

16: The Need for Competence

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The competence construct has been integral to theories of personality and motivation since the advent of psychology as a scientific discipline (see James, 1890, pp. 309-311). Many theorists over the years have assumed that human beings strive to acquire competence and avoid incompetence, and researchers have conducted thousands of empirical studies designed to investigate the nature of competence-motivated behavior (Spangler, 1992). One contemporary theory that reserves a prominent place for the competence construct is Deci and Ryan's (1991) self-determination theory (SDT). SDT posits that all individuals possess an innate, appetitive form of competence motivation—a psychological need for competence. SDT's view of the need for competence is grounded in White's (1959) conceptualization of effectance motivation which posits that organisms are born with the urge to have an effect on and master their environment. In fact it seems, at times, that the two constructs, the need for competence and effectance motivation, may be viewed as essentially equivalent within SDT, as the terms "competence" and "effectance" are used interchangeably in explications of the need for competence construct (see Deci & Ryan, 1991; Ryan, 1995).

In this chapter we attempt to make the case for construing the need for competence in broader, more inclusive terms. Specifically, we propose that effectance motivation be construed as the initial manifestation of the need for competence, but that this inherent need becomes more elaborated and complex over the course of development. The chapter is organized as follows. First, we offer an

Thanks are extended to Anthony Capobianco, Richard Koestner, and Ken Sheldon for their helpful comments on earlier drafts of this chapter. Preparation of this chapter was supported in part by a grant from the Radcliffe Research Support Program of the Murray Center, and a Faculty Scholars grant from the W. T. Grant Foundation.

overview of White's effectance motivation concept in the context of his approach to personality and development. Second, we propose a broader conceptualization of the need for competence, and we overview developmental issues that suggest the viability of such a conceptualization. Third, we discuss this more inclusive view of the need for competence in terms of other forms of motivation that may be operative in competence-relevant settings. Finally, we close with a summary statement and consider the benefits of our proposed conceptualization.

White's Effectance Motivation

In 1959, Robert White published a now classic paper in which he introduced the concept of effectance motivation. In the paper, White detailed the shortcomings of the prevailing approaches to motivation based in drives and instincts, and marshalled evidence in support of an additional source of motivation—the desire for effective, competent interactions with the environment. This inherent motivational energy, labeled effectance motivation, represents an organismic urge or propensity that impels the individual to investigate, manipulate, and master the environment. The infant's natural tendency toward curiosity and exploratory play is considered the prototypic behavioral manifestation of effectance motivation. Effective engagement with the environment is said to produce an intrinsically pleasurable affective experience termed “a feeling of efficacy,” an experience White (1965) later likened to “joy in being a cause” (p. 203).

Effectance motivation is viewed as a natural outgrowth of central nervous system functioning (rather than a response to tissue deficits), and is assumed to be in perpetual operation during waking hours, unless interrupted by homeostatic crisis. This source of motivation is posited to be universal among humans and higher mammals, and is thought to have the biological/evolutionary function of helping the organism adapt to his/her surroundings by fostering the development of skills and abilities. It is important to note that experientially, effectance motivated behavior is engaged in for the direct, immediate reward of having an effect on the environment, not for the sake of acquiring the resulting skills and abilities that maximize fitness and the probability of survival. White illustrated this point by drawing a parallel between sexual motivation and effectance motivation. The ultimate aim of sexually motivated behavior is survival and reproduction, but experientially, sex is engaged in for the immediate pleasure that accompanies the activity itself. Likewise the ultimate aim of effectance motivated behavior is the development of capabilities that afford survival, but experientially, such behavior is engaged in for the pleasure of the feelings of efficacy that accompany effective interaction with the environment.

