

Finding Life Satisfaction Beyond Meaning: An I-D Compensation Perspective

Leonard L. Martin

Wyatt C. Anderson

Amey Kulkarni

Matthew A. Sanders

Chris J. Burgin

Steven D. Shirk

Finding Life Satisfaction Beyond Meaning: An I-D Compensation Perspective

In this chapter, we explore the relation between meaning in life and life satisfaction. At one level, this relation may seem so obvious as to need no further discussion. After all, we all know the story. People have an inherent need to find meaning (Frankl, 1963/1984; Heine, Proulx, & Vohs, 2006) and they are happier when they find it than when they do not (Steger & Kashdan, 2007; Zika & Chamberlain, 1992). The problem, of course, is that the story may not be that simple.

Research has identified a number of moderators of the meaning-satisfaction relation, and it is possible meaning may not be as important to life satisfaction as people generally think it is. In fact, that is the point we make in this chapter. We propose that people do not have an inherent need for meaning in their lives and that they can live full, rich lives without meaning. Moreover, we believe that some especially positive and powerful experiences such as awe and peak experiences may be available to people only when they move beyond meaning as traditionally defined.

In making this case, we discuss the definition of meaning in life. Then, we highlight research demonstrating a positive correlation between meaning and life satisfaction. After that, we discuss some moderators of the meaning-satisfaction correlation. Research has shown, for example, that people can cope with traumatic life events even without making sense of the events. Next, we suggest that making meaning is a false goal and we note that there are certain positive emotions (e.g., awe) people can have only if they relinquish their seeming need for meaning. We then suggest that the seeming need for meaning is a by-product of relatively recent societal changes (e.g., an increasing emphasis on the pursuit of long-term goals). Finally, we

integrate these ideas into a coherent story using I-D compensation theory (Martin, 1999) and we present some evidence for this integration.

Before we make these points, however, we have to clarify what we mean when we use the term meaning in life.

What is Meaning in Life?

Although researchers have not arrived at a single, agreed upon definition of meaning in life, real people in the real world seem to have a sense of what it is. Ask them if their life is meaningful, and they can tell you. As Hicks and King (2009) put it, "whatever it is, humans know it when they feel it" (p. 642). If people feel they have meaning, then they have meaning. If they feel they do not have meaning, then they feel they do not have meaning. Thus, meaning in life is ultimately a subjective judgment.

Given the subjective nature of meaning in life judgments it is not surprising to find that these judgments correlate with people's affective states. People generally report having more meaning in life when they are in a positive mood as compared to a negative mood (Hicks & King, 2009). There is more to meaning, of course, than mood (King, Hicks, Krull, & Del Gaiso, 2006). Meaning in life judgments also seem to include important eudemonic or narrative aspects. In fact, most theorists assume these are the defining aspects of meaning in life.

People can be said to have meaning in life when they are able to construct stories that suggest connectedness, purpose, and growth in their life (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001; McGregor & Little, 1998) or that suggest causal, temporal, and thematic coherence to an overall sense of identity (Singer, 2004). People also report having meaning in life if they feel they are pursuing personally valued goals, possess a clear system of values, or

experience life as a coherent whole (Antonovsky, 1987; Crumbaugh & Maholick, 1964; Emmons, 2003; Frankl, 1963/1984; Klinger, 1977; Ryff & Singer, 1998).

King and colleagues (2006) developed a definition that encompasses both the subjective component and the narrative component of meaning in life. In their view, "Lives may be experienced as meaningful when they are felt to have significance beyond the trivial or momentary, or to have purpose, or to have a coherence that transcends chaos" (p. 180). This is the definition we generally follow for this chapter. Meaning in life is a subjective experience that grows out of the inferences people make about their life, rather than from the life itself. People judge their life to be meaningful if they believe their experiences imply an order, benefit, or significance beyond the experiences themselves.

Given that so many people have placed so much emphasis on finding meaning in life, we can ask whether there is any evidence that finding meaning is in fact important? Are there consequences to having versus not having meaning in life? The short answer is "yes."

Evidence that People Need Meaning

Perhaps the most dramatic evidence people have a need for meaning in their life comes from the coping research (e.g., Bonanno & Kaltman, 1999; Davis, Wortman, Lehman, & Silver, 2000; Janoff-Bulman, 1992; Joseph & Linley, 2005; Lepore & Helgeson, 1998; Neimeyer, 2001; Taylor, 1983; Thompson & Janigian, 1988). In brief, that research has suggested that traumatic experiences disrupt people's meaning systems and lead people to experience distress. This distress, in turn, motivates people to search for meaning, which, if found, reduces their distress.

Much of the coping research has been based on a common set of assumptions, which Park (2010) referred to as the global meaning model. This model starts with the assumption that people possess cognitive frameworks they use to make sense of the world (Janoff-Bulman,

1992). These frameworks are composed of implicit assumptions that usually convey a view of the world as safe and benign. People know they are going die, for example, but their frameworks may allow them to believe they will not die until they are much older, have lived a full rich life, and are ready to die.

Reality does not always conform to people's assumptions, however. To stay with the death example, people eventually come to realize that anyone can die anywhere anytime for any reason. Thus, the world is not as safe and benign as people might want to believe. The more discrepant people's experiences are from their frameworks, the more anxiety, uncertainty, and depression people experience and the more motivated they become to rebuild those frameworks.

One way people attempt to rebuild their frameworks is through meaning making. They seek to answer questions such as "Why me?" and "Why did this happen?" According to the global meaning model, if people find answers to these questions, then they can reduce the discrepancy between their traumatic experience and their frameworks and restore a sense that the world is meaningful (Tedeschi & Calhoun, 2004). If people cannot find meaning, however, then they will not be able to rebuild their frameworks and they may continue to experience anxiety, depression, and rumination, perhaps to the level of posttraumatic stress disorder.

A large number of studies have obtained evidence consistent with this global meaning model. As Wong and Fry (1998) put it, "There is now a critical mass of empirical evidence and a convergence of expert opinions that personal meaning is important not only for survival but also for health and well-being." (p. xvii). In terms of specifics, research has shown that compared to people who do not find meaning, those who do experience higher life satisfaction (Steger & Kashdan, 2007; Zika & Chamberlain, 1992), greater hope (Feldman & Snyder, 2005), lower alcohol and drug use (e.g., Lecci, MacLean, & Croteau, 2002), better coping with physical

illness (Jim & Anderson, 2007), reduced suicidal ideation (e.g., Heisel & Flett, 2004) and improved health outcomes (Updegraff, Cohen, Silver, & Holman, 2008).

Thus, finding meaning in life seems to be crucial to people in a number of important domains. Kray and colleagues (2010) summarized this conclusion quite strongly when they suggested "Ultimately, amid rain or shine, the ability to find meaning in life is virtually a prerequisite for achieving the 'good life' (p. 106).

Evidence that Meaning is Not Important

Although we acknowledge the research showing a connection between finding meaning and positive outcomes, we still suggest that people can live a good life without meaning. How can we make such a suggestion in light of the coping research? Ironically, we can do so by looking at the coping research. Along side of the support this research has obtained for the global meaning model, it has also obtained evidence that in some conditions some people can be well-adjusted without searching for or finding meaning.

