. If this really is a positive feedback loop, then it has the potential to emphasize the significance of an individual's meaningful activity. The question remains, however — significance in what? — and the answer seems to be that meaningfulness contributes to distinctive qualities of happiness and satisfaction. These are positive subjective states that are inherently desirable and good in themselves. Meaningfulness also may be desirable for its own sake but perhaps it's not experienced separately, apart from its components (Fig. 4).

We seek meaningfulness because it contributes to various qualities of our own happiness. Connections to beauty, a sense of relationship with all of existence, and especially love and personal relationships are other contributors to happiness and fulfillment, but purpose is not the underlying factor in a sense of connection. The flow chart in Figure 3 provides a way to conceptualize relationships among these.

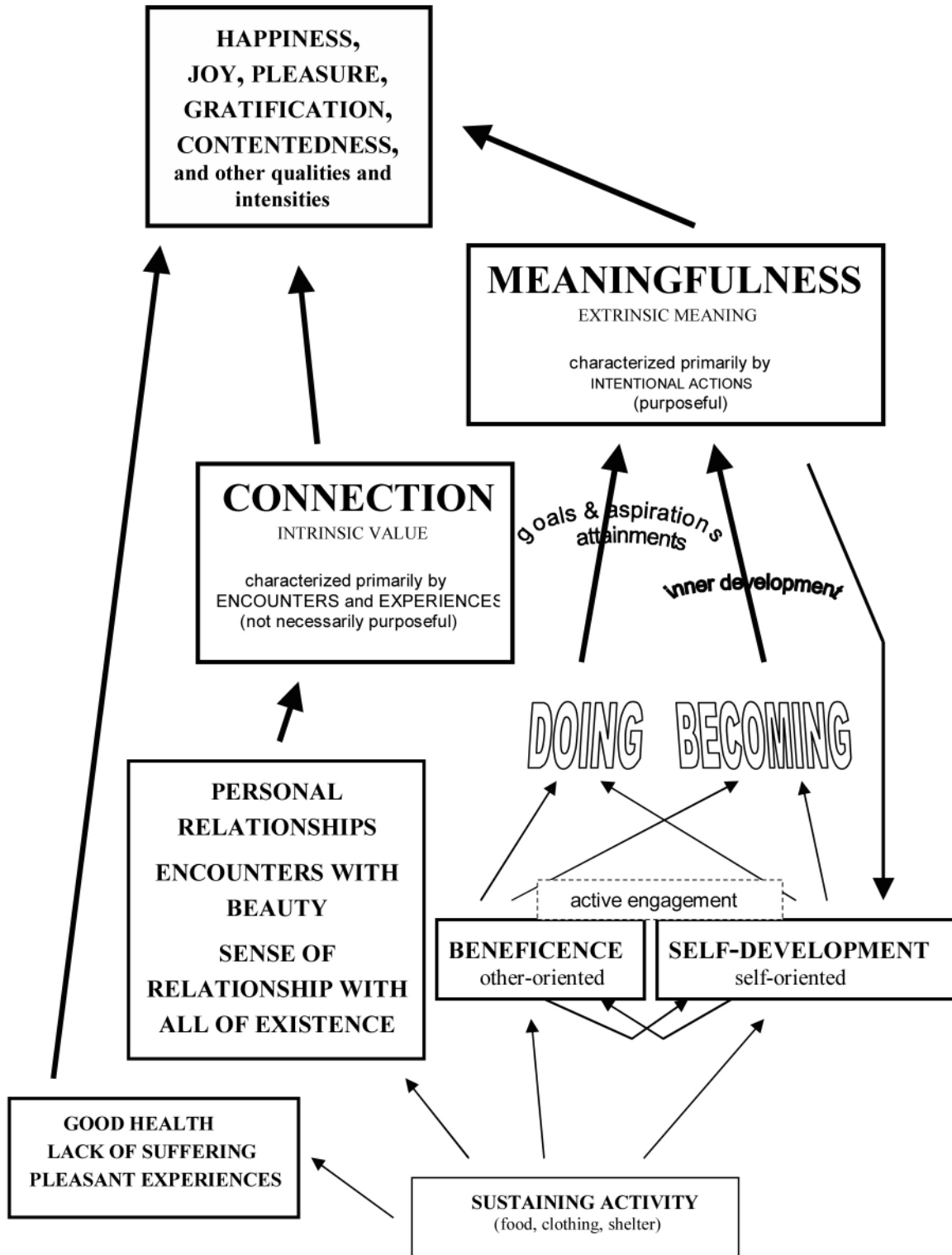


Figure 3. Flow chart for thinking about meaning, purpose, connection, and happiness.

Connection is shown in the flow chart as contributing to happiness and related qualities, but the elements of connection apparently are more similar to qualities of happiness and other emotions in that they are directly experienced (see "Happiness," below). As implied by the flow chart and supported by recent neurological research, purposeful behavior also has a direct effect as something desirable in and of itself.

That's a condensed overview of the discussion that I've given. For a different kind of summary, Julian Baggini (2005) has provided a beautiful one: "It is straightforward enough to say that life can be worthwhile in itself, particularly if it is a life with a balance of authenticity, happiness, and concern for others; one where time is not wasted; one which engages in the ongoing work of becoming who we want to be and being successful in those terms." Or, even more tersely from John Cottingham (2003), a meaningful life is "one in which the individual is engaged ... in genuinely worthwhile activities that reflect his or her rational choice as an autonomous agent."

