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Chapter to appear in Kruglanski, A., & Higgins, E. (2006), *Social Psychology: A handbook of basic principles*, 2nd Edition. New York: Guilford Publications

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"It is vain to do with more what can be done with less."

attributed to William of Occam (c. 1285–1349)

"There is always an easy solution to every human problem - neat, plausible, and wrong."

H. L. Mencken (1949), p. 443

It has been a long time since a chapter devoted to the subject of basic human needs appeared in a major handbook in social psychology; indeed, there has never been one (Gilbert, Fiske, & Lindzey, 1998; Higgins & Kruglanski, 1996; Lindzey, 1954; Lindzey & Aronson, 1968; 1985; Murchison, 1935). A search of chapter titles in the *Annual Review of Psychology* also came up empty. The discovery of these facts gave us considerable reason to pause. But as interest in using a motivational perspective for the generation of hypotheses and the interpretation of findings has increased (cf. Higgins & Kruglanski, 2000; Pittman, 1998; Pittman & Heller, 1987), theorists have begun to return to the question "What are the basic human needs?" It thus does seem to be an appropriate time to assess the ways in which ideas about basic human needs have been and are being used in social-psychological theories and research.

Rather than providing a thorough literature review of all research using constructs proposed to represent the operation of basic human needs, we instead review much more selectively the current state of theories about basic human needs, with a little historical context. We have chosen six theories for comparison. All of these theories have been given extensive explication and review elsewhere, so we will focus particularly on how these theories are structured and at what level of analysis they are designed to apply. We will find a little agreement but perhaps considerable food for thought.

Human Nature

What is human nature? Is there such a thing? Although it is not the way that social psychologists have approached this question, an informal consideration of other species in comparison suggests that there must be such a thing as human nature. We know that dogs are different from cats in many ways, and that neither is the same as a horse, a rat, a dolphin, or an orangutan. These mammals are very different in size and shape, but we also sense from their behavior that the differences among them go beyond those obvious physical characteristics. Humans share many basic similarities with all of these animals but are also unlike any of them in many aspects of their physical construction and, we suspect, in their psychological processes. But what are those psychological differences, and to what extent are they simply differences in degree (for example, in the extent of information processing capability) versus qualitative differences (perhaps, for example, in ambition, or in the inclination and ability to construct symbolic meaning)? Such questions are not easy to answer, but it is also the case that most of our work in psychology has not been designed to address them.

To pursue this line of thinking a bit further nevertheless, it is easy to distinguish a human from other animals based on physical appearance. Bipedal and relatively hairless would seem to do it. "Find the human" is not a common item on tests of intelligence. To make such distinctions based on behavior is also quite simple. A clue such as "makes automobiles" resolves all ambiguity as to which species we have in mind. Of course not all humans make automobiles, but archaeologists do not need to expend a great deal of energy answering the question "made by which species?" upon discovery of clay tablets,

tools, or pottery shards found in digs around the globe. Anyone reading this chapter indoors is surrounded by, sitting on, probably wearing, and using things fabricated by *homo sapiens*. Humans make things.

When we move into the realm of psychology, matters become more complex and considerably less clear. In considering what, psychologically, might constitute human nature, social psychologists have not taken up the method of cross-species comparisons illustrated in the musings above. In fact in psychology more generally, instead of looking for what is unique about human nature, psychologists have tried repeatedly to come up with a few general principles that are meant to apply across all or virtually all species, essentially arguing that psychologically all species are governed by the same fundamental principles. This approach constitutes a scientifically sound strategy, in the spirit of Occam's Razor, as an attempt to understand complexity by reducing it to a few simple laws that apply to many species. Familiar examples of this approach include the various serious attempts by behaviorists to explain everything in terms of basic principles of reinforcement (Hull, 1943; Pavlov, 1927; Skinner, 1938, 1981; Watson, 1930). These ideas were tested and refined extensively with experiments on rats and pigeons as well as humans, were extended into such realms as social learning (e.g., Miller & Dollard, 1941), attitude formation and change (e.g., Doob, 1947), and group behavior (Zajonc, 1965), and are still echoing in the traditional halls of economics. Here we have also found, repeatedly and particularly at social psychology's level of analysis, that as useful as such simple constructions have been, they are not adequate to the task of fully explaining, understanding, and predicting the behavior of humans (cf. Dweck, 1996; Festinger, 1957; Henchy & Glass, 1968; Kahneman & Tversky, 1979).

If social psychologists have not pursued a comparative or a multi-species approach, other than to show that simple cross-species analyses are not sufficient to understand human psychology, then how have they gone about the task of understanding human nature? Leaving aside the question of what makes humans distinctive or unique, and instead focusing on trying to understand human behavior in its own right, one approach (our subject) has been to specify the basic set of things that humans need. This is not the only way to proceed, and use of the need concept is not universally thought to be a good idea. But as part of a motivational approach to human behavior (also not embraced by all), trying to understand human nature means understanding the basic things that humans want and need. Of course we learn to want all sorts of things - even to need them - but can we find a fundamental and universal set of basic needs that characterize human nature? What are the fundamental dimensions of human desire, and how might understanding those basic human needs help us to understand human behavior?

What are needs, and do we need them?

"Man is a wanting animal and rarely reaches a state of complete satisfaction except for a short time. As one desire is satisfied, another pops up to take its place. When this is satisfied, still another comes into the foreground, etc. It is a characteristic of the human being throughout his whole life that he is practically always desiring something."

Maslow (1970), p. 24

Motivational approaches focus on the generative aspect of human behavior, on the forward moving, internally driven aspect of behavior that derives in part from internal impulses that include but also go beyond simple tissue deficits (see Higgins &

Kruglanski, 2000; Pittman, 1998; Pittman & Heller, 1987 for reviews of motivational research in social psychology). Motivational analyses do not, however, necessarily include the use of any assumptions about fundamental needs, nor do they necessarily embrace the emphasis on motives as internal drivers. Instead of employing the concept of need, some have argued for a focus on *incentives* and *goals* as the way to understand motivation. For example, on the question of the nature of control motivation (Pittman, 1993; Pittman & D'Agostino, 1989; Weary, Gleicher, & Marsh, 1993)), Bandura (1997) has argued against thinking of an inborn or acquired need for control as providing the *push* from internal motives, and instead in favor of the *pull* from anticipated environmental incentives. "Some theorists regard the striving for control as an expression of an inborn drive (Deci & Ryan, 1985; White, 1959)... In social cognitive theory, people exercise control for the benefits they gain by it. Some of these benefits may involve biological gratifications, but the striving for control is not a drive in its own right" (Bandura, 1997, p. 16). Similarly, this general Expectancy X Value incentive-based analysis, along with elaborations of the concept of negative feedback loops (Miller, Galanter, & Pribram, 1960), has been employed in Carver and Scheier's (1981;1998; 2000) approach to self-regulation. Research using goals and self-regulation of goal pursuit also tends to be either purely or primarily cognitive in its theorizing and does not depend on assumptions about basic needs (cf. Gollwitzer & Moskowitz, 1996; Kruglanski, 1996).

The approach to motivation represented in the theories on which we will concentrate is one in which motives are seen as variable internal states that, when activated or aroused, energize and direct behavior. In these models, *deprivation* and

deviation (from desired states) play a central role. In the early work on learning and conditioning, a common method for getting an animal prepared for a session would be to deprive the animal of food for some specified length of time. The practical effect of this practice was to create in the animal a real desire for food and a willingness to expend considerable energy to get it. Hungry rats will more reliably and persistently press a bar for food than will rats that are partially or completely satiated. It seemed clear, at least to many, that rats *need* food and are *motivated* to get it when deprived.