Davis, Wortman, Lehman, and Silver (2000), for example, interviewed people who had experienced the loss of a child to sudden infant death syndrome (or to a car accident in Study 2). They asked these participants if they had ever searched for meaning in the death, if they were still searching for meaning, and if they had found meaning. They also had the participants complete a number of measures of physical and psychological well-being.

Consistent with the global meaning model, 80% of the participants reported searching for meaning after the trauma and generally reported feeling distressed until they had made sense of the event. Contrary to that model, though, there was a subset of participants that reported never searching for meaning and never finding meaning in the death of their child. Yet these participants reported physical and psychological well-being as high as that of participants who

had searched for meaning and had found it. This pattern suggests that finding meaning is important only for people who are searching for meaning and even for these people finding meaning provided no benefit above that seen in people who never searched for meaning and never found any.

Results like these led Park (2010) to conclude there is little evidence that finding meaning is necessary for well-being. Finding meaning may help people who were distressed by their lack of meaning but even for these people finding meaning only brings them back to the never searched/never found baseline. Park's conclusion is complemented by studies showing that, contrary to the global meaning model, traumatic life events may not seriously challenge people's frameworks (Kaler and colleagues, 2008; Matthews & Marwit, 2004). There may be small changes on some dimensions but these changes fall far short of the type of shattering suggested by the global meaning model. Moreover, the changes may be the result of the coping process, rather than the traumatic event itself. Together, these results raise the possibility that meaning is not an inherent need that is threatened by traumatic life events.

Using a very different procedure, Steger, Oishi, & Kesebir (2011) also obtained evidence that raises doubts about the inherent nature of the need to find meaning. They assessed the relations among three variables: found meaning in life (e.g., I have a good sense of what makes my life meaningful.), searching for meaning in life (e.g., I am seeking a purpose or mission for my life), and life satisfaction (e.g., In most ways my life is close to the ideal). Consistent with the global meaning model, Steger et al. found a positive correlation between finding meaning and life satisfaction. Consistent with the proposal that meaning is not an inherent need, however, this correlation was significant only among participants who were actively searching for meaning. Finding meaning was unrelated to life satisfaction among people who were not searching for

meaning in their life. This pattern is inconsistent with the conclusion that "Ultimately, amid rain or shine, the ability to find meaning in life is virtually a prerequisite for achieving the 'good life' (Kray et al., 2010, p. 106). Apparently, some people under some circumstances can achieve life satisfaction without finding meaning in life.

Why Meaning is Unimportant

One reason finding meaning may sometimes be unrelated to life satisfaction is that meaning in life is not real. It is a social construction. As many theorists have noted, life has no inherent meaning (Sartre, 1938/1976; Camus, 1942/1996). Meaning is something people bring to life. They invent it. They import it. They infer it. We agree with this view of meaning, but we use a different term to describe the meaning making process because we believe this term makes it easier to understand why searching and then finding meaning may confer no benefits over never having searched for meaning. In our view, meaning is not so much created as it is confabulated. People have bits and pieces of information relevant to meaning and then use social theories to fill in the gaps.

Perhaps the clearest demonstration of the kind of confabulation we are talking about comes from Gazzaniga's (1985) work with split-brain patients. In one demonstration, Gazzaniga presented the command "Walk" in the left visual field of a patient. This presentation led the command to be processed in the patient's right hemisphere. Although the cognitive and motivational operations of this hemisphere did not produce a conscious reaction, they did allow the patient to understand the command and respond to it. The patient stood up from his chair and began to walk.

At this point, Gazzaniga asked the patient where he was going. To answer this question the patient had to use the language centers of the left hemisphere. Recall, though, that this was a

split-brain patient. His corpus callosum was not in tact. So, the left hemisphere had no knowledge of the actual reason for the patient's behavior, that is, the command to walk. That command was presented only to the right hemisphere.

Nevertheless, the patient could observe that he was walking out of the room and he had access to memories and to social theories that might be applicable under such conditions (e.g., people often walk out of an office to get a drink). So, he was able to piece together an explanation for his actions. "I am going to get a drink," he said.

According to Gazzaniga, the patient was not lying or engaging in face saving behavior. He was simply confabulating. He was filling in the gaps in his explanation using plausible social theories. We believe people create their meaning in life in much the same way. They have only bits and pieces of information regarding any meaning in their behavior. Then, they use plausible social theories to fill in the gaps.

It is important to note that people need not have independent cerebral hemispheres to engage in confabulation. They need only have incomplete access to the reasons for their actions. This lack of access may occur because people are literally unable to gain introspective access to the reasons for their behavior (Gazzaniga, 1985; Nisbett & Wilson, 1977) or because they failed to consult those reasons because they generated their explanation in a heuristic way (Csikszentmihalyi & LeFevre, 1989; McFarland, Ross, & DeCourville, 1989).

According to Haidt (2001), we all engage in confabulation when we provide reasons for our moral judgments. In his social intuitionist model, when people are exposed to a morally relevant stimulus, they have an immediate emotional reaction. This reaction usually involves disgust and is thought to be the product of an evolutionary basic mechanism. Once people have this initial, automatic reaction, they use it as the basis for their moral judgment. The more disgust

they experience, the more likely they are to judge the stimulus in a morally negative way (i.e., it is wrong).

According to the model, people's initial judgments involve little, if any, systematic processing. So, when people are asked to explain their moral judgment, they may not have immediate access to good, conscious reasons. If they are to provide such reasons, then they have to generate them on the spot. According to Haidt, people do this by considering their initial emotional reaction and some relevant social theories (e.g., religious or community standards). This takes time. So, people may display considerable starting, stopping, and hesitating while trying to come up with an explanation. Haidt referred to this awkward explanatory style as *dumbfounding*.

We can see the full confabulation process in a study by Haidt and Hersch (2001). They had participants read a vignette in which a person bought a chicken from a store, used it to masturbate, cooked it, and ate it. Not surprisingly, participants tended to respond to this vignette with disgust, an immediate, basic emotional reaction. They tended to follow this initial reaction with an automatic, emotionally congruent moral judgment, "That's a bad thing to do." When asked to explain their judgment, participants exhibited *dumbfounding* until they finally produced explanations such as "Because he had sex with a chicken" and "What if everyone did that?" Consistent with the hypothesis that the explanations are after-the-fact confabulations, Haidt and Hersch found that the participants' moral judgments were strongly related to their initial emotional reactions but not to the reasons they generated later.

Obviously, these studies do not relate directly to meaning in life and it is possible that the operations people use to generate meaning in life are different from the operations they use to generate explanations of simple actions or moral judgments. We believe, however, that they are

essentially the same. People have emotional reactions to events in their life and then attempt to come up with a narrative that puts those events into some sort of order. The narratives, however, are generated after the fact using incomplete information and social theories to fill-in the gaps. In this way, meaning in life is not detected or invented. It is confabulated. It is cobbled together in an ad hoc way.

If this proposal is true, then it is not surprising that meaning provides no benefit over never searching for and never finding meaning. Meaning is essentially an epiphenomenon. From this perspective, meaning relates to people's actual life circumstances about as well as the "I'm going to get a drink" confabulation related to the "Walk" command in the Gazzaniga study.