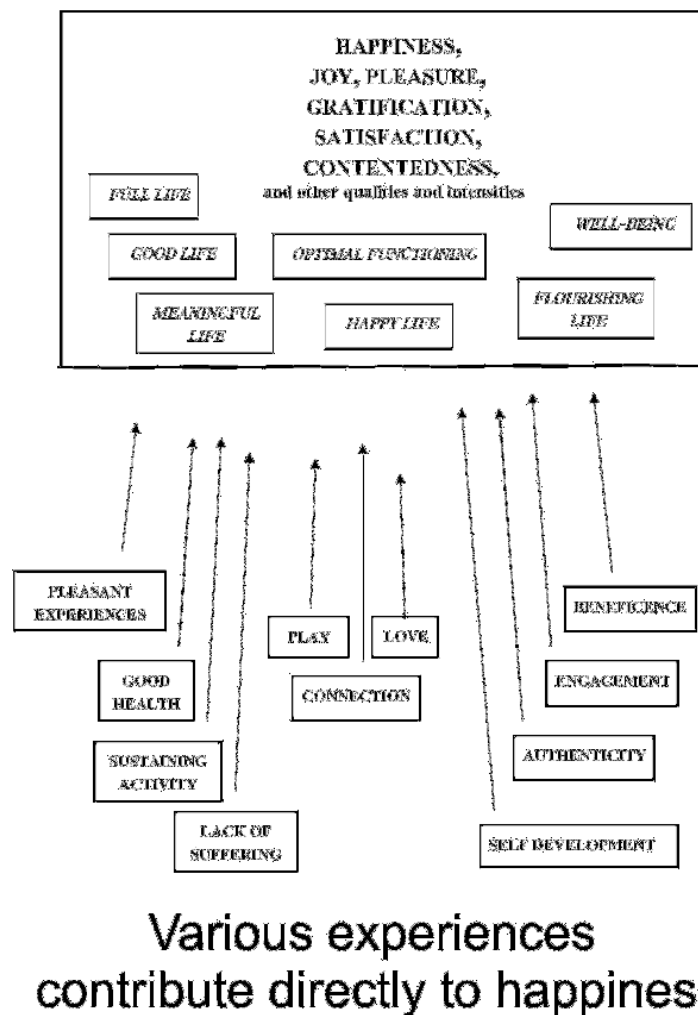


Figure 4. Various activities, including meaningful ones, contribute directly to happiness. A meaningful life, full life, a good life, a flourishing life, a happy life, optimal functioning, and well-being all are expressions variously used to characterize a "life worth living."

MEANINGFULNESS, HAPPINESS, AND RELATED QUALITIES AND POSITIVE STATES

Meaningfulness is one of several ways to describe what many see as an ultimate goal in life (Fig. 4). A "happy life," a "full life," and other similar expressions probably are similar to the concept of a meaningful life in most people's minds.

Meaningfulness is perhaps too narrow to describe what we ultimately aspire to (unless the definition of meaningfulness is maximally broadened or given an operational definition) — instead, it may be that meaningfulness may be one of many things that makes life worth living (as in Fig. 4). Many kinds of meaningful activity are valuable or made more valuable to an individual primarily because of "engagement" rather than the significance of whatever contribution the activity might make. Experiences of connection (encounters with beauty, love and other personal relationships, a feeling of unity, a sense of relationship with all of existence, a sense of the intrinsic equality of all forms of life and even non-life), which are not the result of intentional action, are valuable in themselves and contribute to happiness. In addition, good health, lack of suffering, play, and all sorts of major and minor pleasant experiences all may contribute to the place in life where most of us would like to be.

Happiness often is said to be a major goal in life, or the major goal, and as such it's almost always meant in the broad sense. "Life, liberty, and the pursuit of happiness" were foremost on the minds of those who signed the Declaration of Independence. Happiness appears to be a general term for a group of related emotional states of different qualities and intensities — it's a positive state of mind characterized by contentment, satisfaction, pleasure, amusement, or joy, or euphoria (etc.) — these states have much in common but we can tell them apart and many more distinctions probably can be made.

Apart from the potential they inherit, humans seem happiest when they have the following ("PERMA" according to Seligman 2011), which are closely related to the factors discussed here as contributing to meaningfulness and happiness:

- * **Pleasure** (tasty foods, warm baths, etc.)
- * **Engagement** (absorption in an enjoyable yet challenging activity)
- * **Relationships** (social ties are a reliable indicator of happiness)
- * **Meaning** (a perceived quest or belonging to something bigger than one's self)
- * **Accomplishments** (realization of tangible goals)

Activities that produce an experience of meaningfulness, in the view here, contribute to happiness. A person might be happy for reasons other than meaningfulness (for example, connection, pleasurable activities), but judging from the importance most attribute to living with a sense of meaning, a life without meaning would not be a very happy one. And then, acting to fulfill certain kinds of meaning-giving responsibilities (toward maintaining an authentic and moral existence) may not be pleasant at all, but the positive feeling from doing those things overrides the unpleasantness.

Recent research in psychology has shown that a person's average level of happiness is strongly influenced by his genes and that most environmental and demographic factors influence happiness relatively little. An individual's level of happiness (**H**) can be considered to have a biological set point (**S**; genetic capacity for happiness, usually considered as an range of values), which apparently accounts for an average of about half of a person's basic level of happiness. In this context, happiness also is influenced by conditions of life (**C**; unchangeable things like race, sex, age, and disability and things than can be changed, such as wealth, marital status, where you live). A third major influential factor on happiness level is voluntary activities (**V**; factors under voluntary control through choice). The relationship among these has been expressed as the "happiness formula" $H = S + C + V$ (Seligman 2002).

MECHANISMS OF HAPPINESS.

At the base of it, "happiness," whatever positive feeling we're talking about, is mediated by the anatomy and chemistry of our brains. It's clear that different emotions are localized in specific parts of our neural anatomy and that changes in physiology are correlated with the presence and intensity of the feelings. This area is the focus of much interest and investigation and a great deal already is known. Some general ideas and details are summarized here in part to emphasize that emotions are squarely situated as a field of scientific study and in part to emphasize the similarity of humans to other mammals.

The limbic system

Emotions generally are centered in the **limbic system** of the brain, particularly the ventral tegmental area, which seems to be directly connected with the experience of pleasure, the pre-frontal cortex, which is involved with learning and memory, thinking about the future, planning, and taking action, and the nucleus accumbens (sometimes called the "pleasure center"), which is involved in reward processing and also in mediation of emotions induced by music. Positive states associated with problem-solving and acting with meaning are limbic mediated. The substantia nigra is a structure of the midbrain that also plays a role in reward and addiction.

