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AUTHORS' RESPONSE

The Darker and Brighter Sides of Human Existence: Basic Psychological Needs as a Unifying Concept

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Few things are more intrinsically motivating than the opportunity to test one's ideas against the challenges provided by other theorists and researchers. In writing the target article we invited such challenges by contrasting our work with other current theories and by making clear, and sometimes controversial, claims. Accordingly, we looked forward to the commentaries with great excitement, mixed with a bit of anxiety, anticipating strong and pointed arguments, which we believe to be the best nutriment for continued theoretical growth.

After reviewing the range of comments, we feel appreciative. The comments are indeed pointed, and provoked us to specify our propositions and predictions even further and to make even more direct comparisons with the assumptions and foci of other theories that were used in the commentaries. In several instances the comments suggested specific new ideas and testable hypotheses that have the potential to spawn informative research. Each of the 11 commentaries seriously engaged the self-determination theory (SDT) framework in the spirit of scientific dialog, at times critically and with the fervor that often characterizes an active and socially relevant field of human inquiry. Among the major themes we address in our response are the following:

1. The adequacy of SDT in accounting for the so-called darker sides of human existence.
2. SDT's eudaimonic (as opposed to hedonic) view of well-being.
3. Why we specify these three needs and not others such as security, meaning, and self-esteem.
4. The role of individual differences in need strength and our critique of match hypotheses.
5. Issues concerning the concepts of autonomy and integration within SDT and the relation of autonomy to approach and avoidance motivational systems.
6. The interpretation and priority we give to the need for relatedness.
7. The social relevance of our findings, which are clearly not palatable to some.

The Darker Side of Human Functioning

In their commentary, presented from the perspective of terror management theory (TMT), Pyszczynski, Greenberg, and Solomon mention that SDT serves as a reminder of the potentials within the human species, but the authors went on to suggest that SDT may be "far too idealistic to bear the weight of the realities of life," (this issue), especially what they called the "dark sides" of human behavior. In fact, SDT has historically dealt not only with growth and well-being but equally with the undermining, alienating, and pathogenic effects of need thwarting contexts, and we believe it has a clearer and more direct account of individual differences in expression of the darker sides of human behavior than does TMT. Perhaps even more importantly, SDT makes specific suggestions about practical ways to reduce human alienation and malevolence, which few other theories, including TMT, seem prepared to do. This does not, however, make us "pollyannaish", nor particularly optimistic. To use an analogy, specifying that a plant needs water and sunlight does not imply a belief that a climate of sun showers is immanent. Instead, it makes one more concerned about dry spells and smog.

TMT, which is one of the few theories of human behavior that is dynamically interesting and empirically based, was built around the invariant existence of existential anxiety, the necessity of managing it so it will not be wholly overwhelming, and the kinds of deficit-based behaviors and defenses that are prompted by it. From TMT's perspective, this existential anxiety is an unavoidable consequence of two conditions: the capacity of self-reflective awareness and the inevitability of death. When awareness of mortality is made salient, the consequence is a largely unconscious terror that pushes people to adapt culturally endorsed beliefs, values, and behavior patterns—that is, to conform autoplastically to in-group values in order to defend against terror.

According to TMT, everyone has death anxiety, presumably of the same magnitude, and thus there is a universal readiness to accept culture as a defense against the anxiety. Because the anxiety postulated by TMT is largely a nonconscious, existential anxiety, it is theorized to operate regardless of whether it is experienced, and thus it provides an account of the widespread readiness among people to accept values and practices of groups and cultures, even those that are unhealthy or malevolent. However, the universality of TMT's account is its strength and its weakness. In TMT there is only one type of internalization, namely, a defensive type, and this is the reason that TMT fails to provide a meaningful account of individual differences in the qualities of internalization and of why some people take in the counterproductive or invidious aspects of their surroundings whereas others do not. Furthermore, the TMT formulation implies that there is nothing, even theoretically, that can be done about anxiety except to defend against it. Because SDT begins with different assumptions and foci, it is able to deal directly with each of these issues.

SDT is concerned, not with mortality anxiety, but with the more phenomenologically salient anxieties, insecurities, ego involvements, and heartbreaks concerning threats to basic needs, which we suggest provide more common and proximal sources of phenomena expressing the darker sides of human nature such as depression, hate, violence, and the degradation of self and others. Thus, whereas TMT focuses on *death* anxiety and the existential angst inherent in being mortal, SDT focuses on *life* concerns, including the fears, angers, and frustrations associated with not fulfilling ongoing and central psychological needs. To paraphrase Freud, we believe that the echo of death anxiety is relatively mute next to the deafening roar attending the struggles of life.

From an SDT perspective, human behavior and experience are understood in terms of the meaning of events to individuals, and the meaning of the preponderance of social events concerns their significance for people's attempts to satisfy their basic psychological needs for competence, autonomy, and relatedness. When these needs are met, growth and integration result, but when they are not met, a variety of nonoptimal outcomes accrue. For example, anxiety, grief, hostility, and other such negative emotions are typically responses to circumstances that are interpreted as threats or diminishment to people's need fulfillment. When basic needs are threatened, emotions such as anxiety and anger will be central experiences, varying as a function of the degree of threat, and of people's inner resources for dealing with the threats (e.g., their causality orientations).

Does all this mean that, as Pyszczynski et al. state, SDT's "default state of the organism" (this issue) is integration and thus that the negative emotions and be-

haviors are not inevitable? On the contrary. SDT focuses on the ways in which the social world, including its economic and political arrangements, cultural values, and interpersonal dynamics inevitably, but to varying degrees, obstructs or fails to afford opportunities for fulfillment of the basic psychological needs. Indeed, social contexts often function in ways that pit one need against others, an issue we have researched and written extensively about. In addition, as we show empirically, social contexts are also differentially apt at facilitating the development of people's capacities to constructively regulate their emotions and behavior. As such, from an SDT perspective, neither the amount of negative emotions individuals have to manage, nor their responding defensively to it, will be universal or invariant as in TMT, but instead will vary substantially as a function of the need-supportive versus need-forestalling character of their past and immediate social contexts.

SDT's perspective on the experience and management of threats (and the resulting degree of negative emotions and behavior) has another feature that is noteworthy. SDT distinguishes between threats to one's ego (i.e., to the introjected standards and need substitutes that are central to ego involvement) versus threats to one's integrated structures, basic needs, and processes of self. This distinction implies that the multitudinous experiences of anxiety and frustration that are associated with ego threats would be avoidable to the extent that one did the psychological work necessary to lessen one's ego involvements, namely, (a) either integrating or, alternatively, jettisoning the introjects that are the basis for the ego threats, and (b) developing greater awareness of one's basic needs, which may have been covered over by need substitutes such as extrinsic aspirations, so the basic needs will reemerge as a more central aspect of one's self-regulation. Thus, the SDT account provides yet an additional means of actually diminishing (as opposed to merely defending against) anxiety and the other darker emotions, namely the active and self-transforming processes of organismic integration.

Which Dialectic?

As suggested by the title of the Pyszczynski et al. commentary, TMT proposes a dialectic within the person between growth motives and defensive motives, a dialectic whose battleground is largely intrapsychic. In contrast, the dialectic that is at the core of SDT is a real-world dialectic between integration-oriented human beings and the nutrients provided, versus the obstacles posed, by the actual social contexts. This dialectic entails a proactive organism that is seeking to extend and integrate its own psychic elements and its relations to others, embedded in a social environment

that can be either supportive or antagonistic to those efforts. Thus, in SDT the social context is viewed as playing a crucial role in supporting individuals' potentials versus stimulating their vulnerabilities. This led to controlled laboratory experiments concerning social contextual influences on psychological growth (intrinsic motivation) and development (internalization) and also to real-world investigations of the effects of the kinds of social forces people actually face—such as controlling or neglectful parents, alienating bosses, overchallenging coaches, evaluative teachers, doctors who do not listen, and institutions that do not empower, to name a few.

In contrast, TMT's intrapsychic dialectic led researchers to amass substantial laboratory evidence for the effects of mortality salience but to give little attention to the processes of everyday motivation and well-being. We do not question the depth and poignancy of the mortality-salience phenomena; indeed, we have personally felt the press of existential anxiety and the dread that ensues from it. Nonetheless, although we have no doubt that mortality-salience inductions can catalyze defensive behavior, we believe that a vastly greater amount of human defensiveness, vulnerability, and psychopathology in the real world is accounted for by the dialectic between basic human needs and the conditions that support versus thwart them within families, institutions, and cultures. Buunk and Nauta object, on the basis of social and political values, to our having raised the issue of evaluating theories in part on the basis of their practical import, but for us this is not just an issue of values, it is one of explanatory power.

The Truly Darker Sides of Human Behavior

As already noted, people display, to differing degrees, personality and behavioral patterns that represent the nonoptimal or darker sides of human existence (Ryan & Deci, 2000). SDT provides accounts of multiple, theoretically coordinated aspects of this variation, including considerations of (a) the development and amelioration of ill-being and psychopathology; (b) the acquisition and consequences of need substitutes (e.g., materialism, ego involvements), (c) the antecedents and regulation of negative mood states and stress; and (d) the experience of alienation and impoverished motivation and vitality, within and across domains.