Of course, we cannot assume that the meaning people confabulate is never consequential. Once people have generated an explanation, they may take it seriously and this may have consequences for their future behavior (Wilson & LaFleur, 1995). Moreover, if they believe they need meaning, then they will feel bad and ruminate when they do not have it (McIntosh, Harlow, & Martin, 1996). Obtaining meaning, however, may only remove the distress people created for themselves by thinking they needed meaning in the first place. It does not confer benefits beyond those obtained by people who never searched for and never found meaning. There is no reason why it should. Meaning is an after-the-fact confabulation.

Beyond Meaning

So far, we have suggested that there is no advantage to finding meaning compared to having never searched for it. In this section, we take that argument one step further. We argue that relinquishing the need to find meaning can actually confer benefits. It can help people experience positive emotions even when they are in otherwise distressing situations. This can

occur, for example, when people encounter the ineffable or awe-inspiring, that which is beyond words, beyond narrative, beyond conceptualization.

A particularly memorable example of the range of emotions people can experience in powerful, awe-inspiring settings can be seen in the viral video of the so-called Double Rainbow Guy (<http://www.youtube.com/watch?v=pu49zfbG8fY>). In brief, this video depicts a hiker encountering two full rainbows, one right above the other. His reactions range from positive (Oh my god! It's so bright and vivid! It's so intense!) to negative (he cries) to uncertainty (What does this mean? It's too much. I don't know what it means). The key aspect of this video for present purposes is that the hiker experiences positive emotions despite having no explanation for his experience.

According to the global meaning model, though, having experiences that challenge our frameworks lead people to experience distress. In awe-inspiring situations, however, people experience positive emotions even though they have no clear explanation. How is this possible?

According to Averill (1998), the difference between trauma and awe lies in the degree of openness with which people approach the experience. "When cognitive structures are threatened with collapse, a person can seek to escape; give up in despair; or embrace the dissolution as a sign of union with a more encompassing reality. Depending on which tendency predominates, the result may be anxiety, depression, or a spiritual experience" (p. 117). In short, people have positive experiences when they embrace the dissolution.

Sundararajan (2002) deconstructed this dissolution into two components: negation and self-reflexivity. Negation refers to the ability of certain experiences to nullify people's knowledge structures. Experiences that have the power to do this range from being caught in an intense, life-threatening storm, seeing your first child enter the world, or appreciating a beautiful

once-in-a-lifetime sunset. Because people may find it difficult to assimilate such experiences using their ordinary frameworks, they abandon those frameworks and go back to the drawing board. According to Sundararajan, when they do so, they do not continue to process attributes of the eliciting condition. They process their own responses. This is the self-reflexivity component. People try to open themselves to the experience presumably because there is little else they can do.

The negation/self-reflexivity sequence can be seen most clearly with spiritual or mystical experiences. As Otto (1923/1970) put it, "the object of religious awe or reverence ... cannot be fully determined conceptually" (p. 59). It "can be firmly grasped, thoroughly understood, and profoundly appreciated, purely in, with, and from the feeling itself" (p. 34). Perhaps the prototype of the negation/self-reflexivity sequence is the biblical story of Job.

As the story goes, Job was a good man who believed if he upheld his end of the covenant, then God would uphold his end and provide Job with a good life. This didn't happen (at least not at first). Despite living in accordance with the covenant, Job lost his wife, his children, his crops, his health, and the respect of his neighbors. In meaning terms, Job's life seriously challenged his assumptions about the universe (i.e., God), and, consistent with the global meaning model, Job became distressed and began to search for meaning. He eventually asked God for an explanation. God did not provide him with one. What he gave Job instead was a lesson about Job's place in the grand scheme of things.

God did this by asking Job a series of rhetorical questions such as: Where were you when I laid the earth's foundation? Who marked off its dimensions? On what were its footings set, or who laid its cornerstone? Have you ever given orders to the morning, or shown the dawn its place? Who has cut channels for the downpour and cleared a passage for the thunderstorm, for

rain to fall on land where no man lives and on the deserted wilderness, clothing lands waste and derelict with green and making grass grow on thirsty ground?

As Ricoeur (1974) noted, none of these questions provided Job with any meaning for what was happening to him. Rather, they showed Job "the grandeur of the whole, without the finite viewpoint of his own desire" (p. 351). In short, God negated Job's framework. He showed Job that his petty, limited framework fell far short of a complete understanding of the situation.

After realizing this, Job experienced the self-reflexivity component. He analyzed his own reaction. "I am unworthy—how can I reply to you? I put my hand over my mouth. I spoke once, but I have no answer—twice, but I will say no more. I melt away; I repent in dust and ashes." With that self-reassessment, Job opened a path to non-narcissistic reconciliation (Ricoeur, 1974, p. 351). He renounced his framework and came to view his life in more positive ways.

We see a similar sequence in Buddhism. The Great Heart of Wisdom Sutra, for example, describes the great Buddhist truth in this way: "there is no form, no sensation, no perception, no formation, no consciousness; no eyes, no ears, no nose, no tongue, no body, no mind; no sight, no sound, no smell, no taste, no touch, no object of mind; no realm of sight... no realm of mind consciousness. There is neither ignorance nor extinction of ignorance, neither old age and death, nor extinction of old age and death; no suffering, no cause, no cessation, no path; no knowledge and no attainment. With nothing to attain ... the mind is without hindrance. Without hindrance, there is no fear. Far beyond all inverted views, one realizes nirvana."

As with Job, we first face negation. The description shows us the limitations of our typical frameworks, and it does so without providing a meaningful alternative. Exactly what does it mean, for example, to say, there is "neither old age and death nor extinction of old age and death"? With the realization that our frameworks are completely inadequate for the task of

understanding the big truths, we turn away from those frameworks and experience self-reflexivity. We accept that there is nothing to attain and, in doing so, experience nirvana.

Our last example comes from Taoism. In the first chapter of the Tao Te Ching, it is noted: "The Tao that can be told is not the eternal Tao. The name that can be named is not the eternal name. The nameless is the beginning of heaven and earth. The named is the mother of ten thousand things. Ever desireless, one can see the mystery. Ever desiring, one can see the manifestations."

Again, we are told that the grand nature of things, the Tao, is absolutely beyond our conceptualization. In fact, if we try to understand the Tao, we miss it. We see only its manifestations. This lesson negates our framework. Then we learn that if we are to experience the full mystery, then we have to adjust our response. We have to relinquish our striving, our desiring. Thus, we reconcile with the mystery after experiencing negation and self-reflexivity.

Otto (1923/1970) used the term self-annihilation to refer to people's response to awe-inspiring experiences. He suggested that self-annihilation allows people to achieve "submergence into nothingness before an overpowering, absolute might of some kind" (p. 10). With this submergence people avoid the sense of being overpowered by the experience. As Fingareet (1991) put it, "As mere beings we can only be humble. But as beings who are conscious of this miracle, who participate however humbly in it, we are transcendently elevated and exhilarated" (p. 215).

Empirically oriented researchers may find the preceding conjectures and observations interesting and even plausible but not especially convincing. After all, where's the data? These researchers might be more convinced if the conjectures and observations could be shown to be consistent with known psychological principles. Fortunately, we can do that to some degree.