The limbic system also is known as the paleomammalian brain, because its appearance is associated with the earliest evolution of mammals and is shared by all of us, from rats to humans. The large neocortex of humans, which is concerned with language and "executive functions," is a recent overlay developed rapidly (outside of and around the subcortex) in the evolution of higher primates.

By stimulating (via electrode) a precise subcortical location, essentially identical emotional tendencies can be evoked in all mammals, including humans. Discrete responses can be evoked from seven different innate emotional systems within the limbic system (Panksepp 1998; and see Koch 2012 for good overviews and summaries):

SEEKING -- anticipation, desire
 RAGE -- frustration, body surface irritation, restraint, indignation
 FEAR -- pain, threat, foreboding
 PANIC/LOSS -- separation distress, social loss, grief, loneliness
 PLAY -- rough-and tumble carefree play, joy
 MATING -- copulation—who and when
 CARE -- maternal nurturance

In contrast, artificial stimulation of the neocortex does not engender emotions, although Panksepp notes that "Emotive circuits have reciprocal interactions with the brain mechanisms that elaborate higher decision-making processes and consciousness."

Neurotransmitters

Neurotransmitter molecules control the passage of nerve impulses from one cell to another and are integrally involved in the generation of these emotions. As with the basic structure of the limbic system, "no neurotransmitter or neuromodulator has been discovered in humans that is qualitatively different from those found in other mammals. In fact, all mammals share remarkably similar anatomical distributions of most neurochemical systems within their brains" (Panksepp 1998).

Among the best-known neurotransmitters are norepinephrine, endorphins, serotonin, and dopamine.

Norepinephrine is synthesized primarily in the the locus ceruleus (see Fig. 8), which is in the brainstem (earlier evolved than the limbic system) and involved with physiological responses to stress and panic. The locus ceruleus responds to activation by stress by increasing norepinephrine secretion, which in turn facilitates a number of anxiety-like behavioral responses.

Endorphins are similar in chemical structure to painkilling drugs such as morphine and also resemble opiates in their abilities to relieve pain and produce a feeling of well-being. They are produced in the pituitary gland and the hypothalamus during exercise, excitement, pain, consumption of spicy food, love, and orgasm.

Serotonin is produced primarily by neurons of the raphe nuclei, which are moderate-size neuron clusters found in the brain stem. It is essential to numerous functions including appetite control, memory and learning, temperature regulation, cardiovascular function, muscle contraction, and endocrine regulation. It plays an essential role in concentration, sleep, and mood regulation, especially in calming anxiety and relieving depression, and it is involved in obsessive-compulsive disorder and schizophrenia. A number of antidepressants, including the Prozac family (selective serotonin reuptake inhibitors, or SSRIs) keep serotonin levels high by preventing neurons from reabsorbing the neurotransmitter after it has been released. The hypericin of St. John's wort (*Hypericum perforatum*) inhibits activity of an oxidase enzyme that breaks down neurotransmitters, including serotonin and dopamine.

Dopamine is produced in the ventral tegmental area (VTA) and substantia nigra (SN) — both are part of the limbic system — and transported to various locations involved with emotions. Neural pathways that involve dopamine "appear to be major contributors to our feelings of engagement and excitement as we seek the material resources needed for bodily survival, and also when we pursue the cognitive interests that bring positive existential meanings into our lives" (Panksepp 1998). When dopamine is abundant in synapses, "a person feels as if he or she can do anything." Remarkably, goal-directed behavior is found to stimulate the release of dopamine in the VTA (Blum 1997; Franken 2002; Carlson 2004), but so also do high-risk adventure, competition, and gambling.

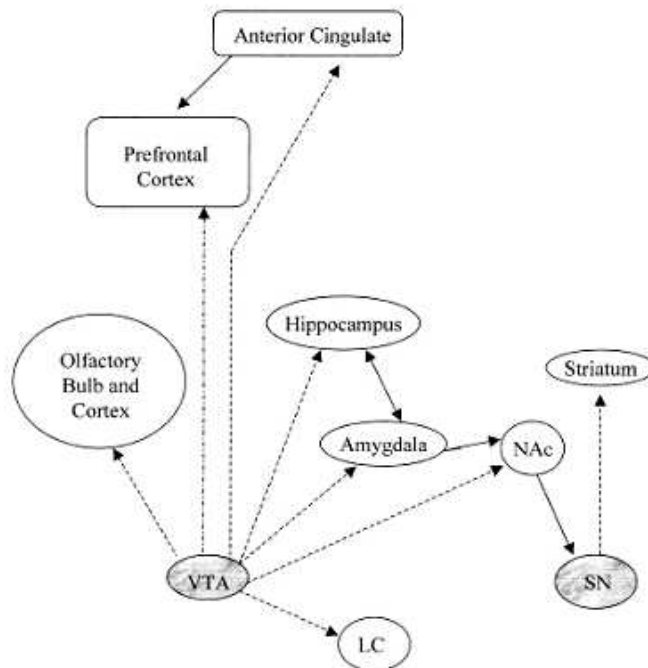


Figure 8. Some dopamine projections in the human brain. Dopamine-producing areas are shaded, and dopamine projections are illustration by the dashed lines. NAc = nucleus accumbens; VTA = ventral tegmental area; SN = substantia nigra; LC = locus ceruleus. From Ashby, Isen, and Turken (1999). The brain areas are in the midbrain (SN), brainstem (LC), and limbic system (the rest).

These neurotransmitter pathways, especially for dopamine, apparently evolved at least partly as reward systems for useful behavior. The reinforcing effects of stimulating the reward pathway underlie motivation and goal-seeking behaviors based on sensitivity to these effects. Reward systems are mimicked by cocaine and amphetamines, which act in preventing dopamine reuptake by binding to proteins that normally transport dopamine — the increased dopamine levels stimulate neurons, causing prolonged feelings of pleasure and excitement.