White described effectance motivated behavior using both negative and positive criteria. He clearly stated that such behavior does *not* include reflexes and

other automatic responses, action in the service of biologically-based drives, or random activity that may inadvertently have an impact on the environment. Behavior impelled by effectance motivation is characterized as persistent, focused effort intended to produce an effect, and is posited to be exhibited in the infant's earliest transactions with the environment (White, 1965). Early manifestations of effectance motivation simply entail the infant directing attention toward an object and attempting to effect a change of a *general* sort. White provided illustrative examples such as the infant's rudimentary attempts to fixate an object in vision, and the infant's poorly coordinated hand movements designed to knock into a suspended rattle. The changes in sensory input that follow from such efforts are experienced by the infant as feelings of efficacy (White, 1960). Effectance motivated behavior also includes actions intended to produce more *specific* types of change in the environment. In his 1963 monograph, White stated: “We are most familiar with the feeling of efficacy at a level of behavior where we act with intentions to produce particular effects. We feel efficacious when we throw the ball over the plate, swim to the raft, or mend the broken household appliance” (p. 35). Thus, whether the behavior entails ill-coordinated arm movements toward a rattle or highly controlled arm motions toward home plate, action impelled by effectance motivation involves at least some incipient form of intentionality (White, 1965), and is sustained by the pleasurable feelings of efficacy acquired directly and immediately from the activity itself (White, 1963).

In addition to the concepts of effectance motivation and feelings of efficacy, White introduced two other constructs: competence and sense of competence. He defined competence as the individual's actual skill and ability to interact effectively with the environment. Innate abilities were presumed to determine a person's competence to some extent, but it was thought to be primarily a product of learning via effectance and other means—the cumulative result of the whole history of transactions with the environment” (White, 1963, p. 39). He defined sense of competence as the individual's subjective perception of his or her skill and ability to interact effectively with the environment that may or may not correspond to his or her actual competence. Sense of competence is viewed as a cognitive set or map representing one's confidence in one's skills and abilities, and like actual competence, it is thought to be a product of one's cumulative learning experiences (White, 1960; 1972). In contrasting effectance and feelings of efficacy with competence and sense of competence, White (1963) stated that the former are applicable to single episodes or experiences with the environment, whereas the latter represent structural elements of the self and personhood that cohere over many encounters with the environment.

White did not posit individual differences in effectance motivation (cf. Harter, 1978; Morgan, Harmon, & Maslin-Cole, 1990), opting instead to emphasize the inherent propensity in all human beings toward active exploration and mastery of their environment. White did, however, discuss various “constitutional” and environmental factors that facilitate or impede effective engagement with

the environment. Constitutional factors include the individual's activity level, physique (discussed in terms of Sheldon's somatypes), and degree of manual dexterity, athletic talent, and intellectual ability; environmental factors include regular access to varied stimulation, parental responsiveness to the child's physical and emotional needs, and parental supportiveness of the child's initiatives and appreciation of his or her accomplishments (White, 1963; 1972; 1975). These factors are not construed as affecting effectance motivation *per se*, but by influencing effectance-relevant experiences, they are thought to have an important impact on interindividual variation in competence, sense of competence, self-esteem, and overall ego development.

Although White offered relatively clear definitions of effectance motivation, feelings of efficacy, competence, and sense of competence, the framework he constructed with these concepts to explain motivation and personality across the lifespan is imprecise and fragmentary, and lacks conceptual clarity (Harter, 1978; Maddi, 1996; Messer, 1993). One weakness of White's conceptualization is that it fails to clearly delineate how effectance motivation develops over the life course. White stated that effectance motivation in infants and young children is undifferentiated, and argued that it gradually becomes differentiated into various motives such as "cognizance, construction, mastery, and achievement" (1959, p. 323). That is, each of these motives were said to have their root, at least in part, in effectance motivation and were thought to differentiate from it via life experiences focused on different aspects of effective functioning. Unfortunately, White did not elaborate on the relationship between effectance motivation and these other motives, and he was silent regarding how and why the motive differentiation process transpires.