The recognition that there are physical nutrients such as food, water, and oxygen that are necessary for survival was used by theorists such as Hull (1943) to develop the concept of drive, a motivational force that provided the impetus toward behavior, an impetus that would wax and wane as a function of the extent of tissue deficits. As we have said, early attempts were made to explain all of animal (including human) behavior with a small set of learning and conditioning principles based on these tissue deficits. But the work of psychologists such as White (1959) on effectance, Hunt (1965) on optimal levels of stimulation, Berlyne (1960) and Harlow (1953) on curiosity, and Festinger and Carlsmith (1959) on the inverse relationship between incentives and attitude change began to make it clear that to understand the complexity of human behavior it would be necessary to go beyond simple principles of learning and an exclusive reliance on building only on basic tissue deficit needs such as hunger and thirst.

How should needs be defined?

"It is characteristic of this deeper analysis that it will always lead ultimately to certain goals or needs behind which we cannot go; that is, to certain need-satisfactions that seem to be ends in themselves and seem not to need any further justification or demonstration.

These needs have the particular quality in the average person of not being seen directly very often but of being more often a kind of conceptual derivation from the multiplicity of specific conscious desires. In other words then, the study of motivation must be in part the study of the ultimate human goals or desires or needs."

- Maslow (1970) p. 22

A source of potential confusion lies in the varying meanings that are intended when theorists use the term *need*. *Webster's Seventh New Collegiate Dictionary* (1963) defines the noun *need* as a lack of something required, useful, or desired. Defining a need as something that is required leads to a set of implications that are quite different from those that would follow from defining a need as something that is useful, or desired.

Some needs are clearly required, necessary in that without them the organism would, in a relatively short time, cease to be alive. Without food, a human would survive for a period of time conveniently counted in weeks; without water, days. In the frigid waters of the North Atlantic or the Arctic Sea, mariners know that death from hypothermia following immersion would come in a matter of minutes. Without oxygen, human life only endures for seconds, perhaps a few minutes. These required forms of sustenance, the antidotes for otherwise fatal tissue deficits, provided the foundation for early studies of the phenomena of learning and conditioning (cf., Cofer & Appley, 1964).

Sexual relations, however, although needed in the sense of being required for the continued existence of a species and needed in the sense that they are at times strongly desired and clearly biologically-based, are not necessary for individual survival in the same sense as are food, water, and air. Although sexual desire can be considered in terms

of drive, and as something fundamentally desired, it is not needed by the individual in the same way as food and water are needed.

When social-psychological theorists talk about basic human needs, they are usually not talking about tissue deficits but such things as control, understanding, or self-esteem. It is worth thinking about what this use of the term *need* actually is intended to mean. One possibility is to consider that some basic needs are necessary for continued existence, but that the time scale for continued existence without satisfying those needs is more conveniently measured in years or decades rather than in minutes, hours, or days. We can take for an example the assumption that there is a need to belong (Baumeister & Leary, 1995). A need to belong is included in a number of the theories to be considered. At the beginning of life, survival without the assistance of others is not possible, because it is only with their help that an infant can obtain basic sustenance. At such young ages, social support is just as essential as food and water for survival. But beyond those early years, the data on survival rates as a function of the extent of social support (cf. Deeg, van Zonneveld, van der Maas, Habbema, 1989) would still be consistent with this definition of basic need, i.e., something that is required for existence, but the time scale for damage due to deprivation would be considerably longer than it is at the beginning of life.

However, instead of using a definition of need as something required for existence, most current social-psychological theories of basic needs employ some version of the concept of *thriving*. For example, Deci and Ryan (2000) argue that truly basic needs are those that influence a person's well-being. Experiences that satisfy these basic needs are thought of as nutriments, and insufficient amounts of these nutriments result in

a failure to thrive. Inadequate degrees of satisfaction of these basic needs may not lead to premature death, but instead are revealed in the failure to achieve one's potential or to function as well as one might under more optimal conditions of need fulfillment. Need satisfaction should promote well-being and psychological thriving (Sheldon, Elliot, Kim, & Kasser, 2001). Those emphasizing survival-oriented considerations (e.g., Fiske, 2004; Pyszczynski, Greenberg, & Solomon, 1997) also seem to use the concepts of basic needs or motives as something that will leave the organism better off and probabilistically, if not necessarily individually, more likely to survive and thrive if satisfied.

Baumeister & Leary (1995), in their argument for considering belongingness to be a basic human need, suggested a set of criteria that could be used to evaluate whether a need is truly fundamental, distinguishable from needs that may be derived from other more fundamental ones. They argue that a *fundamental need* should:

- (1) produce effects readily under all but adverse conditions,
- (2) have affective qualities,
- (3) direct cognitive processing,
- (4) lead to ill effects when thwarted - e.g., poor health or adjustment,
- (5) elicit goal-oriented behavior designed to satisfy it—subject to motivational patterns such as object substitutability and satiation,
- (6) be universal in the sense of applying to all people,
- (7) not be derivative of other motives,
- (8) affect a broad variety of behaviors,
- (9) have implications that go beyond immediate psychological functioning.

Although adoption of this or some similar set of criteria might seem sensible and broadly compatible with how the concepts of basic motives or needs are typically used in social-psychological theories, such tests are not typically employed by theorists to develop or evaluate a set of basic needs. Instead, the more common strategy is to pursue a hypothetico-deductive process of hypothesis generation and testing given the assumed basic need structure.

How many needs do we need?

In social and personality analyses, the notion of needs characteristic of the human organism had an early history, as did the recognition that specification of internal cognitive, emotional, and motivational processes would be required for an effective approach to understanding human psychology. But whether this approach also needed to include a specification of basic human needs was and continues to be a matter on which theorists disagree. Making lists of needs began to acquire a bad reputation with McDougall's (1926) concept of instincts, an approach that was soon rejected for using circular reasoning and leading to a plethora of assumed inborn tendencies. Murray's (1938) list of more than 20 needs was also seen by many as going down a path that would only lead to longer and longer lists, of dubious usefulness. It may be that the baby was thrown out with the bath, however, as the majority of experimentally inclined social and personality psychologists eschewed using the concept of basic needs altogether in favor of a focus on situational constraints and individual differences as the twin paths to understanding.

Most of those who made specific motivational assumptions, for example Festinger's (1957) use of the consistency principle as a source of motivation, took no

clear position on whether these motives were acquired or innate, and also tended to focus on a single motivational dimension. This is still the dominant approach. Investigators can assume that something (e.g., self-esteem) is a strong motive or need and use their theoretical assumptions about how it works to generate hypotheses. They can do so without having to take a position on whether it is a fundamental need or an acquired motive, a derived motive based on some more fundamental need, or on what other needs also might be fundamental. This approach leads to what are sometimes described as mini-theories as opposed to theories with a more comprehensive sweep.

Recently we have seen a re-emergence of interest in specifying the set of basic needs, with an eye toward sticking to a short list that would avoid the criticisms that had been applied to the long and lengthening sets of needs of earlier theorists such as McDougall and Murray. Given the checkered past of long lists of needs, these theories confine their basic set to a number that can be counted on the fingers of one (human) hand. Before proceeding to our set of comparison theories, a brief review of Murray's approach provides a transition to the current theories of basic human needs that we will compare. Considering Murray's list may offer a useful perspective on the question of how many needs should be specified in the set of basic human needs.