MEANINGFULNESS — OBJECTIVE AND SUBJECTIVE

Are there objective criteria for assessing meaningfulness? Is it possible that one individual leads a more meaningful life than another? Yes to both, insofar as goals and purposes are set and pursued and as values have some degree of objectivity (see below). Lives that are more consciously purposive than others may give more of a sense of meaningfulness than others.

But an individual's purposes arise within and are known best by him — they can be known to others as known and related by that individual himself or as inferred by others from his behavior. Thus it seems that only an individual can make an unambiguous judgement of his own personal meaningfulness. This seems to be particularly true for meaningfulness through **self-development**, where goals are mostly personal and judged from within. Psychologists make such evaluations through questionnaires or interviews, but answers to the questions are provided by subjective responses.

Purpose can be expressed in many and subtle ways, and it's hard for me to be clear about the nature of even my own purposes. And if meaningfulness also hinges on worthiness of activities, that's another barrier to objective evaluation, except at poles of morality and immorality.

Value of activities might provide a more obvious way to assess meaningfulness. But almost all activities can be seen as potentially valuable as a contribution to others or as an avenue for personal growth, and there are infinite degrees of value. Particular values and their relative significance differ among individual and cultures. The value of an activity an individual is engaged in might be assessed differently through his own eyes versus those even of a close friend.

What kinds of values ground choices of activities?

a. Individual values. There may be no invariant standards among individuals, thus all values may be subjective. Individuals, though, might have ranked goals, some in that way more significant than others and possibly even considered to have a greater degree of objectivity, and even purposes toward 'trivial' values might stimulate development of individual capacities.

b. Cultural values. Cultures or societies regard some values as more significant than others. An individual might find relative objectivity in these values, as they originate outside of himself.

c. Species values. Individuals and cultures presumably may find objectivity in values inherent in human nature, as they have arisen from the development of our species, which transcends individuals as well as cultures. Especially as they reflect human nature, moral values can be seen as having a greater degree of objectivity (see comments above, under Possibilities for meaningfulness). Operating with love, kindness, and unselfishness implies recognition that all human lives are interconnected and intrinsically equal in value (see Fig. 3).

With an additional step outward, however — from a perspective from outside our species — individual, cultural, and species values all appear to be subjective. Members of an alien species might

have an analogous value for advancement and self-preservation but it likely would be for their species, not ours.

Criteria for evaluation of meaningfulness through **beneficence** are potentially more objective, particularly at the extremes, or at least some criteria of beneficence perhaps seem more simply judged by others. If a meaningful life is conceived of as "one that is actively and at least somewhat successfully engaged in a project (or projects) of positive value" (Wolf 1997), then a life could be judged worthless and meaningless if it had no connection with a project of positive value, or if it were engaged in a worthless project, or if a life were spent in worthwhile projects without being engaged by them (without believing in, or caring about, or being satisfied by them). Some lives might be seen as more valuable than others in their contributions of good to other people, society, our species, and our planet. We make this kind of judgement all the time: "Why that lazy bum is worthless!" or "She has helped a lot of people." The Nobel Prize. A life that does a lot of good could potentially have more meaning than a life that does only a little good. Contribution to the potential for longevity of our species might be seen as more valuable than a contribution to the well-being of a smaller group of individuals.

Some jobs at least appear to have a more direct connection to beneficence to individuals than others — for example, nurse, educator, social worker, psychologist, and priest. And in a broader sense, some are more directly involved in promotion of general good for society and the human race — in alleviation of suffering, elimination of disease, and avoidance of potential disasters (e.g., epidemics, climate catastrophes, collision with an asteroid). An absorbed researcher in alternative energy sources versus a historian of science. Insofar as first priorities for humanity are preservation of our species and planet and giving ourselves the best chance in progress toward happiness and fulfillment, the relative value of a small percentage of people often is extremely great. On the other hand, most "greater goods" (or all of them) are the effort of many, each of whom adds a part.

Who has a more meaningful life, assuming that each is "engaged" in what they do — a plumber, a psychologist, or a philosopher? Too many variables to say, although it's possible that the philosopher might have the most the most purposive and fully engaged pursuit as well as the most trivial. The plumber's work may have the greatest consequence in contributing to increased quality of life for the greatest number of people and he may derive as much or more sense of meaningfulness from his work than the others. As a society, we might agree that a social worker has greater potential for a meaningful life than someone opting for a drug-happy life, but the latter might not see it that way at all.

A life that ranks high in beneficence, based on particular criteria, might be seen from the outside as more meaningful than a life that does relatively little good, but the two lives might be reversed in their degree of self-development and they might differ in the degree to which they are engaged.

Approaches to a meaningful life are variable and comparative evaluations are based on various and greatly overlapping criteria, often highly subjective, and can be made only in an extremely general way. A person may pursue a path intensely or not so intensely. Some parts of life may be sensed as relatively more meaningful than others (a life might end in a relatively meaningful period or it might not. Episodes of meaning might not form a coherent whole. Or if one were engaged for a significant part of life toward a beneficent goal only to have the endpoint nullified, then it might detract from life's meaningfulness — for example, to work for a long period toward finding a cancer cure but not finding it, or to work toward the cure but to be preceded by a successful cure discovered by an independent researcher. Still, that person might feel that the process of his work had contributed to meaningfulness through self-development.

Species values

Humans may have suspected so for quite a while, but only recently have we come to know with certainty that the Universe is unimaginably vast. It's impossible to think that any individual holds a special place. In the same vast context, our species and planet also are inconsequential, recognition of which which seems to effectively cancel the basis of even the most broad-based value judgements. In order, however, to establish potential objectivity of value outside of our species and the Earth, the possibility can be admitted that in the long run (the very long run) *Homo sapiens* or its derivatives may actually come to assume a place of greater importance at least in our Galaxy through outward colonization.