Research and theory based in SDT, for example, provides insights into how psychological needs, the social conditions that support versus thwart them, and the resulting motivational processes and emotions are implicated in the etiology (as well as the treatment) of myriad forms of adjustment problems and mental illnesses. These include eating disorders such as an-

orexia, bulimia, and morbid obesity (e.g., Strauss & Ryan, 1987; Williams, Grow, Freedman, Ryan, & Deci, 1996); rigid character disorders such as paranoia and obsessive-compulsive personality (e.g., Ryan, Deci, & Grolnick, 1995) and conduct disorders (T. Kasser, Ryan, Zax, & Sameroff, 1995). Further, we applied the theory to general issues concerning well-being versus ill-being (Ryan & Deci, 2001). In short, specific patterns of thwarted need satisfaction are key psychological contributors to extreme as well as mild versions of these and many other mental disorders and their behavioral manifestations.

We maintain further that individual differences in the more malevolent, heinous, and disheartening aspects of human behavior can regularly be traced to serious thwarting of the basic psychological needs during development, whereas we know of no evidence that traces the etiology of these differences to mortality-salience related events. For instance, strong evidence suggests that people who have become serial killers have typically suffered severe overcontrol, humiliation, neglect, or all of these from the individuals who should have cared for them at an early age. All of these killers had self-awareness, and all were mortal. But those two factors, being invariant to all humans as TMT highlights, are therefore not explanatory. Similarly, clinical research on the self-infliction of violence clearly implicates severe deficits regarding relatedness, autonomy, or both again showing the proximal and central role of these need deficits. Awareness of existential anxiety may have led Camus (1960) to raise *the question* of suicide, but people with whom we have worked clinically who have actually been suicidal have invariably been dealing with significant threats to relatedness, shame, or hopelessness concerning ineffectiveness at central life goals, or with a deep sense of their agency having been vanquished. Further, these threats to the self have often been layered upon need-related deficits experienced in earlier developmental epochs. Thus, in terms of what accounts for individual differences in the darker sides of behavior, we believe SDT has the principal issues in focus, ones more proximal and more phenomenologically relevant than those addressed in TMT.

Cultural Worldviews and Their Internalization

TMT has, to its credit, an interesting perspective on the type of violence that comes out of *group dynamics* and the tendency of individuals to identify with and conform to in-groups, even those that espouse inhuman actions. According to TMT in an effort to stave off existential terrors, people have a readiness to identify with their in-groups regardless of the groups' values, and, under appropriate conditions, this could lead

them to denigrate and do violence to out-groups in order to feel inclusion and psychological safety. There is no debate between SDT and TMT on the idea that internalization of cultural values and practices is perhaps the most significant problem of psychology, nor is there debate that people can internalize just about anything under the right kind of pressures. But differences are apparent concerning two issues: (a) whether all internalization is defensive and conformist, and (b) what are the primary sources of internalization.

As noted, TMT offers no distinctions concerning types of internalization. That is, TMT makes no qualitative or quantitative distinctions between adopting in-group values or practices in a way that results in what Pyszczynski et al. describe as “slavish conformity” (this issue) to outer pressures and integrating ambient cultural values so that one experiences true volition with respect to their enactment. In contrast, a primary focus of SDT has been to examine how deeply people internalize the values and regulations endorsed by their culture. SDT’s distinction among external regulators, introjects, identifications that are more or less compartmentalized, and well-integrated forms of valuing and self-regulation, as well as its account of the types of internalization being a function of the degree of need satisfaction, yielded strong predictive value regarding not only the quality of people’s adherence to adopted values, but also the mental health consequences of integrating ambient values versus merely swallowing them whole. One of the very important consequences of the SDT perspective is that it can explain how, if people allow internalized material to come into contact with their integrated self and find the new material to be too discordant or contradictory, they could actually reject the material, instead of aligning themselves with the worldviews held by significant others in their culture. Thus, contrary to the claim made by Pyszczynski et al. that SDT has no account of “the development and maintenance of cultural worldviews” (this issue), we believe SDT offers a more exacting account than TMT. Indeed, SDT specifies the kind of value adoption that is unstable versus that which is better anchored. It further specifies how variations in social climate account for more or less internalization.

Fostering internalization of worldviews. Because SDT and TMT have different views of the fundamental process of internalizing culture, they make different predictions about how it is fostered. In line with the organismic–dialectical perspectives, SDT suggests that the most powerful and primary source of the propensity to internalize culture is the tendency to relate to and integrate oneself within an ambient social organization (Ryan, Kuhl, & Deci, 1997). We believe belongingness and relatedness are strong needs that are

basic, nonderivative, and growth promoting. In SDT, this active tendency to connect with others can, however, result in either introjecting or integrating aspects of the culture, depending on whether the complementary need for autonomy is supported versus thwarted in the process. Thus, by considering the dynamics between autonomy and relatedness, SDT offers a differentiated model of internalization in which cultural values can be internalized in more defensive ways versus more growth-oriented ways.

TMT also gives importance to relatedness, but really only during infancy. The theory views relatedness or love not as a need in itself, but as a deficit-oriented and derivative means of obtaining comfort, safety, and security (Greenberg, Solomon, & Pyszczynski, 1997). Greenberg et al. suggested that children, under the age of 3, before they become aware of their mortality, seek parental love in order to feel safe and secure, and thus begin internalizing and displaying the cultural values and practices upon which their parent’s love is made contingent. What TMT labels the animal needs for comfort and security thus drives the desire for love and, in turn, during infancy, the process of internalization. Subsequently, when children become aware of their mortality, at around age 3, internalization is reinforced and, essentially, taken over by the press to defend against mortality terror.

This aspect of TMT highlights another interesting divergence with SDT concerning the optimal processes that promote socialization. According to SDT, internalization and integration are optimized when children are able to satisfy their basic psychological needs. Thus, internalization would be maximized when children feel the noncontingent love of their caregivers, are provided optimal challenges, and are relatively free from excessive control, all ingredients of sensitive parenting (Ryan, 1993). In SDT’s view, the contingent provision of parental love is a primary instrument of control that serves to undermine autonomy and to foster introjected regulation. As such, it tends to be a detriment to, rather than a facilitator of, more integrated internalization (Assor, Roth, & Deci, 2000). In contrast, Greenberg et al. (1997) viewed contingent love as the essential facilitator of internalization, so it is the sense of contingent love amplified by death anxiety that drives adherence to cultural norms. Thus, whereas SDT suggests that more nurturing, noncontrolling conditions produce a greater tendency to deeply internalize ambient values and that internalization following contingent love would likely be only introjected, TMT’s account suggests that it is relatively controlling techniques that most effectively socialize children.

Stated differently, because TMT uses a universal fear model and views all internalization as defensive, it offers an account only of the relatively impoverished forms of internalization, rather than addressing the

more differentiated and fuller spectrum of internalization and regulatory styles captured by SDT. It is precisely because SDT specifies the nutrients that support variations in internalization that it is in a position to understand and predict individual differences in the degree to which people take in cultural values and practices and make them their own.

To summarize, TMT is a provocative formulation that proposes that people are, at base, defensively seeking security and comfort, and subsequently, attempting to buffer their mortality terror. Only when anxiety is kept well in check will growth occur, and Pyszczynski et al. (this issue) propose that even that growth is spawned through mechanisms of reinforcement and incentive. We suggest, however, that, although death anxiety is a meaningful concept that may explain important phenomena, one cannot well explain the processes of life in terms of a running from death. SDT's theoretical and empirical efforts focus on the organism's inherent tendencies toward life, and specifically the living tendencies toward self-expansion and interpersonal integration as manifest in innate needs for autonomy, competence, and relatedness. By examining the facilitators and frustrators of these needs, SDT provides an account of how people internalize cultural worldviews in more versus less healthy and effective ways and of what can go wrong in the person-context dialectic to result in the degradation and perversion of life.

The Brighter Side of Human Functioning

One of the defining features of SDT is its emphasis on the active, growth-oriented *nature* of the human organism. SDT assumes that nature has well endowed the human organism with tendencies toward health and well-being, as well as a propensity to seek out the necessary nutrients. In our target article, we often mention well-being, although an extended discussion of the meaning of well-being was another of the features of SDT (in addition to a focus on the dark side) that we did not include. In an *Annual Review of Psychology* chapter (Ryan & Deci, 2001), we specifically addressed the nature and promotion of well-being, and we present a very brief synopsis of that topic here so we can respond to points raised in the commentaries.

The Meaning of Well-Being

Like various other writers (e.g., Ryff & Singer 1998; Waterman, 1993), we distinguish between two views of *well-being*—hedonic and eudaimonic. The hedonic position views well-being as happiness or positive mood (Kahneman, Diener, & Schwarz, 1999),

whereas the eudaimonic position characterizes well-being in terms of a fully functioning person (Rogers, 1963). SDT subscribes to the eudaimonic view of well-being.