Consider that life situations become problems, in part, because they block important goals (Martin & Tesser, 2006). A spinal cord injury, for example, may challenge people's ability to have children, take care of their self, or support their family. One component of successful coping is knowing when to let go of blocked goals (Martin & Kleiber, 2005; Wrosch, Scheier, Carver, & Schulz, 2003). Smith, Jankovic, Loewenstein, and Ubel (2009), for example, found that people who accepted their colostomies as irreversible were better adjusted one year after their surgery than people who maintained hope they might improve back to their pre-surgery selves. It may be that exposure to awe-inspiring experiences works in a similar same way. People gain psychological benefits by relinquishing their pre-conceptions and giving themselves over to the ineffable.

Why Do People Think They Need Meaning?

So far, we have suggested that meaning is an ad hoc confabulation and that it confers no advantage over never searching for and never finding meaning. We have also raised the possibility that relinquishing the need for meaning can open people up to powerful, awe-inspiring experiences. If these proposals are correct, then it is unclear why people continue to search for meaning and continue to believe humans have an inherent need for meaning. Shouldn't they have realized by now that attempting to find meaning is getting them nowhere?

One reason people think they need meaning is because there are certain situations in which not having meaning does leave them feeling distressed. Then, when they find meaning they are no longer distressed. They take this as evidence of a need and satisfaction of that need. They have no way of knowing, though, that the need was created by their own belief that they needed meaning, and that finding meaning provided them with no more benefits than never searching for and never finding meaning.

In our opinion, there is another more important reason why people feel they need meaning in their life. They live in a world that places a strong emphasis on order, predictability, payoffs, and justifications. In modern, complex societies, people often have to exert immediate effort for delayed uncertain payoffs. They may spend months conducting a study, for example, analyzing the data, and writing-up the paper. Then, they may wait additional months while the paper is being reviewed. If the paper comes back rejected, then they wasted several months of their life. Under these circumstances, people may become highly sensitive to the payoff, significance, and predictability of their actions, that is, the meaning of their actions.

But people do not need to live like this. In fact, there was a time when they did not. If we go back 20,000 years, for example, we find our ancestors living as hunter-gatherers. This lifestyle is characterized by a high degree of flexibility and immediacy (Martin and colleagues, in press; Martin & Shirk, 2002; Woodburn, 1979). As a result, it fosters a focus on the experience of one's life rather than its meaning.

We can make this point by comparing the pressures of our modern complex societies with those of our ancestral hunting and gathering societies. Although we don't know exactly what the latter were like, we can take some reasonable guesses based on modern foragers (Marlowe, 2002). We describe three features of modern forager societies that seem especially relevant to the need to find meaning (for a fuller discussion of the features of these societies, see Martin and colleagues, in press; Martin & Shirk, 2008).

Contemporary foragers value autonomy very highly. As a result, they do not allow for the development of a single, correct version of events. After all, if the interpretation of one person is considered correct, then a different interpretation held by another person must be incorrect. Members of immediate return societies actively avoid this inequality.

At the individual level, the absence of formalized rights and wrongs fosters autonomy and exploration. At the cultural level, it fosters instability (Brunton, 1989). Immediate return societies have few verbalized rules of behavior, their rituals are highly variable (and may even be dispensed with altogether), and there is no single, clear idea of a moral order. Their knowledge is generally idiosyncratic and gained by personal experience rather than handed down by others. As one forager put it, “None of us are quite sure of anything except of who and where we are at that particular moment” (Brunton, 1989, p. 677).

Another important feature of foragers is the immediacy with which they receive feedback regarding to their efforts (Barnard & Woodburn, 1988; Meillassoux, 1973). This does not mean they obtain immediate gratification. It means they know within a relatively a short time whether their efforts have paid off. They will know within a few hours, for example, if their hunt has been successful. If it has, then they can return to the camp to eat. If it has not, then they have time to search for an alternative food source.

This immediacy allows foragers to maintain an extreme focus on the present. They “are bound to the momentary present, scarcely ever striking out new lines for themselves, never forecasting the distant future, and seldom making provisions for the near future. Capable of anticipating its future needs only for a very brief span. Accumulation is difficult, long-term planning is impossible” (Forde & Douglas, 1956, p. 332). Foragers seem to live by the motto “If it is not here and now what does it matter where (or when) it is?” (Turnbull, 1983, p. 122).

The third feature of forager societies relevant to meaning is the existence of a literal social safety net. There is considerable sharing in these societies. So, if people's foraging is not successful, then they can feel secure that the group will provide for their needs (and they will return the favor when they have been successful and others have not). This social arrangement

provides foragers with a benign view of the universe. They approach the world with an assumption of plenty (Woodburn, 1979).

In sum, forager societies provide their members with little demand to conform to fixed social orthodoxy, little need to justify immediate effort for delayed, uncertain outcomes, and little need to worry about the outcome if they fail in their pursuits. We believe these features provide members of those societies with little incentive to find a meaning in their life.

Modern, complex societies differ from foraging ones in a host of ways. Some of these ways seem particularly relevant to meaning. For example, modern, complex societies are more likely to require the long-term cooperation of specific members of society (Martin, 1999; Woodburn, 1979). To facilitate this cooperation, these societies have developed mechanisms such as laws and binding contracts along with agents (e.g., courts and police) to enforce those laws and contracts. When people take a job, for example, they may sign a contract indicating that they will be paid at the end of each month. This contract gives them assurance that their efforts throughout the month will eventually produce their desired outcome, namely the paycheck. If the paycheck does not arrive, then the workers can take the employer to court for breach of contract and hope to obtain their compensation that way.

Thus, members of modern, complex societies intentionally subject themselves to binding social arrangements for without them there would be no guarantee their efforts would payoff. In meaning terms, we could say that without the predictable, orderly arrangements, their actions would have no significance. They might lead to nothing. So, in this way, modern, complex societies foster an emphasis on meaning, outcomes, and purpose.

Barry, Child, and Bacon (1959; Zern, 1983) provided clear evidence for the difference in emphasis between forager societies and modern, complex societies. They did this by comparing

hunting and fishing societies with herding and farming societies. They found that in hunting and fishing societies, each day's food comes from that day's catch and there is a relatively short delay between a person's efforts and feedback regarding the effectiveness of those efforts. Moreover, if a person's initial efforts meet with failure, then he or she could switch to Plan B to acquire their desired resources. This flexibility means that deviations from the established routine are not necessarily feared. So, the child rearing practices in immediate return societies emphasize flexibility and exploration.

In farming and herding societies, on the other hand, there are established rules that prescribe the best-known way to acquire resources. With farming, for example, people must plow the fields, plant the seeds, water the fields, monitor them for weeds and pests, harvest the grain, and store it safely -- and each of these steps must be done in the right way at the right time. If all goes well, then the chances are good the farmers will reap the benefits of their effort. If all does not go well, however, then there is no time to start over, and the consequences for the entire society may be severe, widespread, and long-term (e.g., hunger or starvation). It is not surprising, therefore, that herding and farming cultures place a greater emphasis on order and predictability in the pursuit of long-term goals and emphasize the consequences of breakdowns in that order and predictability. This could be one way complex societies induce in their members a seeming need for meaning in life.

Cohen (1985) came to a somewhat similar conclusion by comparing the strategies used in foraging and complex societies to deal with crowding stress. He focused on four problems caused by crowding. We discuss three that seem most relevant to meaning.