An individual could adopt the direct purpose of simply maintaining the existence of humanity (including his own being), which may be a more immediate concern. A strong sense of the intrinsic value of all beings would underlie this. Or a more future-oriented purpose might be sincerely constituted by a desire simply to provide all with sustenance, good health, and lack of suffering, thus allowing the opportunity for each to move forward in a meaningful path.

People who can set and maintain a sincere and authentic purpose based on an aim to change society, much less modify the course of the species, surely are rare. Individuals vary in ability and motivation to sustain a purposeful life this way (concern and commitment to the well-being of future generations is called 'generativity' by psychologists, e.g. McAdams et al. 1997), but the concept of species is relatively abstract. And how would the criteria for change be determined? The thought-provoking and highly entertaining Foundation Trilogy by Isaac Asimov, and its sequel trilogy, especially the last by David Brin (Foundation's Triumph, 1999), is in part the story of positronic-brained, telepathic, functionally eternal robots constrained to serve humans in the best way possible in the long run (The Zeroth Law: *A robot may not harm humanity, or, by inaction, allow humanity to come to harm.*) As millenia pass, robots become divided in opinion about the best way to proceed and monstrous harm to humans and other species are done in perceived service to the abstract concept of humanity.

In any case, what I regard here as criteria for evaluating meaningfulness have their objectivity primarily in the context only of our own species and small piece of the Solar System and Galaxy. Further out, "objectivity" encompasses hope about the future.

On a personal level and in a consequential view, my own value in science is minor. Thus, although it's satisfying to see completed studies accumulate and I'm happy that I can contribute interesting information that will outlast me into the future, the meaning of that is measured on the same scale, a very minor one. Better understanding of the diversity and function of nature is inherently satisfying to many, including me (see Nesom & Weakley 2009), but part of the value I see in my contributions leans on the hopeful view that they in some way may help extant plant species and ecosystems (all with intrinsic value) persist into the future. If this doesn't happen, and many things indicate that, just as in the past, future extinctions and replacements are inevitable, then in the end I will have been more a historian than conservationist. Study of history can also be seen as a contribution, but that's only as long as historical records persist. Study of natural diversity and evolutionary relationships might be more directly helpful (at least potentially) toward human well-being, but if I were more concerned that my job reflect that, I'd be more consistent in choosing pertinent species and genera for study or I'd choose something other than taxonomy for study (genetics or physiology, for example). In any case, happily, the meaningfulness as a botanist that sustains and encourages me is as much in the process as the endpoint — "becoming" (goals and aspirations, striving, inner development) in Figure 3 versus "doing" (attainment).

OPERATIONAL DEFINITIONS OF MEANING AND HAPPINESS

The present essay begins with the supposition that meaning is most closely defined as purpose or value or a combination of the two. Various other discussions take a different approach and describe meaning as the result of meeting certain conditions. These concepts vary widely among themselves but usually have common elements.

Frankl (2002) observed that meaning in life can be discovered in three different ways: (1) by creating a work or doing a deed; (2) by experiencing or encountering something (goodness, beauty, truth) or someone in his uniqueness and potential (in a loving relationship); and (3) by taking an attitude of acceptance and optimism toward unavoidable suffering.

After reviewing evidence from several fields, Baumeister (as summarized by Baumeister and Vohs 2002) concluded that the quest for a meaningful life can be understood in terms of four main "needs" for meaning. People who have satisfied all four are likely to report finding their lives as being very meaningful.

- * Purpose — need for present events to draw meaning from their connection with future events
- * Values — need for a moral structure to decide whether certain acts are right or wrong, lending a sense of goodness or positivity to life
- * Efficacy — need for a belief that one can make a difference and have some control over one's environment
- * Self-worth — need for believing that one is a good, worthy person

In the way the concepts are structured in the present essay, **purpose** is essentially tied to meaning as a major part of its definition. **Values** (including moral values) are derived from experiences of connection and are central in guiding decisions of purpose that produce meaningfulness. Development of a sense of **efficacy** and **self-worth** is part of what's discussed here as self-development.

Studies by social psychologists (e.g., Little 1998, 2001; McGregor & Little 1998) are interpreted as pointing to two kinds of optimal human functioning and well-being: (1) satisfaction with life, positive affect, and freedom from negative affect are referred to as **happiness**; (2) feelings of connectedness, autonomy, purpose in life, and personal growth are referred to as **meaning**. Goal efficacy ("doing well," successful accomplishment of one's projects) is associated with **happiness** while goal integrity ("being yourself," consistency of one's personal projects with values, commitments, and other core aspects of self-identity) is associated with **meaning**. Those with greater goal integrity report higher levels of meaning. The uncomfortable kinds of feelings — in response to a lack of integration (cognitive dissonance) — are the kinds that would accumulate to be experienced as meaninglessness.

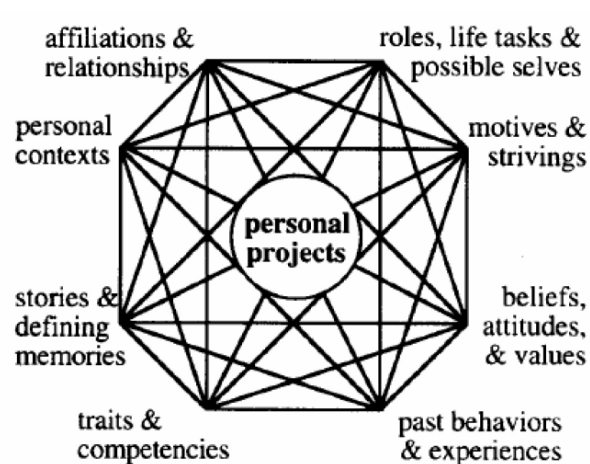


Figure 6. Elements of the "temporally extended and contextually distributed self" (from McGregor & Little 1998). The self can be conceived of as "a collection of defining memories and future goals that are linked together by a narrative to yield a sense of meaning and purpose." To the extent that there is consistency (integrity) between personal projects and core elements of the self, meaningfulness will be experienced.