Murray's List of Needs – A Nest of Boxes?

"...the list of drives one chooses to list depends entirely on the degree of specificity with which one chooses to analyze them. The true picture is not one of a great many sticks lying side by side, but rather of a nest of boxes in which one box contains three others, and in which each of these three contains ten others, and in which each of these ten contains fifty others, and so on."

- Maslow, 1970, p. 25

Murray's (1938) list was generated empirically and resulted in a large and well-known set of both manifest and latent needs. Several of these needs have been investigated intensively, particularly the needs for achievement (Atkinson, 1958; Atkinson & Raynor, 1978; McClelland, Clark, Roby, & Atkinson, 1949; McClelland, 1958), for power (McClelland & Watson, 1973; Winter, 1973; Fiske & Berdahl, 2006), and for affiliation (Schachter, 1959; Baumeister & Leary, 1995), but many of the others have been less well-studied, if not forgotten. What is remembered is that the list was too long. However, another look at Murray's (1938) analysis shows that the question of exactly how many needs he identified can be answered in more than one way. Although Murray did list 20 manifest needs, they were presented in 9 groups. These nine groups were not named, but we have taken the liberty of doing so in Figure 1. Murray also noted that most of these manifest needs were represented by four basic reaction systems, also shown in Figure 1. In the spirit of Maslow's nesting boxes metaphor, the number of needs identified by Murray could be 20, nine, or four (see Figure 1). Or five: Costa & McCrae's (1988) analysis of the Jackson (1984) Personality Research Form suggests that Murray's needs as measured by the PRF can largely be captured by the Big Five set of personality dimensions.

As we turn to the six theories chosen for comparison, it is worth remembering that the number of basic human needs is to a large extent dependent on the level of definitional generality or specificity being used by the theorist. All of these theories present a set of basic motives ranging in number from three to five, but it is instructive to remember Maslow's nesting boxes metaphor, as illustrated by the various ways of

counting up the manifest needs identified by Murray. In some cases, we can easily imagine reducing the set of basic needs that is proposed to fewer, or expanding it to more if we are willing to move to a more specified level of detail.

Theoretical comparisons

Six need theories will be compared: Maslow's (1943) Hierarchy of Needs; Core Social Motives theory (Stevens & Fiske, 1995; Fiske, 2004); Terror Management Theory (Pyszczynski, Greenberg, & Solomon, 1997); Attachment Theory (Bowlby, 1969); Cognitive-Experiential Self-Theory (Epstein, 1992); and Self-Determination Theory (Deci & Ryan, 1980, 2000). We will focus on two general dimensions of these theories: how they structure the set of basic needs, and how those needs are distributed across levels of analysis. Although these are certainly not the only theories of basic needs we could have chosen to compare, they are representative and include among them several current theories that have led to a considerable amount of research.

Structural Assumptions in Theories of Basic Human Needs

One of the ways in which theories about basic human needs differ lies in the proposed structure of those needs. These structural assumptions vary considerably. We have included for comparison a *hierarchical model*; several theories that specify a *root primary need* to which other needs are related; a theory that proposes a *system of checks and balances* across a conscious/non-conscious divide; and a theory including a proposed *set of independent needs*. These structural variations are illustrated in Figure 2.

Hierarchical Structure

Maslow's Hierarchy of Needs. It could be said, with only a bit of exaggeration, that this is a theory that everyone knows, and no one uses. Typically portrayed in

introductory textbooks in a familiar pyramidal figure, the basic structural assumption is that some needs take precedence over others, and that those more fundamental to existence must be satisfied before others will be addressed (Maslow, 1943). The theory is often portrayed, and we have done it again in Figure 2, as having five levels representing five types of needs. In fact, Maslow discussed a much more nuanced division of needs, so that one could argue about the actual number of needs that he thought were fundamental, as his "nesting boxes" quote at the beginning of the earlier section on Murray suggests. But regardless of the number of needs that are specified, the invariance of any such hierarchy is easy to call into question. We have ample examples of needs higher in the hierarchy taking precedence over those said to have priority (in the case of basic sustenance we find people starving themselves to death for the sake of appearance, to save a loved one, or in service to a cause). In actual operation, it becomes difficult to see how in specific settings this hierarchy could either hold up or make testable predictions, particularly at the higher levels of the hierarchy. This may be why the theory has not generated a great deal of empirical research.

There are other current theories that use the notion of a hierarchy. Steele's (1988) Self-Affirmation Theory is an example. When threatened with an inconsistency (Steele & Liu, 1981; 1983) or a failure (Liu & Steele, 1986), self-affirmation theory predicts that these concerns can be taken care of at the level at which discomfort was created (achieve consistency, regain control) or at the higher level basic need to feel good about oneself (affirm self). Note that in this model, the most important need is the one highest in the hierarchy. This also illustrates an advantage of more targeted and bounded theories. In such theories predictions and explanations are limited to the particular conditions under

which the processes specified in the model should operate. By not claiming to capture every aspect of basic human needs these theories have the advantage of being more easily testable, even if the overall import of the analysis is on a scale less grand.

Maslow's theory has been most influential in organizational psychology and related fields as a model of motivation, but has not itself motivated a great deal of empirical research. The concept of self-actualization, however, has been influential in the construction of other current theories, most notably in Self-Determination Theory. Our discussion of that theory will come later, but we note here that a hierarchical version of Self-Determination Theory has been offered by Vallerand (2000).

Root Need Structure

Another basic kind of theoretical structure is one in which a single need is identified as the most important one. This *root need* is either more important than the others, is the one to which the others are closely related, or the one from which the others are derived. Three different versions of root need models are discussed.

Core Social Motives Theory. Based on a comprehensive literature review of a wide variety of writings on basic needs and motives, Stevens and Fiske (1995) argued that there was overall agreement on five basic needs. Fiske (2002; 2004) continued to develop and elaborate this set of basic needs, or core social motives, using the BUC(K)ET acronym as a mnemonic device for the five motives: *Belonging*, *Understanding*, *Controlling*, *Enhancing Self*, and *Trusting* (leaving the K for students to play with if they would like to imagine a sixth motive). In this system, *belonging* is the root need, the essential core social motive. The others are all said to be in service to, facilitating, or making possible effective functioning in social groups. No structural

relation among the five motives is specified, but we have visually arranged this theory in Figure 2 with belongingness at the center and the other four motives arranged around and connected to it.

As implied by its name, this theory is specifically designed to apply to needs that arise in social settings. "Core Social Motives describe fundamental, underlying psychological processes that impel people's thinking, feeling, and behaving in situations involving other people" (Fiske, 2004, p. 14). A basic assumption of this theory is that underlying all of the basic needs is an evolutionary process that has led to these characteristics of human nature because they promote survival of the individual through belonging in groups. Although this kind of imagined evolutionary, survival-oriented thinking is not logically a required aspect of a theory of basic needs with a root need structure, in fact such thinking has been employed in the development of all three of the root need theories in Figure 2.

Core Social Motives theory has been used primarily as an organizing structure for understanding a wide variety of social-psychological research (Fiske, 2004). At this writing, it had not yet been used extensively to generate and test new research questions, and may need some further development to generate testable hypotheses.