The first is congestion. This is the tendency of people to interfere with one another's attempts to use a resource within the same limited space or time span. Cohen observed that

foragers have little trouble with congestion because their populations are small and because each individual has direct access to all of the resources they need to survive. In high-density societies, however, congestion is much more of a problem. These societies have attempted to deal with the problem through organization. They created time schedules, different areas for use by different people, and differently priced tickets for the good seats or the bad seats at the theater. The general idea is modern societies have set up rules so that not everyone gets to use everything whenever they want. There is a time, a place, and a cost, and if the social distinctions are not respected, then everyone suffers.

A second problem Cohen discussed is control. People have to feel their outcomes are contingent on their actions. Again, foragers have little problem with this because they have direct access to the resources they need and because they can obtain relatively immediate feedback regarding the outcome of their efforts. In high-density societies, on the other hand, people have attempted to maximize control by developing social definitions of manageable tasks. They assign different tasks to different roles, assign people to those roles, and expect everyone to work together in the context of their roles. If this does not happen, then everyone suffers.

The third problem is information load. This refers to controlling the amount of information people have to process. Foragers have little problem with information load because of their small population size and the general similarity of the members of their society. In high-density societies, people reduce information load through labeling and categorization. Then, they seek to stabilize these socially created boundaries so that they can tell the people to which they need to attend and which they can disregard. As before, if these boundaries fail, then there will be problems in relating to one another.

In sum, high-density societies are more likely than forager societies to emphasize the importance of socially constructed distinctions and to emphasize the negative consequences that would follow if people disregarded those distinctions. We believe this emphasis can contribute to the high need for meaning seen in modern, complex societies. The need is a by-product of the society, not an inherent human need.

There is one more way modern, complex societies differ from foraging societies. In complex societies, people are more likely to exert immediate effort for delayed, uncertain payoffs (Martin, 1999; Woodburn, 1979). They may plant crops, work for a paycheck, or save for retirement. In each case, people work toward an outcome they will not receive for days, weeks, months, or even years -- if then. This input-outcome disjunction may lead people to experience a great deal of insecurity, possibly over long stretches of time. As a result, people may look for assurance that their efforts are going to pay off.

They may look for this assurance in justifying stories such as the Protestant work ethic and just world beliefs. When people work toward a college degree, for example, they exert effort for years before they can even begin to consider obtaining their sought after outcome -- and even then they may not obtain the outcome. If they do not, then they wasted years of their life. To assure themselves that they are not wasting their time, people may try to convince themselves that the world is just and that their efforts will pay off. People may fear the lack of a payoff so much that they distort reality to maintain their justifying story (e.g., they blame an innocent victim).

Hafer (2000) showed how an emphasis on the attainment of long-term goals (an aspect of modern, complex societies) heightens this kind of reality distortion. She had participants describe either their long-term plans or the university courses they were currently taking. Then, she had

them watch an interview in which a student described how she had contracted a sexually transmitted disease. Some participants heard that the student had contracted the disease by accident (innocent victim), whereas others heard that she had contracted the disease through her own negligence (blameworthy victim).

Hafer found that participants who believed in a just world and who had focused on their long-term goals were more likely than those who focused on their current courses to blame the innocent victim. It would be pointless for these participants to pursue their long-term goals if the world were not just. Yet, the existence of an innocent victim suggests that the world is not just. So, they distorted that reality. They construed the innocent victim as blameworthy. In short, the delayed return orientation (i.e., focus on long-term goals) increased the need to have a payoff.

We can summarize this part of our argument by returning to the definition of meaning we quoted in our introduction: "Lives may be experienced as meaningful when they are felt to have significance beyond the trivial or momentary, or to have purpose, or to have a coherence that transcends chaos" (King et al. 2006, p. 180). Note how the mechanisms of modern complex society, compared to those of foraging societies, emphasize the importance of purpose, order, and predictability, along with the negative consequences when the purpose, order, and predictability are not maintained. In our view, it is this emphasis that gives rise to the seeming need for meaning in life. We have all grown up in a world in which behavior is not important unless it has a payoff. Thus, the need for meaning is created by society. It is a compensation to help people adjust to the transition from a foraging society to high-density societies.

I-D Compensation Theory

We believe it is possible to integrate the various lines of thought we have discussed into a coherent story using I-D Compensation Theory (Martin, 1999). One way to begin is by

unpacking the name of the theory. The *I* stands for the immediate return nature of human beings, the *D* stands for the delayed return nature of the societies in which most people live now, and *compensation* stands for the steps people take to reconcile their immediate return nature with the constraints placed on them by their modern, complex, delayed-return societies. The general idea is that when people experience discordance between their immediate return biology and their delayed culture, they take steps to reconcile the two. One such step would reflect itself in a search for meaning (i.e., evidence our behavior will payoff in some way).

More specifically, the theory starts with the assumption that humans possess a set of sensitivities and predispositions that helped their distant ancestors survive and reproduce in the context of immediate-return societies (i.e., foragers). These societies are characterized by small temporal windows, frequent feedback regarding goal progressing, and little pressure to adhere to specific roles and justifying stories.

In complex, modern societies (i.e., delayed-return societies), on the other hand, people often have to engage in immediate effort for delayed, uncertain outcomes. This effort-outcome disjunction can lead people to experience long periods of insecurity. To cope with this insecurity, people developed complex societal mechanisms such as contracts and agents to enforce them (Cohen, 1985) and justifying stories such as just world beliefs (Martin, 1999).

According to I-D compensation theory, it is internalization of the societal mechanisms and dependence on effort-justifying stories that gave rise to the need for meaning in life (or at least significantly exacerbated and distorted any natural need humans may have had). In the context of the theory, the need for meaning is an exaggeration and misapplication of the desire for a simple effort-outcome justification. People do not experience this desire when they receive immediate, reliable feedback that they are making progress toward their goals.

If this hypothesis is true, then we might see meaning in life being significantly related to life satisfaction only when people have adopted a delayed-return orientation. We tested this hypothesis in three studies.

Empirical Evidence

In the first study, we manipulated immediate-return versus delayed-return orientation by having participants describe two behaviors they routinely performed. Some described behaviors they performed merely for the experience of performing the behavior (e.g., playing the guitar for fun), whereas others described two behaviors they performed in order to obtain some separable outcome (e.g., play the guitar in order to get good enough to join a band). Then, following Steger et al., we had participants rate the extent to which they had found meaning in life, were searching for meaning, and experienced satisfaction with their life.

Recall that finding meaning is related to life satisfaction only among people searching for meaning (Steger et al., 2011). According to I-D compensation theory, people should experience a greater need to have meaning in their life when they are in a delayed-orientation, that is, when they need to justify their immediate effort for delayed, uncertain payoff. Thus, finding meaning would play a more important role in their life satisfaction judgments for participants who wrote about behaviors they performed to obtain a delayed payoff. These are the people who need to justify their efforts.

The results supported this hypothesis. We found a significant correlation between having found meaning in life and life satisfaction among participants who had described behaviors aimed toward a delayed outcome, but not among participants who had written about their immediate experiences. It is important to note that there were no mean differences in meaning or satisfaction. Thus, our manipulations did not change the amount of meaning or satisfaction

people experienced. It only changed the relation between meaning and satisfaction. The relation was stronger for people in a delayed-return orientation

As we noted earlier, modern, complex societies may be more likely than foraging societies to stress predictability and order and to emphasize the negative consequences of a breakdown in that predictability and order. Thus, we would expect that meaning in life would be more strongly related to life satisfaction in modern, complex societies than in foraging. We tested this hypothesis in our second study. We did not do so by assessing meaning in different societies but by priming different societal values. After that, we had participants rate their meaning in life and their life satisfaction.