Our choices of actions (personal projects) emerge from our sense of personal identity (Fig. 6), the self, which can be conceived of as "a collection of defining memories and future goals that are linked together by a narrative to yield a sense of meaning and purpose." To the extent that there is consistency (integrity) between personal projects and core elements of the self, meaningfulness will be experienced (Fig. 7). To maintain a consistency even in the sense of self, which is necessary to guide choices of actions, many psychologists find this facilitated by personal narratives that organize potentially inconsistent elements into an integrated pattern. A large amount of research and literature underlies these complex concepts.

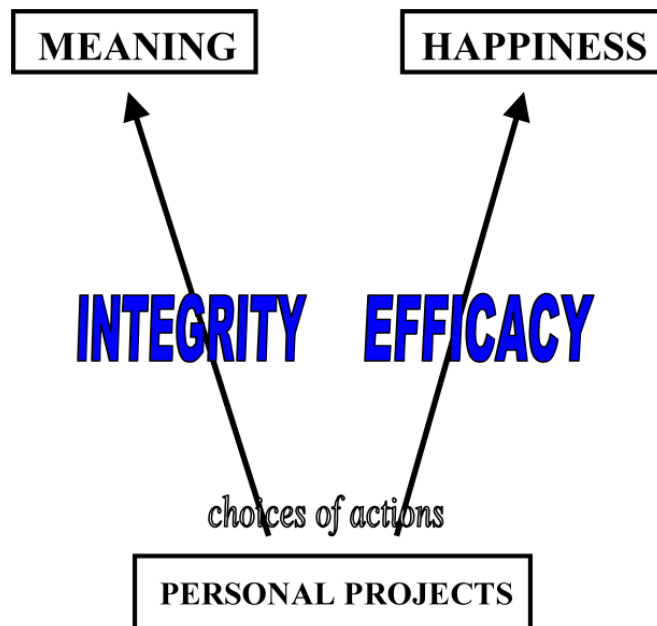


Figure 7. Dual functions of personal projects (from McGregor & Little 1998). In this view, goal efficacy (getting things done) is associated with happiness and goal integrity (being true to oneself) is associated with meaning.

MEANING AND RELIGION

Ultimate purpose and meaning in many religions seem to stem from the belief that God has a plan for the Universe (events are moving toward an endpoint) and that humans are assigned a purpose in fulfilling the plan. Individuals have a soul, an immortal spiritual essence, and behavior is motivated by the promise to souls of reward beyond death or the threat of eternal punishment. These dual motivators seem to be bound together in Christian belief. Purpose is at least to seek salvation. Even without consideration of an afterlife, a meaningful mortal life is tied to fulfilling God's own purpose. The nature of God's purpose, however, hardly seems clear, and if purposes are not clear, there can be no potential for meaning, in the perspective here. Or if humankind is intended to be his servants or his worshipers, as is often said, our creation hardly seems like a godlike gesture. If our assigned purpose is to help others, a god that created and maintains a world where such stark disparities in quality of life are possible seems inconsistent with the concept of a benevolent being.

Jewish doctrine also holds that an afterlife exists when God ultimately will punish souls of the wicked and reward souls of those who lived with goodness and obedience. The nature of their future depends on living purposefully. Hindus have many gods, all said to be manifestations of an underlying universal life force that grounds the physical universe, and a belief that souls are enduring and reincarnated in different forms depending on an individual's behavior (and accumulated Karma). Ultimate purpose in Hinduism is connected with through the possibility of breaking the karmic cycle.

Buddhists, in contrast, are not so concerned about life beyond this world, believing that no permanent essence of an individual survives death. Instead, within this life, Buddhists strive for an intuitive understanding of the unity of existence and to help others achieve it.

Cottingham (2003) argues that a religious grounding or at least a religious mindset is requisite for a meaningful life. "The pursuit of meaning for beings whose existence is inherently fragile requires more than the rational engagement in worthwhile projects; it requires a certain sort of religious or quasi-religious mindset. Involved in the mindset is a turning away from evaluations based solely on external success, and the cultivation of an outlook that is affirming of the power of goodness, trusting and hopeful, and which is focused on the mystery and wonder of existence." Or rephrased, he notes that "We cannot create our own values, and we cannot achieve meaning just by inventing goals of our own; the fulfilment of our nature depends on the systematic cultivation of our human capacities for wonder and delight in the beauty of the world, and the development of our moral sensibilities for compassion, sympathy and rational dialogue with others."

In response to Cottingham, first, the "religious or quasi-religious mindset" required beyond just "the rational engagement in worthwhile projects" is what I describe here as "connection" and "intrinsic value." These kinds of values are not "created" by us but rather have arisen as part of human nature, the innate psychology of our species. They have a degree of objectivity insofar as they transcend individuals and cultures. Second, inasmuch as one's choices and "invented goals" are based on these kinds of values, even if outside of religion, one proceeds along the same path recommended by Cottingham (perhaps with what he terms a "quasi-religious mindset."

In fact Cottingham goes on to suggest that "belief, in the sense of subscribing to a set of theological propositions, is not in fact central to what it is to be religious. ... Doctrinal elements do not in fact have the primacy they are so often assumed to have" And "the practices of spirituality which stem from [the Christian] tradition are able to give meaning to the lives of those who adopt them, not in virtue of allegiance to complex theological dogmas but in virtue of a passionate commitment to a certain way of life." Still, he recommends, seemingly in contrast, that by setting oneself into a religious tradition, embarking on the path of spiritual practice, participating in the rituals, faith and "a dimension of meaning in life which is simply not available within the world-view of analytic reductionism" may follow. In my experience, though, doctrine remains a major distraction, an interference and deterrence.