The difference between happiness and eudaimonia is important with respect to two bodies of research reviewed in our target article, namely the research on regulatory styles and the research on aspirations. For example, Nix, Ryan, Manly, and Deci (1999) showed that succeeding at an activity in a controlling condition enhanced happiness but not vitality, whereas succeeding at an activity in an autonomy-supportive condition enhanced both. Thus, in line with SDT, success under controlled regulation resulted in hedonic well-being but not eudaimonic well-being. Similarly, we have shown that, when people who value extrinsic aspirations such as wealth and fame attain those outcomes, they may feel short-term happiness, but these pursuits do not typically yield eudaimonic well-being. In contrast, the pursuit and attainment of aspirations such as meaningful relationships, personal growth, and community contributions—aspirations that are more closely aligned with basic psychological needs—tend to promote the fuller, more enduring, and deeper sense of well-being described by the term eudaimonia.

An understanding of the nature of eudaimonic well-being is important for interpreting points made in some of the commentaries. For example, Buunk and Nauta were simply incorrect in stating that we define well-being tautologically as “experiences of autonomy, competence, and relatedness” (this issue). Quite to the contrary, we consider autonomy, competence, and relatedness to be necessary nutrients for well-being, so we show that the experience of satisfaction of the three basic needs leads to well-being, with the latter being assessed, for example, as the presence of vitality and self-actualization and the absence of anxiety, depression, and somatic symptoms.

Buunk and Nauta use the ideas of positive mood and well-being interchangeably, placing themselves squarely in the hedonic camp. From that perspective they argue that social comparisons indicating superiority over others and goal contents symbolic of fame are important antecedents of well-being. From the SDT viewpoint, the use of social comparison information to index one's fame or to place oneself above others is a central aspect of ego involvement (Nicholls, 1984; Ryan, 1982) and thus typically represents controlled regulation. As such, we expect it at times to yield happiness or positive mood, but not eudaimonia (e.g., Nix et al., 1999). Furthermore, SDT research shows how competition, contingent evaluation, ego involvement, and related phenomena in which social comparison figures heavily often yield quite negative affects and impoverished forms of motivation. Buunk and Nauta thus espouse ideas that fit well within a controlled, contingent reward-based social context, but do not to

grapple with the possibilities we point to that can only be found by looking outside that box.

The commentaries by Kernis and Coleman refer to well-being and, implicitly, considered well-being from a eudaimonic perspective. Both Kernis and Coleman discuss well-being as assessed by Ryff's (1989) scale, which has six components, including autonomy, competence, relatedness, personal growth, life purpose, and self-acceptance. And, not surprisingly, both commentators discuss need satisfaction—in the case of Kernis, with respect to self-esteem and in the case of Coleman, among elderly people—with a sensitivity to the idea of fully functioning individuals. We respect and agree with Ryff's view of well-being as a eudaimonic process, but we note that we do not typically use her measure because we view autonomy, competence, and relatedness to be the critical *antecedents* of well-being rather than its *indicators*.

Creativity

We focus on well-being or mental health as an important, but by no means the only, brighter aspect of humanity. As well, we investigate and discuss the creative, prosocial, and constructive tendencies of people, which we consider to be more normative than exceptional under nurturing conditions. Hennessey points out in her commentary that the intrinsic motivation hypothesis articulated by Amabile (1982) confirmed that the factors specified by SDT as enhancing versus diminishing intrinsic motivation seem also to predict creative performance. Noting that the undermining versus facilitating effect is evident in young children even prior to the development of attributional mechanisms that undergirded early cognitive accounts of the phenomenon, Hennessey argues that the concept of needs provides a useful explanation that is relevant in those early years as well as later ones. We agree with her interpretation of the undermining versus enhancement of creativity by various contextual events in terms of the functional significance of the events—that is, their meaning regarding psychological needs. It appears indeed, that need fulfillment and creativity are linked, in part, through intrinsic motivation.

Hennessey goes on, however, to discuss how extrinsic motivation, with its various degrees of internalization is also highly relevant to understanding creativity. Studies suggest that extrinsic and intrinsic motivation can, under some circumstance, be synergistic with respect to promoting creative engagement, and the idea of differentiating extrinsic motivation in terms of the degree to which it represents an aspect of the self, seems like a promising formulation for empirical examination. To date little of this research agenda has been accomplished.

Why Three Needs and Why Not Others?

One primary reason that theorists employed the concept of needs is that it allows them to draw together a set of diverse phenomena in a parsimonious way. For such an approach to be effective, it is necessary to use a small number of needs to explain a large number of phenomena. As the number of needs grows, the utility of the approach diminishes. In fact, one of the reasons that some earlier need-related theories fell out of favor was that their lists of needs became long and unwieldy. When, for example, experimental psychologists tried to deal with the challenge to drive theory posed by exploratory behavior by positing a whole set of new drives, such as the drive for visual exploration (e.g., Butler, 1953), Hullian theory went into dramatic decline (White, 1959).

There is nothing magical about the number three when it comes to psychological needs, but there is something extremely important about requiring that each addition to the list be a true need and also that it expand the scope of the phenomena that the list of needs encompasses. In this regard, although Pyszczynski et al. in their commentary claim that our needs are far too general, we believe that their utility comes largely from the fact that they do apply so generally and so aptly across multiple domains of human experience. Consider, for a moment, Bauer and McAdams' list of relatedness themes—namely, friendship and love, dialogue and sharing, group participation, and prosocial activity. We believe that this typology is very useful for thinking about the varied interpersonal arenas in which relatedness can be experienced. Therefore, one might argue (although they did not) that each of these should be considered a different (i.e., more specific) need. We believe, however, that the concept of a relatedness need is the appropriate level of generality for purposes of parsimony and that having these four be separate “relatedness needs” would be too specific and would thus not take stock of the common, satisfying element in each nor of the common elements in the conditions that conduce toward that satisfaction. Accordingly, we maintain that deconstructing the three general needs would detract from, rather than add to, an integrative and parsimonious framework.

Of course, the stringent definition of a need as something that, when fulfilled, promotes integration and well-being and, when thwarted, fosters fragmentation and ill-being does serve to keep the list short. In this regard, although we do not object to the list of needs being expanded, we thus far do not see a compelling argument for any need beyond the three we specified. It is illustrative, then, to consider the additional needs proposed in various of the commentaries—namely, safety–security, meaning, and self-es-

teem—and to address why we do not think they should be added to the list.

Safety–Security

Andersen, Chen, and Carter are the most explicit in their commentary in arguing that, although autonomy, competence, and relatedness are fundamental needs, there may be others. They suggest, first, that safety–security is a need, and Pyszczynski et al. (this issue) would surely agree, as they portray safety–security as an even more basic need than the three we propose. Although we think there is some plausibility to the idea of a need for safety–security, there are important reasons not to conceptualize it in that way.

First, it is important to differentiate between safety–security at the physical and psychological levels. Physical safety and security are certainly essential for survival, just as are food and oxygen. However, we are here dealing not with the health and growth of tissues and bones but rather with the health and growth of the self, just as, we believe, are Andersen et al. and Pyszczynski et al. in their commentaries.

The question, then, is whether security and safety constitute a psychological need. Security and safety can, indeed, be strong motives, but we view them as derivative, as motives that become salient in response to insecurities concerning the meeting of basic needs. That is, people quickly come to desire psychological safety–security when they experience thwarting of the basic needs or, in other words, threats to the self. Thus, adapting a concept from Maslow (1943), we consider safety–security not as a basic need, but as a *deficit* motive. In other words, it is an example of a compensatory formation of the psyche in response to basic need deficits, so it is not a need in its own right but rather is a reaction to impoverished satisfaction of true needs.

Growth and defense. One of the guiding principles of SDT is that it is important to distinguish between psychological processes and structures that are proactive versus those that are reactive. In this regard, growth needs and deficit or defensive motives are qualitatively different from each other and are best viewed as having a particular relation to each other. Specifically, growth needs are conceptualized as fundamental and are the means for promoting the human potential; whereas, defensive motives are derivative and come into play following threats and thwarts to the basic needs. Differentiating between such motivational forces is more exacting in terms of theoretical and empirical specification than simply listing additional needs, for it places different types of motives in an organized relation to one another, with the deficit motives arising and attaining their salience from failures to sup-

port growth. The very term *deficit* implies this. In a similar vein, specifying fewer basic needs that have a dynamic relation to derivative motives is more parsimonious, because the alternative is to postulate an ever-growing list of specific needs that explain variance but have no underlying dynamic relation to one another. In short, distinguishing true needs from deficit motives and need substitutes provides a richer and more valid reflection of the darker and brighter sides of human functioning.

Meaningfulness

The second additional need Andersen et al. (this issue) affirm is a need for meaning. Like various of our colleagues through the years, they suggest that people have a fundamental desire to comprehend and make sense of their life experiences, including the tragedies of their lives.

First, let us say that meaning as Andersen et al. portray it falls squarely within the category of processes that we consider to be growth oriented, as opposed to deficit oriented, and that there is no question that the experience of meaning is an important aspect of eudaimonic functioning, a fact supported by research by McGregor and Little (1998). Still there are questions concerning how the construct of psychological meaning relates to the needs and integrative processes posited within SDT, and whether it is best conceptualized as a separate need.