Attachment Theory. We should begin by making it clear that Attachment Theory was not put forward as a theory of basic needs. Instead, Attachment Theory (Bowlby, 1969) was developed as a goal-corrected systems version of control theory (cf. Bandura, 1997; Carver & Scheier, 1981, 1990, 1998, 2000), without reference to needs. In fact, Bowlby explicitly objected to use of the need concept. His reasons included his apprehension about the difficulties inherent in using what we would call the strong form

of the term (i.e., required for continued survival of the organism) given that humans can survive if not thrive even when several of the attachment systems remain unsatisfied. He was also concerned that the use of the need concept, in which action is designed to create some preordained future state, might invite in "the fallacy of teleology" (Bowlby, 1969, p. 137).

Even so, we have included attachment theory in our set of comparisons. Specifying an attachment system as the central organizing principle, this theory is based on deprivation and deviation, with self-correcting control systems that could easily be thought of as need-based and motivational in character, even if Bowlby preferred not to do so. The attachment, caregiver, and affiliation systems could all be thought of under the heading of belongingness or relatedness. Viewed in this fashion, belongingness is seen to be a complex set of compatible but quite different processes (nesting boxes). Most of the work with adult attachment has focused on styles of attachment (secure, anxious, ambivalent) as they play out in adult close relationships (Ainsworth & Wittig, 1969; Hazen & Shaver, 1994; Reis & Patrick, 1996; Rholes & Simpson, 2004). Attachment Theory also includes an exploration/play system that provides a dimension of comparison with Self-Determination Theory and with Terror Management Theory. It includes as well a fear-wariness system that has been traditionally addressed with motivational analyses, and this provides a general point of contact with the pleasure/pain aspect of Cognitive-Experiential Self-Theory. The theoretical root need structure of this developmental theory also introduces a developmental change aspect to our discussion.

Bowlby did relate attachment and closeness to the survival needs of nurturance and security. This distinction forms the basis for the survival functions underlying

promotion (nurturance) and prevention (security) focus in Regulatory Focus Theory (Higgins, 1997; 1998; 1999) and in the previous Self-Discrepancy Theory (Higgins, 1987, 1989). Regulatory Focus Theory is a kind of need distinction model, without strong claims about evolution but employing Bowlby's notion of survival through nurturance and security. The emphasis in this theory is on how the need-related orientations (promotion vs. prevention) are strategically carried out rather than on the orientations themselves. In this way, it is like Terror Management Theory's emphasis on the defensive systems based on survival needs and the apprehension of mortality rather than the on needs themselves.

Terror Management Theory. Terror management theory (Pyszczynski, Greenberg, & Solomon, 1997; 2000) assumes that *self-preservation* is the root need or master motive for all other needs, including those based on tissue deficits and the derived *symbolic-defensive* and *self-expansive* desires. This root need, survival, is said to be the over-riding desired end state. But given the fact of mortality, this creates an existential crisis for humans who are perhaps uniquely aware of their inevitable demise (Becker, 1973; Freud, 1933; Rank, 1976). "According to TMT, the self-preservation instinct - the goal of staying alive - is the superordinate goal toward which all behavior is oriented. All other motives are, in one way or another, derived from and subservient to their "prime directive"." (Pyszczynski et al., 1997, p. 5)

The assumption that there is a single underlying motive from which all others are derived is similar to other single motive approaches (e.g., the hedonic assumption of approach and avoidance of basic learning theories; the rational self-interest assumption in economic analyses; the reproductive/species survival assumption of evolutionary

analyses). However, at the social-psychological level of analysis it has the interesting character of motivating primarily defensive behavior designed to distract from or comfort in the presence of mortality salience. This also could be considered to be a hierarchical structure of a different kind. The root need, combined with the knowledge of the inevitability of death, creates a uniquely human need to deal with the knowledge of one's own inevitable mortality, leading to two fundamental defensive needs.

Terror Management Theory specifies three sets of motives. *Direct motives* include the need for food, water, and temperature regulation as well as instinctive reactions such as flinching from noise and recoiling from pain. But the bulk of the empirical research inspired by TMT is focused on the *defensive motives*:

Instinct for self-preservation → fear of death → defensive motives:

(a) pursuit of self-esteem

(b) faith in the cultural worldview

The empirical research literature on these defensive motives is extensive, enough so to have its own *Handbook of Experimental Existential Psychology* (Greenberg, Koole, & Pyszczynski, 2004).

More recently a growth component has been added to TMT, perhaps in an attempt to address the ground covered by Self-Determination Theory. Unlike SDT, these *self-expansive motives* are also connected to the root need for survival. Although fear of death apparently motivates only the symbolic defensive system, self-preservation, underlies all three systems.

"A human being with a capacity to do nothing other than maintain an interior homeostasis and defend against physical and psychological threats would have

little chance of long-term survival in a complex and changing environment. Such an animal must also be inclined to explore, assimilate new information, and integrate that information with its existing conception of the world, because survival depends on the development of an adequate understanding of the environment and a complex set of skills for interaction with that environment. Thus it seems clear that a motive for growth and expansion of one's capacities (e.g., Deci & Ryan, 1991; Maslow, 1943; Rank, 1932/1989; White, 1959) would make good evolutionary sense in that it would greatly increase the animals (*sic*) chances of surviving long enough to reproduce."

(Pyszczynski et al., 1997, p. 6)

The addition of self-expansive motives to Terror Management Theory creates some interesting conflicts and contradictions. An organism motivated to explore, grow, and expand is a risk-taking organism. Existential terror would seem to be at odds with such an inclination. One possible solution to this problem would be to adopt the perspective of evolutionary theory (Buss, 1997), in which reproductive success rather than individual survival is considered to be the fundamental driver and crucial selector in evolutionary change. Or one might argue, with Woodworth (1958), that people wish to survive so that they can go about their business, rather than going about their business in order to survive - and in evolutionary terms their business is to reproduce for the sake of their species. However, this view tends to subordinate what is supposed to be the master motive, self-preservation. The potential for tension between the defensive and self-expansive systems provides fertile ground for future research in Terror Management Theory.

Check and Balance Structure

Cognitive-Experiential Self-Theory. Cognitive-Experiential Self-Theory (CEST) is a global theory of personality, heavily influenced by psychodynamic thinking (Epstein, 1992; 1993; 1994; Epstein & Pacini, 1999). Epstein proposes that people process information via two fundamentally different (although related) systems. These two systems - *rational* and *experiential* - function in the formation of schemas, and in the more general information processing required for individuals to adapt to their surroundings. Although these two systems may be combined in the completion of a single act, they operate according to different rules. The experiential system is affected predominantly by emotions, relying on intuition and heuristic cues; it functions automatically (without the conscious deliberation characteristic of the rational system), organizing experiences and directing behaviors. By contrast, the rational system is assumed to be wholly conscious and affect-free, driven instead by analytical thought and socially mediated knowledge. From a psychodynamic perspective, the influence of the experiential system on the rational system is parallel to that of the unconscious on rational, waking thought. However, Epstein's specification of the 'preconscious' modifies the psychodynamic unconscious with the cognitive unconscious based on contemporary experimental psychology.

Cognitive-Experiential Self-Theory assumes that there are four fundamental human needs: (1) to maximize pleasure and minimize pain; (2) to maintain a stable, coherent conceptual system for organizing experience; (3) to maintain relatedness to others; and (4) to maintain a positive sense of self-esteem. Different from the other theories in our comparison set, CEST assumes these four needs function in a system of

checks-and-balances at both the rational and experiential levels, helping to keep behavior within adaptive limits. For example, if one need is fulfilled at the expense of the others, these other needs become more insistent, serving to moderate the strength of the first need. Consequently, behavior is influenced simultaneously by all four needs, and tends not to be dominated by any one need in particular. The specification of checks and balances among needs is in essence the opposite of the assumptions of hierarchical theories, in which some needs take precedence over and may have to be satisfied before others. It also differs from the root need theories in that balance among needs rather than the precedence of a root need is assumed.