"If the origin of the spiritual impulse is the gap between what we are and what we aspire to be, then ... the only available resource will be some kind of radical interior modification which will enable us to come to terms with it. It is just such an interior modification, allowing the possibility of a meaningful life despite our inherent human weakness and mortality, that the great religions have typically aimed to achieve" (Cottingham, p. 79). But many of the most significant religious values appear to reflect realities of human nature and are not necessarily known only through religion.

Granted that a religious perspective can be helpful, it seems reasonable to believe that setting one's own goals and purposes is essential to a meaningful life (in the sense discussed here). Without predetermined, religious-assigned guides, the responsibility for adopting purposes and discerning among values shifts to ourselves, even though the religious guideposts may be effective reminders. It appears to me that at least many of us, if not most, whether religious or not, operate that way and an awareness of that should help all to be more focused in living with meaning.

GOD'S CREATION

Essentially continuing an apology for the excommunication of Galileo, Pope Benedict XVI in 2010 attempted to reconcile science and religion as equally valid avenues for seeking truth (and meaning). He said that the Catholic Church accepts the science of evolution of the Universe and doesn't claim that physical laws were broken through religious miracles. Still, according to the Church, the Big Bang and laws of the Universe owe their origin to God.

Even if one attributes the existence of anything and everything to creation by a god — a being or an “uncaused cause” that exists apart from the Universe — it doesn't clarify questions of meaning unless supernatural revelations are accepted as true. Even if one believes through faith that the Universe was ‘created’ 14 billion years ago, the agent of creation and his qualities still would be a far-mystery, so many are the possibilities. What was God's purpose in doing this? Does his own purpose call for purpose from individuals? And if God is eternal, does it even make sense that he could have a purpose (especially if immutability goes along with immortality)? And of course, ultimate questions are just forwarded up a level (infinitely regressing) — what is the meaning of God's existence? If a god can be conceived of as eternal, then why not also the Universe? None of these questions would be answered even with the assurance that the Universe was created by a god.

A similar and more comprehensive set of questions about supernatural purpose is posed on David Bailey's website “Science Meets Religion” (2012).

Why did God design the universe with the properties it has?
 How did the design and creative process transpire?
 What physical principles and/or laws were employed?
 Why those particular laws?
 What prompted God to proceed with this creation? What was God doing before the big bang?
 Has God created other universes? Where?
 How can God have any further communication or connection with the creation once the big bang is set into motion?

SUMMARY AND PERSPECTIVE

If meaning is purpose, meaning is neither inherent nor supplied from outside, in the sense that a purpose comes attached. In the view here, there are no constraints from outside of nature and culture that require specific actions from any individual, and since there's no purpose assigned to any of us, there's no intrinsic meaning. If the Universe is eternal, even the question "What's the meaning of life?" has no meaning in an ultimate sense, since without an endpoint there's no context for a consideration of purpose.

Lack of intrinsic meaning is simply a condition of existence. "Ontological anxiety" results from this. The phrase “absurdity of the human condition” also has been used to describe situations where people search for intrinsic meaning in a universe where meaning can only be extrinsic and relative, but “absurdity” seems misapplied, since there's nothing inconsistent with reason or common sense. Nor is it absurd for one to enjoy life and look forward to more of it, since meaning can be found in other ways.

Individuals create meaning for their own lives by choices in what they do and in ways of thinking (choosing not to choose is a choice), and cultures and even species can have meaning in a similar way. The most intense experiences of meaningfulness are most closely connected to explicit and focused purpose. Non-thinkers (like molecules, flowers, rocks, galaxies, black holes, etc.) simply exist — without the possibility of meaning — since meaning is available only through choice and purpose.

With these choices we can set goals and purposes and live with a sense of meaning. We can direct our activities outward toward love and benefit to others or we can focus inward toward being true to what we perceive as our 'core' and work toward being the best we can. Outward and inward activities are not mutually exclusive.

Personal satisfaction with choices of potentially meaningful activities appears to be highly subjective. What we actually accomplish may be less significant than the vigor and focus with which we pursue our purposes. Even so, those with a balance of outward (beneficent) and inward (self-development) activities appear sense a greater depth of meaning, especially as they see their lives as having accomplishments and an influence apart from their own self.

If meaning is value, then all of us humans, because of the way we have come to be (through evolution), are able to sense a connection to the Universe and those with whom we share life. Each of us has intrinsic value and thus, in that sense, meaning. This sense of connection can guide choices and forms a basis of morality.

If these perspectives are real, there's practical guidance toward realizing a satisfying sense of meaningfulness. Set personal goals, making your purposes explicit. Act toward developing your abilities and your innate talents and toward contributing positively in a sphere outside of your own concerns. Find challenging, attainable personal projects that absorb and focus your attention and time in an enjoyable way. Open yourself to experiences of beauty and love.

In the remarkable perspective that positive feelings from a sense of meaningfulness and connection are, at the very basis, localized brain functions mediated by neurotransmitters, my life doesn't appear to be less real or different from others and it hardly changes the way I approach any activity. To close with a quote from Julian Baggini, "The only sense we can make of the idea that life has meaning is that there are some reasons to live rather than to die, and those reasons are to be found in the living of life itself."

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EPILOGUE

“We are stardust, we are golden ... ” **Joni Mitchell**

“When we drink a drop of water, we drink the Universe, because a molecule of water, the H₂O, gathers in itself the hydrogen — a vestige of the initial explosion, the Big Bang, and the oxygen, produced in the furnace of the stars and exhaled by them.” **Michel Cassé**

"To see a world in a grain of sand
And a heaven in a wild flower,
Hold infinity in the palm of your hand
and eternity in an hour." **William Blake**, first stanza of *Auguries of Innocence*

"Not how the world is, is the mystical, but that it is." **Ludwig Wittgenstein**

"In my case, Pilgrim's Progress consisted in my having to climb down a thousand ladders until I could reach out my hand to the little clod of earth that I am." **Carl Jung**

"The difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind." **Charles Darwin**