Consider first the issue of meaning in structural terms. When people experienced meaning they will likely have achieved a sense of coherence, integrity, and congruence within the self. Researchers such as Antonovsky (1987) and Korotkov (1998), for example, reported that meaning is a core component of the sense of coherence (SOC). For us, meaning or SOC can be quite exactly understood in terms of the processes of internalization and integration, which involve assimilating values, regulations, emotions, and initiatives to one's self. Thus, the structural aspect of meaning is for us an aspect of the more general issue of integrity, which we address with our model of the organismic integration process. There, we specify the conditions under which something becomes meaningful and coherent with respect to the self, as well as the conditions under which social values and meanings are only partly internalized, winding up as introjects or compartmentalized identifications. As such, we believe in the importance of meaning and SOC, but argue that it is achieved, structurally, through the movement toward greater integrity or autonomy—that is, toward greater integration of a value, idea, or practice within the self.

Now consider meaning not as a structural feature of self but as a set of contents. The search for meaning is,

in a sense, the search for certain basic truths or essential experiences. Here, too, SDT's basic needs figure saliently. We believe that when the most unassailable contents of human meaning are inspected one will find among them: (a) a sense of connection to loved ones, to relevant groups, to culture, and to humanity more generally; (b) a sense of effectance in negotiating the terrain of life, which concerns the potency of one's purposive actions; and (c) a sense of personal agency in relating to others and accomplishing goals that reflect one's core values. In short, when people reflect on aspects of life that convey meaning, they are often focused on experiences of relatedness, competence, and autonomy (or freedom) in a deep and personal way—that is, on their relative fulfillment of basic psychological needs.

Self-Esteem

There has recently been some controversy within social-personality psychology about whether there is a need for self-esteem. Maslow (1943) was quite definitive in positing it, and others such as Steele (1988) implied it. Heine, Lehman, Markus, and Kitayama (1999), in contrast, argued that there is not a universal need for self-esteem. Two commentaries within this issue take positions that are relevant to the controversy and to the question of human needs.

Kernis, both here and in various other publications, distinguished between secure high self-esteem and fragile high self-esteem. In his commentary, he notes that this concept bears considerable similarity to our distinction between true self-esteem and contingent self-esteem (Deci & Ryan, 1995), although that is another aspect of SDT that we did not address in the target article. As Kernis notes, secure self-esteem reflects positive feelings of worth that are well anchored and do not require promoting oneself or feeling superior to others (the feeling that Buunk and Nauta claim to be so important). In contrast, fragile self-esteem involves positive feelings about oneself, but these feelings are contingent upon specific outcomes and are easily threatened. As such, people with fragile high self-esteem are continually seeking evidence of their worth.

In light of this important distinction that Kernis so clearly articulates here and has supported in past research, let us consider whether there is a fundamental need for self-esteem. We are very much in agreement with Kernis that “the quest for high self-esteem may reflect a substitute need, rather than a fundamental one” (this issue). In other words, insofar as the search for self-worth is a strong motive or a “prime directive” the self-esteem being sought will almost certainly be contingent or fragile rather than true or secure. If, on the other hand, the self-esteem under discussion is true or secure, people would not likely be pursuing it, and

we believe that it, like meaningfulness, is best thought of as an indicator of eudaimonic well-being rather than a need. Thus, secure self-esteem is, for us, an element of well-being that results from satisfaction of the basic needs and is not itself a need. To say that there is a need for self-esteem would be equivalent to saying there is a need for well-being, a clearly tautological proposition. The important feature of specifying needs as we have done is that it allows one to address the necessary conditions (viz., autonomy, competence, and relatedness) that will lead to high secure self-esteem, meaningfulness, and various other indicators of eudaimonic well-being.

This discussion also points to a convergence and a divergence with TMT. Pyszczynski et al., over the past several years, illuminated a phenomenon in which mortality anxiety can drive people to become preoccupied with self-esteem as well as leading to prejudice, hostility, and self-deception. Although, as noted earlier, our own view places the roots of anxiety in threats to the self and its innate needs rather than in mortality awareness, we nonetheless agree, as just outlined, that if there is a quest for self-esteem it is likely to be a deficit process. Thus, we converge on the postulate that, when self-esteem is a salient motive, it is largely defensive, but we diverge on the matter of there being a form of self-esteem that is not defensive (and is not a need) but instead represents an attribute of the fully functioning person.

The Three Basic Needs

Our theory of psychological needs defines them in a highly specific manner that differentiates them from goals, desires, and other motivationally relevant forces in human behavior and development. The concept of need, classically and as used within SDT, pertains to those nutriments that must be procured by a living entity to maintain its growth, integrity, and health (whether physiological or psychological). We propose autonomy, competence, and relatedness as psychological needs because they appear to satisfy the criteria for needs that we and others (e.g., Baumeister & Leary, 1995) enumerated and because we found it necessary to consider them needs in order to integrate, at a meaningfully dynamic level, a wide variety of phenomena ranging from the undermining of intrinsic motivation by rewards, to the alienation associated with feeling controlled at work, to the benefits of fully integrating the values extant in one's reference group, to the drawbacks of a materialistic lifestyle, to the development of secure attachments within specific relationships, among others. Consideration of basic needs is thus important in providing explanatory utility for a large number of seemingly disparate phenomena across a

wide range of human endeavors, developmental epochs, and domains of activity.

The meaning of need satisfaction. One of the things we noticed in some of the commentaries was the tendency to interpret the concept of need fulfillment in a relatively superficial way, as if we were proposing that every behavior must be *aimed* at satisfying the three needs for a person to display well-being. Although we state clearly that the crucial issue concerns people feeling a sense of competence, autonomy, and relatedness whether or not a particular behavior is intended to promote those feelings, we found, for example, that Buunk and Nauta (this issue) attempt a counterargument with the seemingly absurd example of a man on vacation who is not satisfying his competence need but is displaying greater well-being than if he were. Leaving aside the obvious fact that he might very likely be engaging optimal challenges and feeling competent with respect to his golf, body surfing or crossword puzzles, it should go without saying that a man on vacation is not there to prove his competence with respect to his *work*. The point, however, is that if he were feeling incompetent and ineffective with respect to his work, recreation, or life more generally, we would certainly detect the negative effects. Further were he to engage in no challenges, even for fun, he might quickly become bored and dysphoric.

In another such hypothetical example, Buunk and Nauta portray a movie star who was completely fulfilled with respect to autonomy, competence, and relatedness, yet fell into depression upon failing to win an Oscar. Apart from the clinical implausibility of a person who feels loved, competent, and volitional being so easily rendered incapacitated by failing to receive an award, our response is to ask, what must have been the meaning of the Oscar to an individual who had such a reaction? For it to have had such an impact, must it not have been a significant symbol of her being loved or accepted, or of her being competent or accomplished? Could Buunk and Nauta possibly have been proposing that the Oscar is somehow valuable in its own right without reference to deeper psychological needs?

Do basic needs conflict? Pyszczynski et al. (this issue) point out that SDT's three basic needs often conflict. As noted earlier in this response, we, of course, agree and have written extensively on this matter (e.g., Deci & Ryan, 1991; Ryan, 1993). We described how the needs for autonomy, competence, and relatedness are not inherently contradictory—indeed, they can be complementary—but the social world is often structured to pit one need against another, as when a man believes he has to act against his own autonomously held

values to gain his peers' regard, or an adolescent girl believes she must give up competence strivings in mathematics so as not to feel geeky or get rejected. The fact that people's basic needs are cast against each other to some, although varying, degrees within social contexts is thus not in any sense a problem for SDT. On the contrary, it has allowed SDT to predict, for example, that contingent parental love would result in introjection rather than integration (Assor et al., 2000) or why excessive focus on performance comparisons so often detracts from motivation and well-being (Ryan & La Guardia, 1999).

Do needs change? A strong version of SDT suggests that across all domains and developmental periods fulfillments of all three psychological needs are necessary for integrity, growth, and well-being. Our focus developmentally has largely been on children, adolescents, college students, and working-age adults. Coleman (this issue) rightfully points out that more study of the dynamics and impact of needs in gerontological studies is sorely needed. As Coleman suggests, many frameworks on aging (e.g., Baltes, 1997), emphasize the plasticity and flexibility of people's investments, goals, and concerns under changing life circumstances. He correctly underscores, however, that in SDT's view, this flexibility is constrained by underlying psychological needs. Not only is it possible, as Coleman states, that "basic human needs for autonomy, competence, and relatedness become harder to satisfy" (this issue) in old age but that the means through which individuals do satisfy them becomes tailored accordingly. His commentary contains several ideas that we find intriguing. For instance, he suggests that what is often called generativity may in fact represent a tendency toward forming a broader sense of connectedness. He also suggests that perhaps some of the loss of meaning and well-being faced by some older people may be related to cultural structures that lead people to identify too exclusively with their careers as the source of life's purpose.

In recent work, we too have begun to outline an agenda for considering how aging and need satisfaction relate to each other (V. Kasser & Ryan, 1999; Ryan & La Guardia, 2000). In line with SDT's central principles, we argue that although the challenges to, supports for, and means available to satisfy basic needs change with age, the importance of basic need satisfaction does not. We specifically suggest that individual resources and cultural contexts can be examined for their adequacy with respect to needs in old age, and this adequacy predicts the meaning, vitality, and well-being that can be experienced in later life.