Evidence for the utility of Cognitive-Experiential Self-Theory comes from studies on the nature of inferences in the two systems (Kirkpatrick & Epstein, 1992); on inconsistencies in the literature on depressive realism (Pacini, Muir, & Epstein, 1998); on the use of the theory in justice research (Krauss, Lieberman, & Olson, 2004; Lieberman, 2002); and in understanding individual differences as revealed in thinking in the two systems (Epstein, Pacini, Denes-Raj, & Heier, 1996) and in temperament (Teglas & Epstein, 1998).

The distinction between a conscious, deliberative and rational system as opposed to a non-conscious, intuitive and emotional system is seen in a number of other contemporary theories. For example, Metcalfe and Mischel (1999) have proposed a distinction between "hot-cool," *know* and *go* systems that determine self-control. Strack & Deutsch (2004; 2006) proposed a *reflective-impulsive* model that is very similar in overall conception to the rational-experiential distinction, although Strack & Deutsch's model relies much more on associative network assumptions to understand the operation

of the impulsive system. McClelland, Koestner, & Weinberger (1989) argued for a distinction between *implicit motives* and *self-attributed motives*. At the level of emotion and preference, Zajonc (1980) demonstrated that *preferences need no inferences* in a seminal paper that argued for a distinction between affective and cognitive systems. However, none of these other theories are about the set of fundamental needs. In that regard, it is the articulation of four basic motives operating among each other and across the cognitive-experiential divide that sets Cognitive-Emotional Self-Theory apart from these other approaches.

Independent List Structure

Self-Determination Theory. Deci and Ryan (1980, 1985, 1991, 2000) proposed three basic human needs: *autonomy*, *competence*, and *relatedness*. Deci and Ryan (2000) have also provided a very clear elaboration of how they use the concept *need*:

"human needs specify the necessary conditions for psychological health or well-being and their satisfaction is hypothesized to be associated with the most effective functioning" and that "we assert that there are not instances of optimal, healthy development in which a need for autonomy, relatedness, or competence was neglected, whether or not the individuals consciously valued those needs. In short, psychological health requires satisfaction of all three needs; one or two are not enough"

(Deci & Ryan, 2000, p. 229).

We have classified this theory as one with an independent need structure because although it is clearly stated that all three needs must be satisfied, the theory does not specify any structural organization among those needs. There is no hierarchical structure,

no root need that is said to be more basic or more important than the others, no system of checks and balances. All three needs must be satisfied for optimal functioning according to the theory, but each need has its independent set of requirements.

Over the past 30 years Self Determination Theory (SDT) has generated an extensive empirical literature, more so than any of the other theories we have chosen for this review (see for reviews, Deci, Koestner, & Ryan, 1999; Sansone & Harackiewicz, 2000), including its own *Handbook of Self-Determination Research* (Deci & Ryan, 2002). We have shaded the need for autonomy in Figure 2 because that is the need that gave the theory its name, and is the one that has received the earliest and most consistent research attention. The work of deCharms (1968) on internal and external perceived loci of control (Rotter, 1966) was part of the original thinking about the need for autonomy. The concept of autonomy can also be related to Brehm's (1966; 1993) work on Reactance Theory with its concept of *behavioral freedoms*. When a perceived behavioral freedom is eliminated or threatened with elimination, reactance motivation increases the attractiveness of that freedom and motivates the person to reestablish that freedom. In this context, Self-Determination Theory suggests that the set of behavioral freedoms needs to be more (perhaps much more) than zero for the individual to thrive. From another perspective, in the current context of theories of self-regulation and self-control (cf. Wegner & Wenzlaff, 1996), the need for autonomy might be taken to mean that individuals need to engage in autonomous self-regulatory activities to a sufficient extent, or well-being will suffer. From this viewpoint, self-regulation is not only something that humans can do, it is something that they need to do.

The need for competence, in the tradition of White's (1959) analysis of effectance motivation, refers to a need for effective interaction with the environment, and in a different sense to Murray's (1938) need for achievement. In the early versions of Self-Determination Theory, the combination of autonomy and competence was found to underlie intrinsic motivation (Deci, 1975) and both generated merged with a considerable amount of research on the nature of competence motivation (Boggiano & Pittman, 1992; Elliot & Dweck, 2005). Research combining the individual difference approach to achievement motivation (e.g., McClelland & Watson, 1973) with an experimental approach to research on intrinsic and extrinsic motivational orientations (e.g., Pittman, Boggiano, & Ruble, 1983) has proven to be a particularly fruitful avenue for empirical research on the effects of intrinsic, achievement, and competence motivation (Harackiewicz, Sansone, & Manderlink, 1985; Harackiewicz, Manderlink, & Sansone, 1992; Sansone & Harackiewicz, 2000).

The need for relatedness has not received as much empirical attention, perhaps because it is a more recent addition to Self-Determination Theory. In the research on intrinsic motivation, relatedness has been studied through its role as a source of support for autonomy and competence (e.g., Ryan & Grolnick, 1986; Ryan, Stiller, & Lynch, 1994). Here there is a clear connection with Attachment Theory, particularly with Ainsworth & Wittig's (1969) use of the 'strange situation' in research on the exploration-play system (see Figure 2). In this work, the attachment system provides a secure base for exploration. The security provided by satisfaction of the need for relatedness is seen in Self-Determination Theory as an important influence on the ability of persons to engage in the pursuit of autonomy and competence (Ryan & LaGuardia, 2000). Relatedness has

played a more direct role in the analysis of the process of internalization. The extent to which extrinsically imposed rules and regulations, cultural prescriptions, and shared habits of thought and action, become integrated and part of a person's way of satisfying intrinsic motivation depends very much on the nature of the relationship between the individual and socializing agents. Internalization is most likely when relatedness needs are satisfied in a way that also promotes feelings of autonomy and competence (Grolnick & Ryan, 1989; Deci & Ryan, 2000).

Self-Determination Theory makes clear predictions about the overall effects of satisfying or failing to satisfy basic needs on individual functioning. Satisfaction of the three basic needs should promote optimal development, while failure to satisfy any one of the needs should interfere with that development. These predictions have been tested in studies of the relation between need satisfaction and well-being. In addition to positive affect, Deci and Ryan (2000) define well-being as "an organismic function in which the person detects the presence or absence of vitality, psychological flexibility, and a deep inner sense of wellness (Ryan & Frederick, 1997; Ryan, Deci, & Grolnick, 1995)." These predictions have been tested with measures of well-being in studies relating daily experiences with autonomy and competence (Sheldon, Ryan, & Reis, 1996), and with autonomy, competence, and relatedness (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000).

The theory can be and has been criticized for being too optimistic about human nature (e.g., Pyszczynski, Greenberg, & Solomon, 2000), and also for not allowing sufficiently for the possibility of joy in the pursuit of extrinsic goals (e.g., Sansone, 2000).