"Man is the only creature that refuses to be what he is." **Albert Camus**

“Even if the open windows of science at first make us shiver after the cosy indoor warmth of traditional humanizing myths, in the end the fresh air brings vigour, and the great spaces have a splendor of their own.” **Bertrand Russell**

“Faith in reason is the trust that the ultimate natures of things lie together in a harmony which excludes mere arbitrariness. It is the faith that at the base of things we shall not find mere arbitrary mystery. The faith in the order of nature which made possible the growth of science is a particular example of a deeper faith.” **Alfred North Whitehead**

"Love and work are the cornerstones of our humanness." **Sigmund Freud**

“Continuity of purpose is one of the most essential ingredients of happiness in the long run, and for most men this comes chiefly through their work.” **Bertrand Russell**

“There is no meaning to life except the meaning man gives his life by the unfolding of his powers, by living productively.” **Erich Fromm**

"The struggle itself towards the heights is enough to fill a man's heart. One must imagine Sisyphus happy." **Albert Camus**

“What makes people despair is that they try to find a universal meaning to the whole of life, and then end up saying it is absurd, illogical, empty of meaning. ... To seek a total unity is wrong. To give as much meaning to one's life as possible is right for me.” **Anaïs Nin**

“Without some goal and some effort to reach it, no one can live.” **Fyodor Dostoyevsky**

“Pursue some path, however narrow and crooked, in which you can walk with love and reverence.” **Henry David Thoreau**

"I wish I'd had the courage to live a life true to myself, not the life others expected of me." The most common regret of the dying. **Bronnie Ware** <<http://www.inspirationandchai.com/Regrets-of-the-Dying.html>>

"How to gain, how to keep, how to recover happiness is in fact for most men at all times the secret motive of all they do, and of all they are willing to endure." **William James**

"To laugh often and love much, to win the respect of intelligent persons and the affection of children; to earn the approbation of honest critics; to appreciate beauty; to give of one's self; to know even one life has breathed easier because you have lived — that is to have succeeded." **Harry Emerson Fosdick**

"My life has no purpose, no direction, no aim, no meaning, and yet I'm happy. I can't figure it out. What am I doing right?" **Charles Schulz**

"The only sense we can make of the idea that life has meaning is that there are some reasons to live rather than to die, and those reasons are to be found in the living of life itself." **Julian Baggini**

"We have to decide what we will believe. There is no way of knowing what should be believed, so we have to choose for ourselves what will be believed. Of course, there are plenty of people who are certain that they know what should be believed, and will be glad to tell us, but that does not relieve us of the burden. We have the responsibility of deciding whether we will believe them." **Jim Dollar**

"After sleeping through a hundred million centuries we have finally opened our eyes on a sumptuous planet, sparkling with color, bountiful with life. Within decades we must close our eyes again. Isn't it a noble, an enlightened way of spending our brief time in the sun, to work at understanding the universe and how we have come to wake up in it? This is how I answer when I am asked — as I am surprisingly often — why I bother to get up in the mornings." **Richard Dawkins**

"The conviction ... that there exists a basic knowable human nature, one and the same, in all places, in all men — a static, unchanging substance underneath the altering appearances, with permanent needs, dictated by a single discoverable goal, or pattern of goals, the same for all mankind — is mistaken; and so too is the notion that is bound up with it, of a single true doctrine carrying salvation to all men everywhere" **Isaiah Berlin, summarizing views of John Stuart Mill**

"You see, one thing is, I can live with doubt and uncertainty and not knowing. I think it's much more interesting to live not knowing than to have answers which might be wrong. I have approximate answers and possible beliefs and different degrees of certainty about different things, but I'm not absolutely sure of anything and there are many things I don't know anything about, such as whether it means anything to ask why we're here, and what the question might mean. I might think about it a little bit and if I can't figure it out, then I go on to something else, but I don't have to know an answer. I don't feel frightened by not knowing things, by being lost in a mysterious universe without having any purpose, which is the way it really is so far as I can tell. It doesn't frighten me." **Richard Feynman**



"Is that all there is? If that's all there is, my friends, then let's keep dancing." **P.J. Harvey**

"I do not know what the spirit of a philosopher could more wish to be than a good dancer." **Friedrich Nietzsche**

"Well, that's the end of the film. Now, here's the meaning of life." [An envelope is handed to her. She opens it in a businesslike way.] Thank you, Brigitte. [She reads.] ... Well, it's really nothing very special. Try and be nice to people, avoid eating fat, read a good book every now and then, get some walking in, and try and live together in peace and harmony with people of all creeds and nations." **Monty Python's film, "The Meaning of Life"**

"42" ... the "Ultimate Answer to the Ultimate Question of Life, the Universe, and Everything," as concluded after 7 1/2 million years of calculation by the supercomputer Deep Thought, in the Hitchhiker's Guide to the Galaxy. **Douglas Adams**

Meaning Of Life

Be born. Go to school. Do well. Graduate. Look for
 a Job. Find a Job. Make money. Make more money.
 Save money. Meet somebody. Go out with somebody.
 Move in with somebody.  Marry somebody.
 Make money. Move up  the ladder at
 work. Make more money. Have a baby. 
 Buy a house. Make money. Get up and go to work.
 Come home and watch television. Have another baby.
 Make more money. Buy things at Wal-Mart. Mow the
 lawn. Make  more money. Have another Baby.
 Buy a car  that can seat a family
 of six. Buy Elmo videos for the kids.
 Make money. Have another baby, Go see
 the latest  romantic comedy movie. 
 Make more money. Take a vacation to Disneyland. 
 Eat at McDonald's. Call the plumber when
 the sink is broken. Make more money.
 Say "I love you" to your spouse on occasion. Send the
 kids to school. Make more money. Cast your vote
 for "American Idol." Go to your High-
 School Reunion. Make more money. Take
 up Golf. Give the kids advice about stuff.
 Send the kids to college. Take Bayer
 aspirin for your Arthritis. Get kind of fat. Become a
 Grandparent. Finish making money. Retire. Get old. Die.

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