Do needs explain everything? We believe the concept of basic psychological needs has substantial

heuristic utility, and we focused more on what the concept can accomplish than what it can not. We make no claim that the three needs explain everything, and we often have considered the influence of other factors such as genetics and neurobiological processes in shaping people's behavioral vulnerabilities and resources. Nonetheless, we think that most significant events in social life relate to basic psychological needs and that need dynamics explain sequelae to the events. This can be illustrated by considering some examples from our critics who attempt to cite non-need-related factors that affect well-being.

Buunk and Nauta's suggest that there are many stressors in the workplace that do not relate to the three needs, citing as examples the fact that workers face issues such as role ambiguity, loss of status, and work overload. We agree that such factors can indeed have negative consequences, but their links to thwarted need satisfaction are also readily apparent. An employee who is unclear about what the job entails is unlikely to feel competent at performing the job and is likely to be hesitant about self-initiation. Similarly, it is hard to imagine a case in which loss of job status would not threaten feelings of competence, autonomy, and relatedness, and indeed we would argue that it is precisely this need thwarting that gives the loss of job status its psychological sting. Finally, workers experiencing work overload would no doubt find it hard to self-organize and experience choice in contexts where superiors are insensitively heaping on work, as the term overload implies. The possibility that work overload would diminish the workers' sense of competence is also high, as is the likelihood of being unable to experience a sense of connectedness with others (e.g., their families) under such circumstances. It seems that even these examples, offered as contradictions to our model, are easily connected to psychological needs, and they readily illustrate how positing such needs can link diverse phenomena, and how psychological needs figure centrally in motivation and well-being within organizations.

Needs, Motives, Individual Differences, and Matches

In the target article, we state that although we believe there are individual differences in the strength of needs, we do not think that need strength is the most fruitful place to focus empirical attention. In contrast, we indicate that the individual differences in the strength of one's *motives* can be an important issue, because different motives are, in SDT's view, either more or less effective as vehicles to need fulfillment. Some commentators took exception to our stand on that issue. For example, Vallerand, in his commentary, maintains that measuring need strength allows one to

match people's needs with opportunities to satisfy them and thus to predict the effects of need satisfaction. He then refers to a measure of need strength based on self-reports of what people want, raising two related pitfalls with his and similar interpretations by other commentators, namely, a failure to differentiate theoretically between needs and motives, and between psychological needs and their representation in conscious awareness and self-reports.

Needs are, by definition, essential and universal—they are the nutriments without which people's psychological health will not flourish—so SDT argues that the three needs are important whether or not people report wanting them. Consider, for example, Buunk and Nauta's statement that "employees prefer to receive close supervision and clear instructions rather than autonomy" (this issue). Even if that were true, although there is no evidence that it is, it does not mean that autonomy is not a need. Indeed, SDT would predict that even if employees stated this preference, there would still be meaningful motivational and psychological costs if those employees were denied autonomy, or were forced to choose between having autonomy and receiving meaningful competence feedback, as the example implies. People may at times accommodate to blocked need satisfaction by saying they do not want the satisfaction, but we assert that, even if they say they do not *want* autonomy, competence, or relatedness, their well-being will be diminished if they do not get it.

Part of the problem with assessing need strength as a moderator of the effects of satisfying the need also results from confusion between needs and their conscious representations. There is the strong possibility that what is measured in self-reports will not be need strength but will instead reflect the strength or salience of a loosely related motive.

Vallerand's discussion (this issue) of an "eating drive" serves well to illustrate our point. People do not have an eating drive, they have a need for sustenance. Eating behaviors may satisfy that need or drive, but eating can also satisfy a variety of other motives or need substitutes as anyone who has worked with patients with eating disorders knows. Similarly, the desire to interact with others or to be part of a group is based to some extent in the need for relatedness, but it can also reflect motives that are not aligned with this need. The point, simply, is that the measurement of conscious motives is not identical with the measurement of needs; in fact, self-reports are themselves behaviors that require dynamic interpretation. No doubt this confusion is part of the reason that the evidence for meaningful moderation of need satisfaction effects by need strength is quite scant, particularly with dependent measures that concern well-being and effective functioning. In our own attempts to find evidence that even the personal salience of need-related motives

might moderate the impact of need satisfaction on workers' well-being, we have typically come up empty-handed (e.g., Leone, 1995).

In our research on life goals, we measured individual differences in people's relatedness motives (e.g., T. Kasser & Ryan, 1993; Ryan, Chirkov, Little, Sheldon, Timoshina, & Deci, 1999) and found that having strong relatedness motives, relative to, say, strong financial motives, predicts greater well-being. In line with SDT, we assumed that *all* of our participants needed relatedness, regardless of how much they consciously valued it, but we also reasoned that people whose motives for intimacy and closeness were strong relative to their desire for money were expressing a pattern of motives that would be more likely to support their basic need fulfillment, and the evidence concerning well-being outcomes strongly supported this view. In short, SDT takes the view that people's motives can be better or worse servants of needs, and that is why the study of individual differences in motives and goals is of interest. However, that interest depends upon clearly distinguishing between needs and either motives or goals.

Sansone and Smith, in their commentary, provide a telling example of what can happen when goals and needs are confused. They argue that, whether interest will be facilitated by competence and autonomy inputs "may depend on whether achieving competence or autonomy is the primary goal of the individual's engagement of the task" (this issue). However, this goal-based formulation is incongruent with phenomenological accounts of intrinsically motivated behavior, for people seldom say that the reason they are doing an intrinsically motivated activity is to feel competent or autonomous. The statement is also inconsistent with decades of research on intrinsic interest in which external conditions that facilitate versus forestall feelings of competence and autonomy have been shown to affect intrinsic interest regardless of people's conscious goals. For example, children do not typically play games with a primary goal of achieving competence, they play for fun (White, 1959). However, if the games they play are ones that they cannot master, they move to others that are more engaging—namely, ones where more effectance can be experienced. Similarly, children in an experiment by Koestner, Ryan, Biernieri, and Holt (1984) were not doing artwork with the goal of experiencing autonomy, but when the experimenter was controlling with respect to the task, they lost their sense of being origins, and their interest, intrinsic motivation, and creativity were undermined.

The statement that goal facilitation enhances interest also requires that one be precise about what it is that people become interested in. For example, if people's interest in going to exercise class is dependent on relating to others, then it seems that their level of intrinsic motivation for *exercise* is probably not sufficient to get them to attend. Thus, it would be inappropriate to say that the relatedness satisfaction attained in class adds

to their interest for exercise, as opposed to their interest in going to that exercise class (where they can interact with the others). The fact that goals are often bundled together in everyday discourse may have practical importance, for example for getting people to attend a health club, but it does not imply that we should allow them to stay bundled in our scientific discourse. It is theoretically and empirically important to specify exactly what it is that someone is interested in, if one is to study how goals relate to interest.

In spite of our disagreement with the utility of the goals-match hypothesis, we do not want to lose track of what we think is an important point made by Sansone and Smith in their commentary. They claim, and we agree, that to stay motivated and engaged no matter what the activity, people try to generate some interest in their behavioral field. If it is not in the behavior itself, at least it can be in related or contextual elements, as when the factory worker invents mental games on the assembly line or an exerciser arranges to be at the health club when particular others are also there. As such, SDT does not suggest that matches between goals and outcomes can not *add* interest or enjoyment to an activity, but this increment neither contradicts nor captures the functional importance of autonomy, competence, and relatedness for motivation, growth, and well-being. The problem with endorsing the idea of a goals-match hypotheses that is not constrained by an understanding of the importance of basic need satisfaction, is that, at least implicitly, it is endorsing a standard social-science model in which the content of people's nature is simply ignored and the functional inputs that are required to sustain interest, self-motivation, and well-being are not being considered.

Need Compensation

We use the term compensatory motives attempting to convey that when basic needs are not satisfied, people will often compensate by developing need substitutes that can have immediate and long-term negative consequences. Vallerand suggests in his commentary that compensation is a healthier process than we indicate because, he says, when needs are thwarted people will go elsewhere to satisfy them. It is true, of course, that people often gravitate toward domains in which they are better able to satisfy their needs—a point we made explicitly in the target article—and this can at times represent a healthy organismic tendency toward equifinality with respect to need satisfaction. Nonetheless, there is a problem with Vallerand's formulation that went unrecognized. He cites a study in which student athletes who failed in the academic domain showed a slight, and presumably compensatory, increase in their autonomous motivation for sports. That

is certainly intriguing, and it attests to the dynamic nature of needs. But this does not address how these athletes may have been impacted by the need thwarting at school. To what degree was their perceived cognitive competence and self-esteem decreased, their alienation from school exacerbated, their general well-being diminished, and so on? Failure to get one's needs met within a domain as central as school will surely have costs for well-being and growth, and turning away from school towards sports may or may not be a truly healthy response to this thwarting.

Autonomy as a Need: Critiques and Reactions

The need for autonomy is a unique and a controversial focus of SDT research. Whereas relatedness and competence are widely researched within psychology, and the idea of needs for relatedness and competence is relatively acceptable to many theorists, SDT researchers are essentially alone in their empirical exploration of the concept of autonomy. Thus, in spite of manifold demonstrations by numerous SDT researchers of the functional importance of autonomy, several critics argued that autonomy is not important, that autonomy is not a need, or that autonomy is merely a product of Western ideology.