To prime different societal values, we presented participants with 14 sentences and asked them to sort the sentences into seven pairs. If participants were to be successful at this task, then they had to consider the meaning of each sentence. For some participants, the sentences reflected the features of immediate-return, forager societies (e.g., "Long-term, binding contracts inhibit people's freedom"). For others, the sentences reflected the features of modern, complex, delayed-return society (e.g., "Long-term, binding contracts assure of that our efforts will payoff"). After participants completed this task, they rated the extent to which they had found meaning in their life and the extent to which they were searching for meaning in their life. Then, they rated their satisfaction with life.

The results supported our societal hypothesis. There was a stronger correlation between having found meaning and life satisfaction among participants primed with the delayed-return orientation. As in Study 1, the manipulations did not change the means for either meaning in life or life satisfaction. It only altered the relation between the two. Thus, exposure to the values of

modern, complex, delayed-return societies heightened the connection between meaning life and life satisfaction.

According to I-D compensation theory, the need for meaning in life may reflect a misapplication of a more basic need to feel our behavior is justified. We tested that hypothesis in our third study. We did so using a classic dissonance paradigm. We asked participants to record an essay in favor of raising parking fees at the university. This is an issue to which students are opposed. So, recording the essay would be inconsistent with their attitudes and would arouse a need for justification.

We gave some participants that justification by telling them they had no choice but to record the essay. It was part of the experiment. We told other participants they could decide whether they wanted to write the essay but it would be good if they did. So, when they wrote the essay, their justification for doing so was not obvious. They had to search for it. This search may reflect itself in an increase in the importance of meaning in judging one's satisfaction with life. So, after participants agree to record the essay, we measured the extent to which they had found meaning in their life, were searching for meaning in life, and were satisfied with their life.

The results supported our hypothesis. The more participants were searching for meaning, the less satisfied they were with their life -- but only among participants who had not been given a justification for agreeing to record to the essay. Taken as a whole, our studies suggest that adopting a delayed-return orientation increases the role meaning plays in people's judgments of life satisfaction. Such results are consistent with the hypothesis that meaning in life stems from a more basic need to find a connection between efforts and outcome -- and this meaning is heightened when people engage in immediate effort for delayed, uncertain payoffs. Thus, our adoption of more complex societies may have exacerbated this simple need and made it seem

like a more grand need for meaning in life.

The Death of Meaning

Before we end, we would like to indulge in one last bit of speculation. If it is true that the need for meaning in life increases when people adopt a delayed-return orientation, then it follows that the need would decrease if people dropped that orientation. There is some suggestion that this might be the case. It comes from people who have had a close brush with death (Martin, Campbell, & Henry, 2005). They seem to display the full range of negation, self-reflexivity, and reconciliation.

First, the negation. People who have a close brush with death often drop aspects of their culture (Flynn, 1984; Ring, 1984; Sutherland, 1992). According to Kuhl (2003), when people cannot escape death "they embrace life, their own life. The 'prescription' of how to live given by family, culture, profession, religion, or friends loses its grasp" (p. 227). In fact, the shedding of cultural values can occur to such a high degree in some people that they experience symptoms of culture shock (Clark, 1987; Furn, 1987).

Second, the self-reflexivity. People who have had a close brush with death tend to reassess their priorities. A woman described the effects receiving a terminal diagnosis of cancer had on her: "When you're dying, you're stripped of everything that's important to society – money, image – so all you have left is that honesty. It takes so much energy to pretend when you can use that energy for other things. ... all that crap just flies off of you; it just sort of comes off you like layers of skin. All of a sudden, you're staring from scratch, like when you were born. . . . I believe in myself now. I never had that before. And I am not afraid of being who I am." (Kuhl, 2003, p. 230).

Third, the reconciliation. According to Wren-Lewis (1988), when people drop their preconceptions, they come to see the world in its nothing-needs-to-be-added completeness. They emerge freer happier people than they ever though possible before. Wren-Lewis (1994) described the aftereffects of his close brush with death as "a basic shift in consciousness where life in each moment becomes so vivid that anxiety about future survival, in the body or out of it, simply ceases to be important." (p. 109)

A woman dying of cancer expressed the same sentiment in a more vivid way: "Before I lived nice cotton -- clean, cool, healthy. But now I live velvet -- beautiful, purple, magic carpet velvet. I call this my 'Year of Ecstasy.' Sublime, incredible things have happened. That's why I wouldn't go back. Even though my previous life was good, it was not the bliss, the splendor, the ecstasy of how I live now" (Branfman, <http://www.oocities.org/riceharvest/lastyearbest.htm>).

It is important to note that people can experience this bliss, splendor, and ecstasy even if they do not have an explanation of what has happened to them. As one survivor of a near death experience put it, "I can't tell what happened to me because I don't know, but something happened and I've never been the same since. People describe me as being high on life, and they are right. ... I wish I could explain how very much that one experience changed me. But I just can't find words to express myself. But I'm sure of one thing: there's a peace that remains with me always now--it has the strangest calming effect on me" (Ring, 1984, p. 99). Another said, "I find I no longer have any fear of death, even though I have no more knowledge than I had before about whether [I am] going to reincarnate, or survive death in some nonmaterial form, or simply come to an end as far as time is concerned" (Wren-Lewis, 1988, p. 117).

In short, a close brush with death is like a confrontation with the absolute. It leads people to drop aspects of their delayed-return culture, to reassess their own place in the grand scheme of

things, and to reconcile themselves to the world as it is. As Wren-Lewis noted after his own brush with death "I now know exactly why the Bible says that God looked upon the creation and saw that it was good" (p. 115).

Summary and Implications

Our general point was that the need for meaning so many people seem to experience and so many theorists have claimed is an inherent human need may not be an inherent human need. We have characterized it as a compensation people use to try to cope with a delayed-return world (e.g., engaging in immediate effort for delayed, uncertain payoff). Moreover, meaning in life is not even a real compensation. Not in the sense that a lever or a wheel is. Those exist in the real world and accomplish real work. Meaning is a confabulation. People cobble it together as needed from bits and pieces and they fill-in the gaps with social theories. This is one reason why finding meaning in one's life confers little, if any, benefit over never searching for and never finding meaning. Ironically, not having meaning can cause distress if people think they need meaning but don't have it -- but this is just something they are doing to themselves.

It may not be easy for people to drop their need for meaning. In our opinion, this is not because meaning is a basic need. It is because concerns with order, predictability, and payoff are a central part of the societies in which most of us live. It is not a part of immediate-return societies, and our studies showed that adopting an immediate-return orientation decreased the role of meaning in life in people's judgments of life satisfaction.

It is worth noting that we are not the only people to suggest that humans do not have an inherent need for meaning. Mythologist Joseph Campbell (Moyers & Campbell, 1988) made a similar point. He said, "People say that what we are all seeking is a meaning for life. I don't think that's what we're really seeking. I think what we're seeking is an experience of being alive. So

that the life experiences we have on the purely physical plane will have resonances within that are those of our own innermost being and reality so that we actually feel the rapture of being alive. That's finally what it's all about" (p. 4-5)

The research on awe agrees with Joseph Campbell and with us (as well as with most major world religions). If people are to experience the rapture of being alive, then they will have to do so without meaning. They have to understand that their frameworks are not adequate for addressing most of life's big questions. Then, they must reflect on their own reactions to their life. It is only with that self-reflection that they can open up beyond their narrow perspective and reconcile with the mystery.