A second weakness of White's conceptualization is that it does not clearly articulate the nature of the motivation underlying the competence and sense of competence constructs. White stated that competence and sense of competence result from learning via effectance motivation and other motivational sources; he also indicated that effectance motivation can fuse with other motives to produce behavior that results in competence and a sense of competence (White, 1960, 1963). In neither case did he suggest which other forms of motivation might be implicated, nor did he offer any details regarding these motivational processes. Most importantly, White did not speak to the issue of whether the desire for competence could represent a motivational source in and of itself. Although some who overreview White's work state that he proposed a competence motivation construct parallel to the effectance motivation construct, this proposal is not to be found in White's writings. In fact, to the best of our knowledge, the term competence motivation is used only twice by White (both times in his seminal 1959 paper), and in both instances he simply used it to refer to effectance motivation in a non-technical, descriptive fashion.

A Broader Conceptualization of the Need for Competence

It is our contention that the need for competence construct is best conceptualized as an innate desire for competence broadly defined rather than an innate desire for effectance *per se*. That is, we view the motivation that White referred to as effectance motivation as a subset of a more general form of innate, appetitive competence motivation—a desire to be competent in one's actions, skills, and abilities. This inherent urge has the experiential aim of being competent, and it serves the biological/evolutionary function of adaptation to the environment. From this standpoint, effectance motivation represents the first manifestation of a broader motivational source; it is what the need for competence looks like initially, in infants and young children. It is posited that as the individual acquires various representational capacities, is marked by experience, and encounters an array of socialization experiences, his or her need for competence develops in both a quantitative and qualitative fashion and becomes, over time, a multidimensional motivational disposition that includes, but is not limited to, effectance motivation. In the following, we elaborate on this view of the need for competence, highlighting its link to White's conceptualization, the various developmental transitions and socialization factors that influence its growth and differentiation, its transformation into a motivational disposition, and the ways in which it becomes an increasingly complex motivational construct as it operates in an increasing complex and multiply motivated organism.

Differentiation of the Need for Competence

White described effectance motivated behavior as action engaged in "for its own sake," a phrase he used to emphasize that effectance motivation was an important source of energy in itself, independent of other drives and instincts. Importantly, this phrase was not meant to connote that effectance motivated behavior is engaged in simply for the pleasure of doing the activity *per se* (as some have suggested); rather it is engaged in to experience the pleasure that comes from doing the activity in an effective manner. If an infant seeks to fixate an object in vision to produce a clearer image or swings his/her hand toward a rattle to produce a noise, the mere act of fixating the object *per se* or swinging his/her arm *per se* does not result in feelings of efficacy. If the child is able to sharpen the image or cause the rattle to emit noise, he/she will then experience feelings of efficacy; if the child is not able to sharpen the image or cause the rattle to emit noise he/she will not experience feelings of efficacy. Thus, behavior motivated by effectance is outcome focused in that it represents striving to obtain a desired result.

The result that effectiveness motivated behavior seeks to obtain is *task-referential* competence. That is, in effectiveness motivation, competence is defined in an absolute sense by the requirements of the task itself, and the individual's (experiential) aim is simply to accomplish what the task demands. Given that the standard for evaluating competence is inherent to the task, one may receive feedback regarding one's efficacy or competence directly and immediately during the course of task engagement. This direct and immediate receipt of feedback gives this form of competence motivation a very process-oriented, flow-like character (Csikszentmihalyi, 1990) quality, enabling one to remain absorbed in the task even as one receives ongoing competence feedback. In sum, White's effectiveness motivation may be (re)constructed as the initial manifestation of a more global need for competence, specifically, as a desire to attain task-referential competence.

In the neonate, the task and, therefore, competence are represented quite broadly and imprecisely as having some sort of general effect on the environment. Neonates are able to detect whether an environmental event is contingent upon their behavior (Watson, 1966; Papoušek, 1967), and they display a positive orientation to and an anticipatory enjoyment of such behavior-event contingencies (DeCasper & Carstens, 1981). Within two to three months, infants clearly exhibit joyful pleasure in response to exerting an influence on the environment (Heckhausen, 1984). These rudimentary forms of task-referential competence motivation are obviously not guided by any consciously mediated desires or affective anticipations and may be construed as functioning in non-conscious fashion, much like McClelland and colleagues' (McClelland, Koesner, & Weinberger, 1989) notion of implicit motivation.