Our use of the term autonomy is informed not only by our ongoing empirical findings but also by traditions in phenomenological and analytic philosophy (Ryan, 1993). Our use of the concept is also internally consistent. However, we find that many of the criticisms levied at SDT, including those by commentators in this issue, are based on definitions of autonomy that we neither endorse nor employ in either our theoretical or operational definitions. For example, rather than addressing volition and integrated self-regulation, which is central to SDT's concept of autonomy, our critics focused on independence, individualism, detachment, or selfishness.

In terms of the present commentaries, Carver and Scheier forward a relatively strong, and in many respects inaccurate, critique of our concept of autonomy, but they were not alone. We use their comments as a platform for discussing what autonomy is and what it is not. Some of this discussion reiterates a prior dialogue on this matter (Carver & Scheier, 1999a, 1999b; Ryan & Deci, 1999), and although their current critique seems to have been altered somewhat by the prior debate, it is clear that they continue to wrestle with the meaning of autonomy.

Autonomy Is Neither Independence Nor Free Will

Repeatedly we argue that when we use the term autonomy what we are referring to is self-governance.

Autonomy is, as Carver and Scheier suggest, "self-direction, self-determination—plain and simple" (this issue). However, in no way does the idea of self-governance imply, either logically or practically, that people's behavior is determined independently of influences from the social environment (which is the straw man that Bandura, 1989, used to criticize the concept of autonomy), or that autonomy is "true independence of action...in effect, ...free will" (which is how Carver & Scheier herein characterize it).

We know of no real-world circumstances in which people's behavior is totally independent of external influences, but, even if there were, that is not the critical issue in whether the people's behavior is autonomous. Autonomy concerns the extent to which people authentically or genuinely *concur* with the forces that do influence their behavior. The issue is whether they are pawns (deCharms, 1968) to those forces, or, alternatively, perceive the forces as being valuable, helpful, and congruent sources of information that support their initiative. The functional differences in experience, quality of behavior, and outcomes that result from this differentiation are clear and were reviewed at length in the target article. Although a controversial point, we see this basic motivational truth as applicable across cultures, whether they are collectivistic or individualistic. Indeed, even the stability of a collective depends on people being relatively willing to adhere to its norms, practices, and values; and the health and performance of the participants involved depend on their experience of autonomy or volition in that adherence.

In a similar vein, we do not believe there is free will, even though there is autonomy. Free will, as the term is typically used, means essentially that behavior defies causation, that it is not lawful (see Deci, 1980). But, SDT is a scientific framework that assumes a lawful, causal determination of behavior, so the critical questions concern the nature of the causation and the principles by which behavior is lawful. SDT describes and predicts the occurrence of distinct processes by which behavior is determined or regulated, some of which are characterized as autonomous and some as controlled or amotivational. We assume not only that these forms of regulation differ experientially, but they also differ in their antecedents, their consequences, and their neuropsychological underpinnings (e.g., Ryan, Kuhl et al., 1997).

Autonomy Requires Integration

Carver and Scheier (this issue) assert that our use of the term autonomy to encompass the ideas of self-determination, coherence within the self, and the experience of freedom is quite different from common usage and that the issue of self-determination should be kept distinct from the issue of integration within the self.

For us, the fit is quite simple and straightforward, but it requires a shared understanding of the meaning of key terms or concepts.

Autonomy does mean self-determination as we noted earlier, and we have used the terms more or less interchangeably for 2 decades. Integration is the means through which the self develops, so integration is the basis of self-determination (i.e., of autonomy). If a behavioral regulation is well integrated into the self, the behavior is something with which the person fully concurs and the person experiences freedom. As such, the three notions are fully consistent and represent a unified and extensive portrayal of autonomy.

A possible basis for confusion in this portrayal, and one which Carver and Scheier acknowledge, concerns the meaning of *self*, which is the organizer or director of autonomous action. We briefly address this issue in the target article and discussed it at great length elsewhere (e.g., Deci & Ryan, 1991; Ryan, 1993). Within SDT, self is the set of integrated processes and structures that begins with the nascent self, composed of intrinsic motivation, the innate psychological needs, and the organismic integration process. Over time, additional material becomes integrated into the developing self, but the crucial point is that not all aspects of one's psychic makeup become part of the self. When a person is regulated by an introject, for example, one aspect of that person's personality dominates over others. Introjected regulation is not representative of true autonomy, and the demonstrated experiences of pressure, tension, and ambivalence, as well as the diminished quality of performance that accompanies introjects are all indicative of this fact. Thus, our definitions are not just philosophically informed, they are also empirically supported. Most social-cognitive theories, in contrast, consider self to consist of any and all internal regulatory schema and self-relevant cognitive structures. Thus, for example, controlling introjects would be part of the self, as would compartmentalized identities, addictive regulatory schema, and ruthless, relentless self-derogatory evaluations. All of those aspects may well be parts of one's psychic makeup that energize or direct action, but in SDT they are not considered integrated aspects of the self and therefore do not represent autonomy.

Consider this example, which is drawn from a clinical case we encountered. A soldier, entering a village from where shots had been fired, was ordered to kill an innocent person. He was of two minds: as a loyal soldier he believed in the importance of following orders; at the same time he knew that he ought not kill an innocent person. The clash of values suggests that his motive to kill (to follow the order) could not be integrated within the self, so it could not be done autonomously. He did kill the victim, but the action entailed one part of him dominating over other parts—a phenomenon easily recognizable to clinicians and, we suggest, to

anyone who takes interest in inner dynamics. Subsequently, this individual suffered post-traumatic stress caused by memories of such actions that he had been neither able to integrate nor to adequately repress.

Pyszczynski et al.'s example of Germans autonomously committing genocide begs for a similar analysis. In the SDT view, the perpetrators of those acts were sometimes acting from external regulations (a phenomenon documented by Milgram, 1965), from introjects (a formulation consistent with Arendt, 1971, and Browning, 1992), out of unintegrated, compartmentalized identifications (a view consistent with Goldhagen, 1996), or from all of them. To make and carry out their decisions to act required that they make external attributions for their actions or that they isolate their actions from their sensibilities as Christians or as compassionate human beings. Historical evidence for all three regulatory processes being at work is manifold, and it shows the necessity of understanding the multiple forms of internalization that may support cultural adherence. Importantly, although these three types of regulation do differ in their degree of autonomy, none of them represents full autonomy or self-determination as we use those terms.

Although these examples are extreme and involve a powerful inner conflict that must be defended against, there are many familiar and less potentially explosive examples in everyday life that also show the inexorable relation of integration to autonomy. When people buy environmentally destructive sport utility vehicles (SUVs) to impress their friends, they may experience pleasure with their purchase. But the behavior betrays a lack of mindfulness of themselves and their surroundings. In other words, it requires some amount of shutting out of information about the hazards to the earth and to people's health. The very process of shutting out rather than processing information, of defending against awareness, suggests a "divided self" that is acting without full endorsement. This is not to say that the act of buying an SUV is necessarily non-self-determined, for it is the underlying processes rather than the behaviors or outcomes themselves that are the defining features of autonomy. In other words, a person who needs the SUV for hauling in rough terrain, is mindful and regretful about the hazard, and has made a choice in light of the pros and cons could well be integrated with respect to owning the vehicle. To the extent that the potentially conflicted act was self-determined, it would likely have resulted from a meaningful consideration of the costs and benefits to themselves and to others of their engaging in the behavior.

Autonomy and Culture

There is another issue that represents a point of fundamental disagreement between SDT and the perspec-

tive of Carver and Scheier, who state in their commentary that “people in Western culture do seem to like to feel autonomous” but who “wondered how universal this desire really is...” (this issue). The issue, again, concerns the difference between needing something and wanting something. We maintain that all people need autonomy (whether they report wanting it or not), but we have no doubt that there are cultural differences in the explicit valuing or desiring of autonomy. In spite of the fact that several critics have made a similar argument, we have seen no evidence to indicate that autonomy is not important in other cultures (notably, collectivist cultures). In fact, we cite studies in our target article (e.g., Hayamizu, 1997; Yamauchi & Tanaka, 1998) showing relations between autonomy and well-being outcomes among Japanese school children. Hennessey, in her commentary, similarly offers evidence of undermining of creativity by rewards in Saudi children.

Carver and Scheier take issue with our interpretation of the Iyengar and Lepper (1999) study and asks, “why the Asian-American children who chose for *themselves* apparently did *not* feel autonomous” (this issue). Carver and Scheier’s question was based on an inaccurate presumption, as a careful examination of the results of the study indicates that the Asian-American children who chose for themselves did indeed feel autonomous. Specifically, the Iyengar and Lepper results showed that, in the first study, Asian-American (as well as Anglo-American) children who chose for themselves were highly significantly more intrinsically motivated (and thus, presumably, felt more autonomous) than Asian-American (and Anglo-American) children who were assigned a task by the experimenter. Thus, this study replicated exactly, with Asian-American as well as Anglo-American children, the initial study by Zuckerman, Porac, Lathin, Smith, and Deci (1978) that showed that participants who chose their activities were more intrinsically motivated than those assigned them by the experimenter. In their second study, Iyengar and Lepper similarly showed that tasks chosen by participants led to significantly more intrinsic motivation than tasks chosen by out-groups for Asian-American and Anglo-American participants, again showing results consistent with those of Zuckerman et al.