In short, good things can happen when people stop thinking they need meaning. As Joseph Campbell put it, "Words are always qualifications and limitations. That's why it's a peak experience to break passed all of that every now and then and say 'Ooh' 'Ah'" (Moyers & Campbell, 1988, p. 287).

References

- Antonovsky, A. (1997). The sense of coherence: An historical and future perspective. *Israel Journal of Medical Science*, *36*, 725-733.
- Averill, J. R. (1998). Spirituality: From the mundane to the meaningful—and back. *Journal of Theoretical and Philosophical Psychology*, *18*, 101-126.
- Barnard, A. & Woodburn, J. (1988). Property, power and ideology in hunter-gathering societies: An introduction. In T. Ingold, D. Riches, and Woodburn (Eds.), *Hunters and Gatherers* (Vol 2, pp. 4-31). Oxford: Berg Publishers.
- Barry, H., Child, I. L., & Bacon, M. K. (1959). Child relation of child training to subsistence economy. *American Anthropologist*, *61*, 51-63.
- Bonanno, G. A., & Kaltman, S. (1999). Toward an integrative perspective on bereavement. *Psychological Bulletin*, *125*, 760–776.
- Branfman, F. (1996). How a terminal diagnosis saved Jackie McEntee's life. Retrieved Nov 20, 2012 from *trulyalive.org* (url: http://www.trulyalive.org/individuals/jackie_mcentee.htm).
- Brunton, R. (1989). The cultural instability of egalitarian societies. *Man*, *24*, 673-681.
- Camus, A. (1942/1996). *The Myth of Sisyphus*. Trans. Justin O'Brien. Existentialist Philosophy: An Introduction (2nd ed.) Ed. L. Nathan Oaklander. New Jersey: Prentice Hall.
- Clark, K. (1987). Response to “Adjustment and the near-death experience.” *Journal of Near-Death Studies*, *6*, 20-23.
- Cohen, M. N. (1985). prehistoric hunter-gatherers: The meaning of social complexity. In T. D. Price & J. A. Brown (Eds.) *Prehistoric Hunter-Gatherers* (pp. 99-117).

- Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology, 20*, 200-207.
- Csikszentmihalyi, M. & LeFevre J. D. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology, 56*, 815-22.
- Davis, C. G., Wortman, C. B., Lehman, D. R., & Silver, R.C. (2000). Searching for meaning in loss: Are clinical assumptions correct? *Death Studies, 24*, 497-540.
- Emmons, R. A. (2003). Personal goals, life meaning, and virtue: Well-springs of a positive life. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 105–128). Washington, DC: American Psychological Association.
- Feldman, David B. Snyder, C. R. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal-directed thinking and life meaning. *Journal of Social and Clinical Psychology, 24*, 401-421.
- Fingarette, H. (1991). Comment and response. In M. I. Bockover (Ed.), *Rules, rituals, and responsibility* (pp.169-220). La Salle, IL: Open Court.
- Flynn, C. P. (1984). Meanings and implications of near-death experienter transformations. In B. Greyson & C. P. Flynn (Eds.), *The near-death experience: Problems, prospects, perspectives* (pp. 278-289). Springfield, IL: Charles C. Thomas, Publisher.
- Forde, D. & Douglas, M. (1956). Primitive economics. In H. L. Shapiro (Ed.), *Man, Culture, and Society* (pp. 330-344). New York: Oxford University Press.
- Frankl, V.E. (1963). *Man's search for meaning: an introduction to logotherapy*. New

- York: Washington Square Press.
- Furn, B. G. (1987) Adjustment and the near-death experience: A conceptual and therapeutic model. *Journal of Near-Death Studies*, 6, 4-19.
- Gazzanga, M. (1985). The social brain. *Psychology Today*, 19, 28-30, 32-34, 36, 38.
- Hafer, C. L. (2000). Investment in long-term goals and commitment to just means drive the need to believe in a just world. *Personality and Social Psychology Bulletin*, 26, 1059-1073.
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, 108, 814-834.
- Haidt, J. & Hersh, M. (2001). Sexual morality: The cultures and emotions of conservatives and liberals. *Journal of Applied Social Psychology*, 31, 191-221.
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychological Review*, 10, 88–111.
- Heisel, M. J., & Flett, G. L. (2004). Purpose in life, satisfaction with life, and suicide ideation in a clinical sample. *Journal of Psychopathology and Behavioral Assessment*, 26, 127–135.
- Hicks, J. A. & King, L. A. (2009). Meaning in life as a subjective judgment and a lived experience. *Social and Personality Psychology Compass*, 3/4, 638–653.
- Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York : Free Press.
- Jim, H., & Anderson, B. (2007). Meaning in life mediates the relationships between physical and social functioning and distress in cancer survivors. *British Journal of*

- Health Psychology, 12*, 363–381.
- Joseph, S., & Linley, P. A. (2005). Positive adjustment to threatening events: An organismic valuing theory of growth through adversity. *Review of General Psychology, 9*, 262–280.
- Kaler, M., Frazier, P., Anders, S., Tashiro, T., Tornich, P., Tennen, H., & Park, C. (2008). Assessing the psychometric properties of the World Assumptions Scale. *Journal of Traumatic Stress, 21*, 326–332.
- King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology, 90*, 179–196.
- Klinger, E. (1977). *Meaning and void: Inner experience and the incentives in people's lives*. Minneapolis, MN: University of Minnesota Press.
- Kray L. J., George, L. G., Galinsky, A D., Liljenquist, K. A., Tetlock, P. E., & Roese, N. J. (2010). From what might have been to what must have been: Counterfactual thinking creates meaning. *Journal of Personality and Social Psychology, 98*, 106–118.
- Kuhl, D. (2003). *What dying people want: Practical wisdom for the end of life*. New York: Public Affairs.
- Lecci, L., MacLean, M. G., & Croteau, N. (2002). Personal goals as predictors of college student drinking motives, alcohol use and related problems. *Journal of Studies on Alcohol, 63*, 620-630.
- Lepore, S. J., & Helgeson, V. S. (1998). Social constraints, intrusive thoughts, and mental health after prostate cancer. *Journal of Social and Clinical Psychology, 17*, 89–

106.