Levels of Analysis in Theories of Basic Human Needs

By limiting themselves to three to five basic needs, all of these theories are comparable in their level of generality, in the sense of Maslow's metaphor of the nesting boxes. But in other important ways, their comparability is problematic. One important dimension of difference lies in the level of analysis at which each of the proposed basic needs is assumed to operate. Scientific disciplines are distinguished by their predominant level of analysis. While physicists typically work at the level of atomic and sub-atomic particles, biologists are more likely to work at the level of the cell or the organism. Psychologists take the perspective of the individual, while sociologists and economists tend to develop their analyses at the level of social groups. Although all six of our social-psychological theories of basic human needs do take the perspective of the individual, within that perspective they still can be understood to vary in the levels of analysis they employ. To illustrate these kinds of differences, we discuss three different levels of analysis as they are represented across these six theories: basic or biological-level needs, needs operating at the level of the individual, and needs operating at the level of the individual in social groups (see Figure 3). We recognize and want to state clearly that this rather crude classification scheme runs the risk, perhaps the certainty, of distortion through over-simplification. Our purpose in using these broad classifications is primarily to illustrate that social-psychological theories of needs are not always operating at comparable levels of analysis.

Theoretical Comparisons within Levels of Analysis

Basic/Biological-level Processes. At the level of basic or biological processes are needs that are probably not so different in their fundamental action across a wide variety of species. In addition to the need for food, water, temperature regulation, and oxygen,

this level of analysis includes needs involving basic processes such as fight or flight mechanisms of survival, and fundamental psychological processes of learning and change based on classical and instrumental conditioning. This is a level of analysis that is typically assumed to be important but not commonly chosen for study by social psychologists. It is, however, represented in several of the theories under consideration.

Maslow's Hierarchy starts at its base with needs at the physiological level. These most fundamental needs are assumed to take precedence over all others. In addition, the need for safety and security can be considered to fall into this level of analysis, at least partially if not entirely. One of the four basic needs in Cognitive-Experiential Self-Theory, pleasure/pain, also can be classified as a basic biological level need. In Attachment Theory, we could think of the Fear-Wariness system as operating at this level. In Terror Management Theory, the survival motive and its resulting need for self-preservation also operates at this level. We think that two of our six theories, Self-Determination Theory and Core Social Motives, do not address needs at this level of analysis (see Figure 3).

Although four of the six theories do specify needs at this level, none of them have focused empirically on those needs. The three theories that have generated a substantial amount of research have not done so at this level. That is to be expected given that these are the theories of social and personality psychologists. However, in two of the theories the needs at the basic/biological level of analysis are given particular theoretical importance. In Maslow's Hierarchy, it is the level of need that takes precedence over all others. In Terror Management Theory, it is the home of the "master motive," survival. None of the other theories give such fundamental precedence to needs at the

basic/biological level, instead locating their most important or root needs at the individual or the social group level of analysis.

Individual-level Processes. More familiar in social-psychological theories in general are processes assumed to operate at the level of the individual. Many traditional motivational theories in social psychology such as cognitive dissonance theory (Festinger, 1957) and other consistency-based approaches (cf. Abelson et al., 1968) could be classified as individual-level analyses. The implied assumption here is that although these processes are embedded in each person's social world, and therefore affect and are affected by others, they are fundamental aspects of individual human functioning that would be present and important to understand even in the absence of social considerations. Indeed, the intensive study of such processes sometimes leads to questions and arguments about what it is that is social about such research (in other words, is it really social psychology).

Not surprisingly, five of the six theories specify basic needs at this level of analysis. In Maslow's Hierarchy, self-esteem and self-actualization, the two needs at the top of the hierarchy, are individual-level needs. In Attachment Theory, the exploration-play system is where individuals express their curiosity about the environment. In Cognitive-Experiential Self-Theory coherent meaning and self-enhancement are individual-level needs. Terror Management Theory includes the symbolic defenses for managing existential terror, and the self-expansion system at this level of analysis. Self-Determination Theory has two of its three basic needs, autonomy and competence, at the individual level of analysis. Only Core Social Motives theory makes no claims about individual-level needs (see Figure 3).

Also not surprisingly, this is the level at which most of the empirical research generated by three of these theories has been done. Self-Determination Theory has generated the most research on the needs for autonomy and competence. Terror Management Theory has focused primarily on the operation of the symbolic defenses in the face of mortality salience as they are expressed in self-esteem and embracing the cultural worldview. We have placed the cultural worldview to straddle the individual and social group levels, but primarily the research focus has been on how and when individuals use their version of the cultural worldview to manage their personal terror. The empirical research guided by Cognitive-Experiential Self-Theory has also been concentrated on the needs for coherent meaning and for self-enhancement. It is probably fair to characterize these three theories as primarily individual-level approaches, at least in terms of how they have been tested in the research literature.

One common thread worth noting is that in Attachment Theory, Maslow's Hierarchy, and also in Self-Determination Theory, security of attachment, belongingness, or relatedness does or can provide the basis for effective satisfaction of needs at the individual level: exploration-play in Attachment Theory, self-esteem and self-actualization in Maslow's Hierarchy, and at least as represented in some of the research on relatedness inspired by Self-Determination Theory, for satisfaction of autonomy and competence needs.

Social-level Processes. At the social level of analysis are needs that depend on the individual being embedded in a social environment. They are still processes operating within an individual, but they depend upon and are oriented toward social groups. Social comparison theory (Festinger, 1954) could be considered to be an early example of a

theory oriented toward this level of analysis. Theories of social identity (e.g. Brewer, 1991; Brewer & Pickett, 1999; Tajfel & Turner, 1979; see Deaux, 1996, for a review) and the need for shared reality (Asch, 1951, 1956; Hardin & Higgins, 1996; Sherif, 1935, 1936) are also examples of theorizing at this level. The distinction between this level of analysis and that of the individual is that the social group is required for such processes to operate and make sense.

All six theories have at least one need or basic process at this level. Maslow's Hierarchy specifies a need for belongingness in the middle of the hierarchy. Cognitive-Experiential Self-Theory includes a need to maintain relatedness, and Self-Determination Theory also includes a need for relatedness. Attachment Theory is primarily about the social level of analysis, including the attachment, affiliation, and caregiver systems. Core Social Motives theory is all about the social level of analysis, with all five needs related to functioning in social groups. Of all of the theories, Terror Management Theory is least oriented to this level of analysis. Maintaining a cultural world view requires a community from which to learn and with which to share this source of comfort in the face of the knowledge of mortality, but we think that the generation of the shared culture from the combination of many individual personal existential problems and the waxing and waning of the use of defensive terror management mechanisms with the salience of mortality within the person still pulls the theoretical emphasis toward the individual level of analysis (see Figure 3).

Although there seems to be a great deal of agreement about what is important at this level of analysis, only Attachment Theory has generated much actual research on such needs; in addition to the extensive developmental work on attachment and its

associated systems in infancy there is a burgeoning literature on adult attachment processes in close relationships (Reis & Patrick, 1996; Rholes & Simpson, 2004). Maslow's Hierarchy and Core Social Motives Theory have not been used to generate empirical research; relatedness is the least intensively studied need in both Self-Determination Theory and Cognitive-Experiential Self-Theory; and Terror Management Theory is primarily oriented to the individual level, although there is a considerable amount of research on when individuals will embrace cultural values. The potential generative impact of assuming that there is a need for relatedness or belongingness (Baumeister & Leary, 1995) is not yet apparent in most of these theories.

Comparing theories with attention to differences in level of analysis helps to reveal, at least in part, why they are so different in the needs that they specify, and perhaps also why their theoretical structures are so different. Comparing an essentially Social Group/Societal level theory (e.g., Core Social Motives) with an essentially Individual level theory (e.g., Self-Determination or Terror Management Theory) is more difficult than might otherwise be apparent in part because of these differences in levels of analysis.