Carver and Scheier ask what evidence there is that the Asian Americans in the “trusted-others” conditions felt autonomous in accepting the trusted-others’ choices. There is no evidence on the issue in Iyengar and Lepper’s (1999) article, but it is a very important issue about which we are currently collecting data. Because we often argue that autonomous interdependence is at least as common a human state as autonomous independence, findings that some individuals are well integrated in their reference group would not, from an SDT point of view, be problematic. What

would be problematic is to find that children who willingly followed parental advice and displayed high intrinsic motivation felt forced or heteronomous in doing so. We know of no such evidence.

Autonomy Is Not Selfishness

Another source of confusion and disagreement about autonomy is that some people tend to align it with selfishness, power, and getting what you want. This showed up in Buunk and Nauta’s seeming equation of autonomy with dominance and in Pyszczynski et al.’s seeming equation of being autonomous and powerful. Dominance and power do allow control over outcomes (and might lead to the feeling of competence), but they certainly do not represent autonomy; indeed, the exerting of dominance and power are, we submit, much more likely to be energized by need substitutes and to be regulated controllingly rather than being energized by basic needs and regulated autonomously.

The same general issue appeared in Carver and Scheier’s suggestion that sociopaths could be autonomous in their deceitful or selfish actions. A wealth of clinical observations attests to the fact that the behaviors of antisocial personalities are not typically autonomous in the sense of being volitional, integrated expressions of the self—indeed they are often impulsive, poorly coordinated, and relatively unregulated by self-reflection. Further, evidence is clear that most persons with antisocial personality have histories involving serious need thwarting during their development. Indeed, it shows, consistent with SDT, that teenagers diagnosed with conduct disorders are likely to have come from homes characterized by excessive control, and low nurturance and warmth (T. Kasser et al., 1995). The *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. [DSM-IV] American Psychiatric Association, 1994) specifically cites parental abuse, neglect, and inconsistent discipline as etiological factors, attesting to the need deficits antisocial individuals have typically faced. Thus, as was the case with Buunk and Nauta’s examples, this example from Carver and Scheier turns out, when carefully examined, to support rather than contradict SDT’s position.

The sense of autonomy as selfishness is also implicit in Buunk and Nauta’s question about one person’s autonomy conflicting with another’s and in Pyszczynski et al.’s example of one person wanting autonomously to jam while another wants autonomously to nap. For us, such a conflict represents one of the challenges of life, and people’s homonomous tendency—their need for relatedness—involves a readiness to make adaptations as they work toward a meaningful integration with the social system. This is not to say that it is easy; what challenge is? Surely, there will be times of diffi-

culty as people work to feel autonomous while resolving the conflict to feel homonomous. Still, the needs to feel autonomy and relatedness are the bases through which the mutual solution can be achieved, for the irreparable antagonism between autonomy and relatedness that some commentators seem to suggest is not inevitable.

If, however, the individual jams despite the neighbor's request for quiet, there exists a strong possibility that the personal decision in that situation is not well integrated and thus lacks autonomy. For the person to jam autonomously would require two things: (a) that the individual truly wants to jam (that part is easy), and (b) that the individual truly concurs with the idea either that the neighbor does not have the right for quiet at that time or that the neighbor's concerns and goals are without merit. If the timing of the jam is 2 a.m., the fact of jamming while the neighbor wants to nap implies a lack of mindfulness, a lack of integration, and leads us to ask about the meaning of shutting out the neighbor. If it is 2 p.m., the person could, perhaps, in an integrated way, decide to jam despite the neighbor's desires, but that would require further analysis. Our point, simply, is that many behaviors that are "selfish" are not autonomous but are, indeed, quite the opposite.

As an illustrative empirical result, Sheldon and McGregor (2000) recently demonstrated that autonomy seems to predict less rather than more selfishness. In two studies, they examined the behavior of people espousing extrinsic versus intrinsic value orientations using the "Tragedy of the Commons" paradigm. They found that groups characterized by more extrinsically oriented individuals, who are typically characterized by less autonomy as Carver and Baird (1998) showed, behaved more acquisitively despite the fact that this competitive, selfish, strategy dearly cost themselves and the existing common.

Is Autonomy Illusory?

Another issue that was raised concerned whether autonomy is real or illusory. We believe that autonomous versus controlled regulation is a real distinction, not only functionally, but also in terms of neurological dynamics and processes (see Kuhl & Fuhrmann, 1998). Additional work of this sort will be important for understanding better what it means to say that autonomous regulation is actually different from controlled regulation. However, we also believe that there is already substantial psychological evidence indicating that autonomy is functionally real. Carver and Scheier state in their commentary that, "Perhaps the universal need is actually the need to screen away enough of the controlling pressures to *feel* the sense of self-direction, even if it happens to be illusory" (this issue). But from the point of view of a psychological em-

piricist, research indicating that the experience of autonomy (or, in their words, feeling the sense of self-direction) has a variety of specifiable consequences such as improving conceptual learning and flexible information processing and enhancing mental health and well-being is, *ipso facto*, evidence that it is more than just illusory. What would be necessary psychological criteria for autonomy to be real if not that the empirical specifications of autonomy versus control lead reliably to predictable consequences?

Approach and Avoidance Motivations Within SDT

A final issue concerning autonomy involves the relation of control theory's emphasis on approach-avoidance motivational systems and processes of self-regulation as described within SDT. In a previous exchange (Carver & Scheier, 1999a, 1999b; Ryan & Deci, 1999) we emphasized that autonomy could not be equated with approach behaviors, and controlling regulation could not be equated with avoidance behaviors, as Carver and Scheier attempted to do. For instance, the fact that behavior regulated by contingent rewards represents control according to SDT (and accordingly has been found to have negative consequences) contradicts any proposed isomorphism between approach and autonomy. We also presented compelling examples of avoidance behaviors that could be autonomous, as when an athlete wants to avoid further injury and thus decides to avoid certain risky behaviors in practices.

We do, however, agree that there is a certain amount of asymmetry, as was suggested by Carver and Scheier in their commentary. For example, there does appear to be a greater tendency for autonomous behaviors to be approach oriented. Still, the alignment is not a simple one. For example, being externally regulated, which we categorize as controlled, can be either approach (behaving to get a reward from a superior) or avoidance (behaving so your teacher won't get angry at you). Introjected regulation, in contrast, would likely be more closely aligned with avoidance; avoiding guilt is obvious, but seeking self-aggrandizement, although seeming to be approach, would require only the slightest scratching of the surface to reveal its true (avoidance) nature. We believe, in fact, that the major motivation underlying introjection is a fear of losing relatedness or love. Identified and integrated regulations, like external regulations, can concern either approach or avoidance goals. For instance one could be identified with the goal of avoiding fatty foods to decrease one's risk of heart attack. Still, many if not most identified and integrated regulations are approach oriented. Finally, we believe that intrinsically motivated behavior is nearly always approach in character, as one is hard pressed to think of examples of intrinsically motivated avoidance.

Relatedness as a Need: How Important Is It?

We postulate that fulfillment of all three basic needs is essential and necessary for growth, integrity, and well-being. Indeed, the point of some of our recent studies (e.g., Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva, 2000; Reis, Sheldon, Gable, Roscoe, & Ryan, in press) has been to show that well-being suffers whenever circumstances are such that people do not experience satisfaction of all three needs. According to SDT, satisfaction of all three needs is required for developing and maintaining intrinsic motivation, facilitating the integration of extrinsic motivation, fostering intrinsic aspirations, and becoming integrated with respect to the regulation of one's emotions. When we first introduced the concept of relatedness (Deci & Ryan, 1985; Ryan, Connell, & Deci, 1985) we were, as far as we know, the first to bring the idea of relatedness to bear in discussions of the underlying determinants of intrinsic motivation and the internalization of extrinsic motivation.

In the target article, we state that relatedness is important for intrinsic motivation, although with some tasks and some circumstances, a distal sense of relatedness is all that is required. On the other hand, we interpreted a study by Anderson, Manoogian, and Reznick (1976) as indicating that, for other tasks and circumstances, proximal relational supports facilitate intrinsic motivation. The reason for making this point was simply to acknowledge that there are many instances in which people experience interest and vitality while engaging in intrinsically motivated activities by themselves. In contrast, we emphasize that proximal feelings of relatedness are even more important for internalization and integration than for intrinsic motivation, because the desire to belong and feel connected is an absolutely essential contributor to people's willingness to take in and endorse values and behavioral regulations that are held by significant others. In other words, it is really people's homonomous tendency—that is, their desire to be integrated within a social sphere—that provides the principal impetus for internalization. In line with this view, our research shows repeatedly that relational supports do promote internalization and autonomous regulation (e.g., Grolnick & Ryan, 1989).