- Marlowe, F. (2002). Why the Hadza are still hunter-gatherers. In S. Kent (Ed.), *Ethnicity, Hunter-gatherers, and the "Other": Association or Assimilation in Africa* (pp. 247-275). Washington, D. C.: Smithsonian Institution Press.
- Martin, L. L. (1999). I-D compensation theory: Some implications of trying to satisfy immediate-return needs in a delayed-return culture. *Psychological Inquiry, 10*, 195-208.
- Martin, L. L., Campbell, W. K., & Henry, C. D. (2005). The roar of awakening: Mortality acknowledgment as a call to authentic living. In J. Greenberg, S. L. Koole, & T. Pyszczynski (Eds.). *Handbook of Experimental Existential Psychology* (pp. 431-448). New York, NY, US: Guilford Press, 2004.
- Martin, L. L. & Kleiber, D. A. (2005). Letting go of the negative: Psychological growth from a close brush with death. *Traumatology, 11*, 221-232.
- Martin, L. L., Sanders, M. A., Kulkarni, A., Anderson, W. C., Edwards, R., Jun, C., & Heppner, W. (in press). I-D compensation: Exploring the relations among mindfulness, a close brush with death, and our hunter-gatherer heritage. In E. Langer, Ie, A. (Eds.). *Handbook of Mindfulness*.
- Martin, L. L. & Shirk, S. (2008). Immediate return societies: What can they tell us about the self and social relationships in our society? In J. V. Wood & A. Tesser (Eds.), *The Self and Social Relationships* (pp. 161-182). New York, NY, US: Psychology Press.

- Martin, L. L. & Tesser, A. (2006). Extending the goal progress theory of rumination: Goal re-evaluation and growth. In L. J. Sanna & E. C. Chang (Eds.), *Judgments Over Time: The interplay of Thoughts, Feelings, and Behaviors* (pp. 145-162). New York: Oxford University Press.
- Matthews, L. T., & Marwit, S. J. (2004). Examining the assumptive world- views of parents bereaved by accident, murder, and illness. *Omega: Journal of Death and Dying, 48*, 115–136.
- McAdams, D. P., Reynolds, J. L., Martha Patten, A. H., & Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin, 27*, 474-485.
- McFarland, C., Ross, M., & DeCourville, N. (1989). Women's theories of menstruation and biases in recall of menstrual symptoms. *Journal of Personality and Social Psychology, 57*, 522-531.
- McGregor, I. and B.R. Little: 1998, 'Personal projects, happiness, and meaning: On doing well and being yourself .' *Journal of Personality and Social Psychology, 74*, 494–512.
- McIntosh, W. D., Harlow, T. F., & Martin, L. L. (1995). Linkers and nonlinkers: Goal beliefs as a moderator of the effects of everyday hassles on rumination, depression, and physical complaints. *Journal of Applied Social Psychology, 25*, Special issue: Rumination and intrusive thoughts. pp. 1231-1244.
- Meillassoux, C. (1973). On the mode of production of the hunting band. In P. Alexandre

- (Ed.) *French Perspectives in African Studies* (pp. 187-203). Oxford: Oxford University Press for the International African Institute.
- Moyers, B. & Campbell, J. (1988). *The Power of Myth*. (Ed. B. S. Flowers). New York: Doubleday.
- Neimeyer, R. A. (2001). The language of loss: Grief therapy as a process of meaning reconstruction. In R. A. Neimeyer (Ed.), *Meaning reconstruction and the experience of loss* (pp. 261–292). Washington, DC: American Psychological Association.
- Nisbett, R. E. & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84, 231-259.
- Otto, R. (1923/1970). *The idea of the holy* (John W. Harvey, Trans.). London: Oxford University.
- Park, C L. (2010). Making Sense of the Meaning Literature: An Integrative Review of Meaning Making and Its Effects on Adjustment to Stressful Life Events. *Psychological Bulletin*, 136, 257–301
- Ricoeur, P. (1974). *The conflict of interpretations/Essays in hermeneutics*. Evanston: Northwestern University.
- Ring, K. (1984). *Heading toward Omega: In search of the meaning of near death experience*. New York: William Morrow and Company, Inc.
- Roberts, G. A., & Owen, J. H. (1988). The near-death experience. *British Journal of Psychiatry*, 153, 607-617.
- Ryff, C. D., & Singer, B. (1998a). The contours of positive human health. *Psychological Inquiry*, 9, 1–28.

- Sartre, J. P. (1938/1976). *Nausea*. (Translated by Lloyd Alexander). New Directions Publishing Corporation.
- Silver, R. L., Boon, S., & Stones, M. H. (1983). Searching for meaning in misfortune: making sense of incest. *Journal of Social Issues, 39*, 81-102.
- Singer, J. A. (2004). Narrative identity and meaning making across the adult lifespan: An introduction. *Journal of Personality, 72*, 437–459.
- Smith, D. M., Jankovic, A., Loewenstein, G., & Ubel P. A. (2009). Happily hopeless: Adaptation to a permanent, but not to a temporary, disability. *Health Psychology, 28*, 787–791.
- Steger, M. F. & Kashdan, T. B. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies, 8*, 161-179.
- Steger, M. F., Oishi, S., & Kesebir, S. (2011). Is a life without meaning satisfying? The moderating role of the search for meaning in satisfaction with life judgments. *The Journal of Positive Psychology, 6*, 173-180.
- Sundararajan, L. (2002). Religious Awe: Potential Contributions of Negative Theology to Psychology, “Positive” or Otherwise. *Journal of Theoretical and Philosophical Psychology, 22*, 174-196.
- Sutherland, C. (1992). *Transformed by the Light*. Sydney: Random House Australia.
- Steger, M. F., & Kashdan, T. B. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies, 8*, 161-179.
- Taylor, S. E. (1983). Adjustment to threatening events: A theory of cognitive adaptation. *American Psychologist, 38*, 1161–1171.
- Tedeschi, R. G. & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations

- and empirical evidence. *Psychological Inquiry*, 15, 1-18.
- Thompson, S., & Janigian, A. (1988). Life schemes: A framework for understanding the search for meaning. *Journal of Social and Clinical Psychology*, 7, 260–280.
- Turnbull, C. M. (1983). *The Mbuti Pygmies: change and adaptation*. New York: Holt, Rinehart Winston.
- Updegraff, J. A., Silver, R. C., & Holman, E. A. (2008). Searching for and finding meaning in collective trauma: Results from a national longitudinal study of the 9/11 terrorist attacks. *Journal of Personality and Social Psychology*, 95, 709–722.
- Wilson, T. D. & LaFleur, S. J. (1995). Knowing what you'll do: Effects of analyzing reasons on self-prediction. *Journal of Personality and Social Psychology*, 68, 21-35.
- Wong, P. T. P., & Fry, S. P. (Eds.) (1998). *The Human Quest for Meaning: A Handbook of Psychological Research and Clinical Applications*. Mahwah, NJ: Lawrence Erlbaum.
- Woodburn, J. C. (1979). Minimal politics: The political organization of the Hadza of North Tanzania. In W. A. Shack & P. S. Cohen (Eds.) *Politics in leadership: A comparative perspective* (pp. 224-246). Oxford: Clarendon Press.
- Wren-Lewis, J. (1988). The darkness of God: A personal report on consciousness transformation through an encounter with death. *Journal of Humanistic Psychology*, 28, 105-122.
- Wren-Lewis, J. (1994). Aftereffects of near-death experiences: A survival mechanism hypothesis. *Journal of Transpersonal Psychology*, 26, 107-115.
- Wrosch, C., Scheier, M. F., Carver, C. S., & Schulz, R. (2003). The importance of goal

- disengagement in adaptive self-regulation: When giving up is beneficial. *Self and Identity*, 2, 1-20.
- Zern, D. S. (1983). The relationship of certain group-oriented and individualistically oriented child-rearing dimensions to cultural complexity in a cross-cultural sample. *Genetic Psychology Monographs*, 108, 3-20.
- Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and psychological well-being. *British Journal of Psychology*, 83, 133–145.