Theoretical Comparisons across Levels of Analysis

Briefly comparing the theories across levels of analysis, Figure 3 reveals that the range of levels represented within individual theories varies considerably. Maslow's Hierarchy and Cognitive-Experiential Self-Theory both cover the range from basic/biological to social group/societal. In contrast, Core Social Motives theory is completely contained at the level of the social group. Attachment Theory, although not entirely at the social level of analysis, has its root motive and the systems that have been

most heavily researched at that level. Self-Determination Theory and Terror Management Theory, if judged by the research they have generated, are essentially Individual level theories.

As an example of what can be noticed by attending to levels of analysis, we note that in Maslow's theory as we go up the hierarchy, we don't go up the levels of analysis in a linear fashion. Instead, we move from the basic/biological level to the social group level, and only then to the individual level where self-esteem and self-actualization are at the top of the hierarchy. Seeing belongingness as the foundation for self-esteem and self-actualization is consistent with Attachment Theory and perhaps with Self-Determination Theory, but would seem to be at odds with Terror Management Theory. Another concordance among Attachment Theory, Self-determination Theory, and Maslow's Hierarchy can be seen at the individual level of analysis, where exploration and play, autonomy and competence, and self-actualization appear to be addressing comparable dimensions.

Positive and Negative Psychology? Both Self-Determination Theory and Terror Management Theory have generated a considerable amount of research. Both are essentially individual level of analysis models. But their assumptions about the nature of basic human needs and human nature are polar opposites. In the recently proposed language of positive psychology (e.g., Seligman & Csikszentmihalyi, 2000) and by implication, negative psychology (e.g., Seligman, 1975), Self-Determination Theory is positive about human nature. On the other hand, if a Positive Psychology Hall of Fame were ever created, Terror Management Theory would be unlikely to occupy a place of prominence.

“...it is part of the adaptive design of the human organism to engage interesting activities, to exercise capacities, to pursue connectedness in social groups, and to integrate intrapsychic and interpersonal experiences into a relative unity.”

(Deci & Ryan, 2000, p. 229)

“...many psychological needs are ultimately rooted in the existential dilemma into which our species was born.” “Knowledge of the inevitability of death gives rise to the potential for paralyzing terror, which would make continued goal-directed behavior impossible.” “...this terror is managed by a dual-component cultural anxiety buffer, consisting of ... (a) an individual’s personalized version of the cultural worldview, ...and (b) self-esteem or a sense of personal value...”

(Pyszczynski, Greenberg, & Solomon, 1997, p. 2)

Perhaps a better way to describe the difference between the two theories would be to say that Self-Determination Theory is a Growth Model, while Terror Management Theory is a Defensive Model. One is based on self-actualization, the other on managing anxiety. Both approaches have a long tradition in psychology, and both are probably capturing important aspects of human nature. Self-expansive motives have been added to Terror Management Theory, but they are still justified as survival-based, and do not have the optimistic self-actualizing quality of Self-Determination Theory's approach. The darker and brighter aspects of Self-Determination Theory and Terror Management Theory have been discussed by the principles (Pyszczynski, Greenberg, & Solomon, 2000; Ryan & Deci, 2000), and further comparisons and contrasts, as well as empirical tests, are likely.

Basic Needs: Where do We Stand?

Although it is tempting to try to come up with THE basic set of human needs, we think that the theoretical differences we have revealed in structure and in levels of analysis make any simple attempt at synthesis of these theories premature. One might try thinking about, for example, the relations between autonomy and competence (SDT) and understanding and control (CSM), but these theories are operating at two different levels of analysis. One could similarly wish to compare the need for self-esteem (TMT) and self-enhancement (CEST), and perhaps to think they might be the same thing. But in one theory, self-esteem is a derivative of the core motive, while in the other it is one of four equally balanced needs maintained across a cognitive-experiential divide. Probably the differences in theoretical structure and in levels of analysis will need to be addressed before an overall integration or winnowing would be possible. Even so, some commonalities can be discerned. The most obvious of these is that five of the six theories share, at the level of the social group, an assumed need for relatedness, belonging, or affiliation.

Are theorists and researchers working on evaluating or integrating these disparate theories of basic human needs? Theoretical discussions and empirical comparisons among several of these theories have begun to emerge. At the empirical level, there have been comparisons or integrations of Terror Management Theory and Cognitive-Experiential Self-Theory (Simon et al., 1997), Attachment Theory and TMT (Mikulincer & Florian, 2000), and Self-Determination Theory, AT, and TMT (Arndt, Routledge, Greenberg, & Sheldon, 2005). CEST has been used to examine Self-Verification Theory and self-enhancement (Morling & Epstein, 1997; Swann, 1984, 1990, 1992), while an

SDT-inspired approach to self-concordance uses a rational-experiential consistency model with features similar to CEST (Sheldon & Elliot, 1999; Sheldon et al., 2004). And at the theoretical level, discussions among SDT and TMT, as well as several other self theories (Crocker & Park, 2004; Leary, 2004) have been published (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004a, 2004b; Ryan & Deci, 2004). There have also been several investigations of cross-cultural evidence for the existence of a set of universal human needs (Grouzet et al., 2005; Sheldon, Elliot, Kim, & Kasser, 2001; Sheldon et al., 2004).

In keeping with the beginning of this chapter, we should ask to what extent these theories tell us what it is that is distinctive about human nature. Have we learned how humans differ from other organisms? Many of the basic needs proposed by these various theories could easily be characteristic of other species as well. For example, basic attachment processes may not be uniquely human, nor perhaps are needs related to living in social groups, so in that sense we may not have made much progress in learning what is distinctive about human beings. Terror Management Theory is based on what may be a unique, or if not unique at least unusual ability to understand the concept of mortality, and to deal with it through defensive symbolism. If self-reflexive consciousness is uniquely human (Higgins, 2005; Terrace & Metcalfe, 2005), then the rational-experiential distinction of Cognitive-Experiential Self-Theory may also be uniquely human. If self-reflexive self-regulation is uniquely human, then the complex relations among autonomy, competence and relatedness that play out in the extent to which reasons for task engagement are external, introjected, integrated, or internal (SDT) may be a uniquely human issue. It is an interesting and open question to ask more generally if

self-actualization and the desire for autonomy and competence are uniquely human. The question of whether the best way, or even a good way, to understand what is uniquely human is through understanding basic human needs is still open.

Is the specification of basic human needs a useful psychological approach? On their own, several theories based on such specifications have led to extensive programs of empirical research, most notably Self-Determination Theory and Terror Management Theory. Although there is at this time considerable disagreement among the various theories of basic human needs, this disagreement also has had a generative impact on theory and research. Much work remains to be done. Differences in theoretical structure, levels of analysis, and the set of basic human needs will need to be addressed. But it seems likely that this first Handbook review of *Basic Human Needs* will not be the last.