Despite this emphasis, four sets of commentators (Andersen et al.; Sansone et al.; Vallerand; Van Lange) either take issue with our statement that relatedness is not proximally necessary for intrinsic motivation in some situations or suggested that relatedness is more important than we indicated. Consider first the proximal necessity of relatedness for intrinsic motivation. Countless studies of intrinsic motivation, some even done by Sansone and colleagues and by Vallerand and colleagues, show high levels of intrinsic motivation in

situations in which people worked alone on interesting activities experiencing no relatedness with peers and probably little with the experimenter. It is perhaps because these were the types of studies that dominated the field during the 1970s and early 1980s that relatedness was not linked to intrinsic motivation until later. Our point is that, although we have seen instances of high levels of intrinsic motivation in situations in which there were not proximal supports for relatedness, we have never found instances of people sustaining a high level of intrinsic motivation when they do not experience competence and autonomy. Thus, although some studies indicated that interacting with others and feeling related to them can contribute to intrinsic motivation in various situations, it is also important to recognize that, although people are indeed social animals, they can also have moments of centeredness, excitement, and flow, when engaged in solitary activities.

Van Lange, referring to the example of a boy being paid to mow the lawn (Deci, 1971), argues in his commentary that it might be relatedness rather than autonomy that is undermined by rewards if the boy's intent had been to contribute to his family. We have no objections to that as a potential explanation of the undermining of autonomous motivation in this example, as Van Lange's scenario was quite plausible. Paying people to get them to do something you want them to do without taking account of their perspective could very well convey, as Van Lange suggests, a mistrust and lack of respect. We think it would be interesting to explore how rewards, threats, deadlines, and other events that undermine autonomous motivation affect people's feelings of relatedness. In fact, there is considerable evidence that prosocial behavior, which is frequently autonomously motivated, is readily undermined by rewards, which shift the perceived reasons of acting from relational ones to extrinsic ones (Fabes, Fultz, Eisenberg, May-Plumlee, & Christopher, 1989).

The Importance of Relatedness for Well-Being

The evidence is manifold that secure attachments and feelings of relatedness are associated with psychological well-being (see, e.g., La Guardia, Ryan, Couchman, & Deci, 2000; Ryan, Stiller, & Lynch, 1994). Not only we, but countless other investigators documented the importance of relatedness and provided evidence that we interpret as supportive of the notion that relatedness is a basic psychological need. Indeed, Baumeister and Leary (1995) made the case very convincingly that there is a psychological need for relatedness.

Thus, we believe strongly that relatedness is essential for growth and well-being. Andersen et al., in their com-

mentary, indicate that they give even greater emphasis to relatedness than we do. Although they, like Sansone and Smith and Vallerand, appear to misconstrue our position about the importance of proximal relational supports for intrinsic motivation, we nonetheless agree with them that relatedness is a primary need and an important motivator across the life span (Ryan & La Guardia, 2000). Still, we emphasize, as explained in what follows, that focusing on relatedness without also taking account of autonomy and competence can lead to suboptimal outcomes and prescriptions.

In real-life circumstance, there will be many instances in which people who feel relational supports from others will also feel supports for their autonomy. In such situations, they will likely experience satisfaction of the relatedness and autonomy needs simultaneously. Nonetheless, there will also be circumstances in which supports for one need without the other are present, and in those situations we predict diminished outcomes. For example, if a teacher provides choices and encourages self-initiation but does so in a way that is experienced as cold and rejecting, the students would likely evidence some decrements in motivation and well-being, just as they would if the teacher were warm and friendly but used controlling rewards and contingencies to ensure compliance. In other words, although Andersen et al. suggest that we do not give relatedness "independent status in well-being" (this issue), we do maintain that each need is independently necessary for well-being, and some of our studies, such as that by Reis et al. (2000) show that each of the three needs does make an independent contribution to the prediction of daily well-being. Moreover, research by La Guardia et al. (2000) showed that satisfaction of each of the three needs within relationships separately predicted security of attachment within those relationships. In other words, to feel securely attached to others, individuals had to feel a sense of autonomy, competence, and relatedness in their relationships with those others. Indeed, even when we controlled for relatedness, analyses showed that the experience of autonomy with relational partners was a robust predictor of security of one's attachment to those partners. However, although acknowledging the independent functional value of each basic need, we still do not ignore their dynamic interactions.

As noted earlier, our work focuses more on autonomy dynamics than on relatedness (or competence) dynamics because, of the three needs, that is the one that has been most neglected by empirically oriented psychologists. Still, we attempt to make clear that that does not mean we consider it more important for well-being, it simply means that our research tends to focus on the importance for mental health and effective functioning of the one need that so many other motivational psychologists have not only ignored in their own research, but have even eschewed as a meaningful concept.

Motivation and Social Cognition

Andersen et al. state that "most information processing models are silent on matters central to self-determination theory" (this issue) suggesting both that that may be the reason we assume such models are not relevant to SDT and that it would be interesting and important to work toward a rapprochement.

We of course believe that cognitive processes are central to motivation, and we agree that more research on social-cognitive processes represents an important future direction for research. However, before saying more about that, it is important to clarify one point. The field of social cognition contains a set of empirical techniques and a set of specific processes or mechanisms that describe how information is processed, decisions are made, and behaviors are prompted. We find the methods and processes compelling and provocative. Further, however, the field of social cognition has operated from a metatheoretical starting point that we described as relatively mechanistic, and as a result the field as a whole has made little attempt to consider crucial distinctions such as those captured by autonomy versus control, by growth motives versus deficit motives, or by rigid and defensive versus flexible and actualizing processes. Thus, as empiricists, we strongly endorse the use of social-cognitive methods and concepts to explore motivational phenomena, but at the same time, as organismic theorists, we strongly disagree with many of the metapsychological assumptions and formulations that characterized that field. Thus our differences will be located not in the realm of methods, but in the realm of interpretation.

We see many opportunities for integrating social-cognitive methods into the study of motivation, as Andersen et al. call for in their commentary and some investigators have already done. For instance Baldwin, Carrell, and Lopez (1990) showed how subliminal priming of authority figures affected the extent to which students experienced the figures as controlling and were in response more self-critical, a study that we think is informative regarding the nonconscious influence of introjects. More recently, Levesque and Pelletier (2000) primed participants for either intrinsic motivation or extrinsic motivation and found, subsequently, different levels of attitudes, affects, and intrinsic motivation (behaviorally assessed). Further, they developed an implicit measure of intrinsic versus extrinsic academic motivation to complement the explicit measure of intrinsic versus extrinsic academic motivation developed by Vallerand, Pelletier, Blais, Brière, Sénécal, and Vallières (1992). Importantly the researchers found that the two measures of intrinsic versus extrinsic motivation predicted different behaviors. The continuation of such research will undoubtedly yield important insights into the cognitive processes involved in the regulation of autonomous

versus controlled forms of motivation, and the relations of implicit and explicit cognitive processes to basic needs. Similarly, more research using thematic methods, as suggested by Bauer and McAdams in their commentary, may help shed light on how individual needs and integrative processes are expressed in life stories and spontaneous narratives, and how differing approaches to measurement converge with the experimental, self-report, and personal strivings approaches that have been more commonly used in SDT research.

Psychology, Social Responsibility, and Politics

As psychologists, we believe strongly that it is our responsibility not only to undercover and detail basic psychological phenomena but also to consider the relevance of these phenomena for improving the human condition. That belief does not lead us to value-applied research over basic research; indeed, quite the contrary. Nonetheless, we do place value on knowledge that has implications for structuring social circumstances to facilitate wellness or prevent illness, for intervening with oneself through processes such as awareness to accomplish one's goals or to feel more vital, or for informing public policy concerning the well-being of cultures. In part this is simply Baconian logic—the proof of a theory's validity lies in its predictive and practical value.

This belief was the basis for a somewhat critical comment we made about TMT in the target article and for some similar comments herein. Our comment about TMT, in turn, prompted Buunk and Nauta to state that they are “somewhat concerned about the political agenda that researchers working on intrinsic and extrinsic motivation sometimes seem to have” (this issue), apparently interpreting our agenda as anticapitalist. They cite our calling for research that can be used to facilitate “positive social change” and “promote human growth and well-being” (this issue) as examples of the political agendas they find distasteful. Remarkably, after they suggest that it was inappropriate for us to judge a theory in part on the basis of whether it has potential relevance for positive change, they go on to sing the praises of “rigidly following extrinsic motivation, that is, the desire to make money” (this issue) as the route to “people's well-being,” basing their comments, as near as one can tell, only on their opinions. Apparently they do not object to political agendas after all.

One aim of SDT is, indeed, to specify necessary conditions for promoting growth (intrinsic motivation), integrity (integration), and well-being. There can be no doubt that in doing that we endorsed the value of growth, integrity, and eudaimonic well-being and that our social or political agenda has, in fact, been to spec-

ify basic processes that have implications for promoting those values. SDT thus provides tools for questioning any and all interpersonal, social, and cultural structures. It asks the same questions about capitalism that it does about central planning economies and about fascist states; namely, in what ways do these systems facilitate or obstruct the fulfillment of psychological needs and promote human well-being? SDT can be critically applied with equal ease to individualistic arrangements and collectivist ones; to vertical organizations and horizontal ones; to competitive contexts and to cooperative ones. If the charges are that SDT takes its mission to be the explication of conditions that most optimally support human development and well-being, and that doing so is value laden, we plead guilty as charged. We invite more people in the field to commit such crimes.

Note

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