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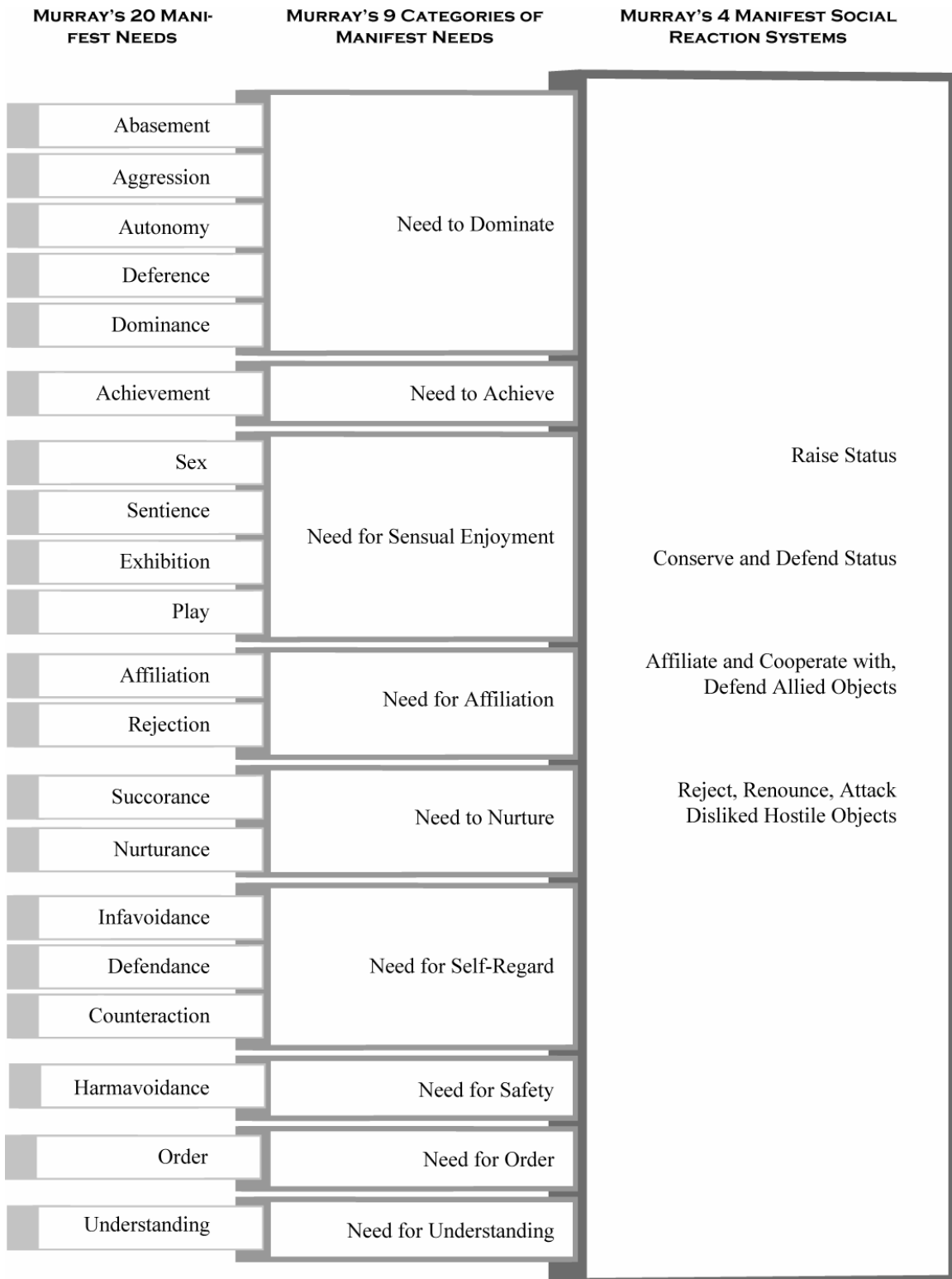
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Figure Captions

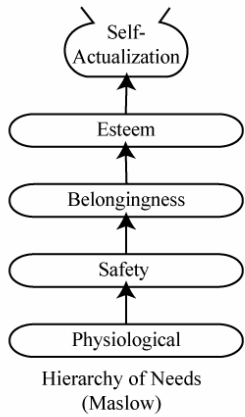
Figure 1. Murray's (1938) manifest needs represented as nesting boxes: Twenty, nine, or four?

Figure 2. Structural form of six theories of basic human needs. Shadowing indicates the needs that have generated the most empirical research.

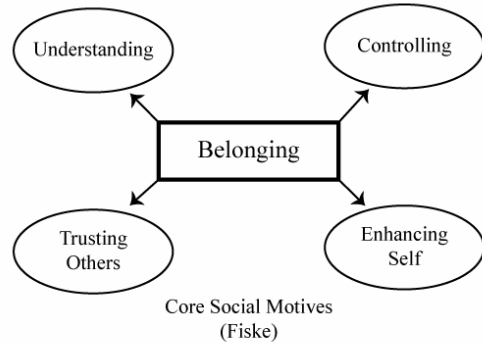
Figure 3. Levels of analysis of six theories of basic human needs. Shadowing indicates the needs that have generated the most empirical research.



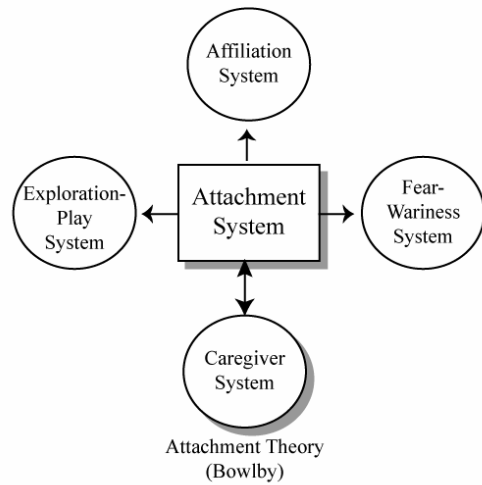
HIERARCHICAL



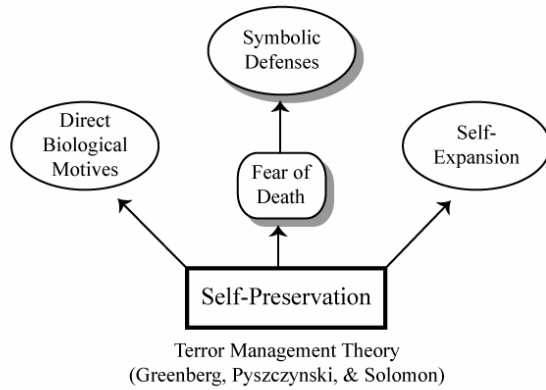
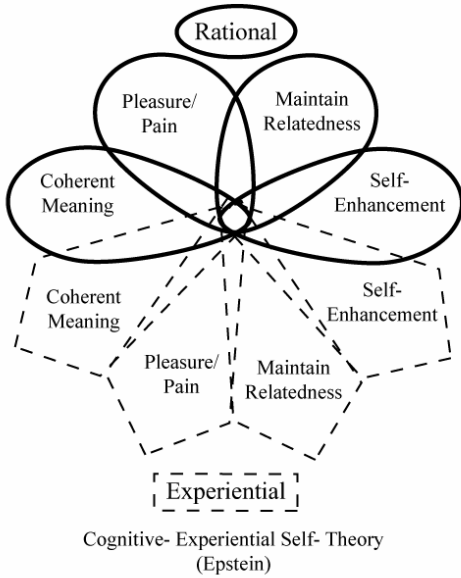
ROOT NEED



INDEPENDENT



CHECK AND BALANCE



Note: Aspects of theories that have received the most empirical attention are indicated with shadows.

LEVELS OF ANALYSIS

	<i>Basic/ Biological</i>	<i>Individual</i>	<i>Social Group/Societal</i>
<i>Self Determination Theory</i>			
<i>Terror Management Theory</i>			
<i>Core Social Motives Theory</i>			
<i>Cognitive-Experiential Self-Theory</i>			
<i>Attachment Theory</i>			
<i>Maslow's Hierarchy</i>			