By 18 months, children have developed the capacity to represent tasks cognitively with greater specificity and precision. Now, the child views task requirements and, therefore, competence in terms of fully completing or mastering activities, rather than simply exerting a general influence on the environment (Barrett & Morgan, 1995). This allows the child to evaluate his or her performance with more rigor and in a more deliberate fashion by explicitly comparing it to the task-referential standard of competence (Kagan, 1981). Thus, the need for competence at this age has begun to function in a more conscious, cognitively-elaborated fashion, akin, to some degree, to McClelland et al.'s (1989) notion of self-attributed motivation.

Prior to 18 months, the child's notion of self is limited to a sense of agency, commonly labeled the subjective self-concept or "I." By the age of 18 months to 2 years, children acquire an objective self-concept—a sense of self as a distinct entity that can become the object of one's knowledge (i.e., one can reflect on one's accomplishments; Harter, 1983). With the advent of this sense of "me," one's task-referential competence efforts can take on a new form of self-relevance, and, accordingly, task mastery can produce not only the pleasure of joy in accomplishment but also the pleasure of pride in accomplishment (Jennings,

1993; Mascolo & Fischer, 1995; Stipek, Recchia, & McClintic, 1992). In competence evaluation, joy and pride represent closely related emotional satisfactions; Heckhausen (1987) makes reference to "joyful pride" (p. 343), and Lewis (1993) describes the phenomenology of pride in terms of joy over an action well done. This affective experience corresponds directly to McClelland, Atkinson, and colleagues' (Atkinson, 1957; McClelland, Atkinson, Clark, & Lowell, 1953) conception of pride in success that served as the intrinsic satisfaction underlying their need for achievement construct. Importantly, although pride requires self-reflection and attribution to the self, the central focus is on the quality of the action that the self has produced, not on the self per se independent of the accomplishment (Lewis, 1997).

As the child's cognitive capacities continue to mature and develop, the child is able to represent tasks and cumulations of tasks in a more elaborate fashion and, eventually, can focus on the acquisition of skills and abilities as the desired accomplishment. For example, over time a child may move from seeking to play a single note on the piano, to seeking to play a chord, to seeking to play a song, to seeking to acquire piano skills more generally. In each case, if the satisfaction being sought is the joyful pride of accomplishing a challenge, the self-regulatory behaviors involved are a manifestation of the need for competence. Thus, the need for competence can be manifest in seeking to master a single act or set of actions, but it can also be manifest in seeking to master skills and abilities more broadly. These representational capacities are thought to emerge during the third year of life (Jennings, 1993; Kagan, 1981; van der Meulen, 1991).

Initially, children's conceptions of skills and abilities remain rather concrete and behaviorally focused. Over time, their conceptions can become more abstract and can take the form of underlying qualities such as ability (in contrast to distinction to abilities) and intelligence. Although there is currently much debate in the literature as to when this developmental transition occurs, researchers are beginning to think that children can conceive of underlying psychological abstractions as early as age 4 (Cain & Dweck, 1995; Heyman & Gelman, 1999). At this age, children construe ability and intelligence as malleable qualities that can be acquired through effort. Accordingly, this transition may not produce much of a change in the need for competence, as the need for competence is still manifest as a seeking to acquire competence, now simply construed in more abstract terms. It is interesting to note that children initially think of ability and intelligence in global terms across domains (e.g., academic and social) and gradually develop more specific representations of ability in distinct domains and distinct areas within domains (e.g., math ability and reading ability; Harter, 1983; Wigfield, Eccles, & Rodriguez, 1999).

A little researched issue concerns children's subtle shift from viewing competence in terms of task mastery to viewing it in terms of improvement and development. That is, once children have acquired the capacity to represent two outcomes simultaneously and to evaluate these outcomes with regard to tempo-

ral sequence, they can begin to define competence in terms of improvement—an increase in their present performance relative to their past performance. Most theorists have implicitly presumed that this *past-referential* form of competence motivation emerges rather early in development, around the time that children begin to focus on the acquisition of abilities and ability (Dweck & Elliot, 1983; Nicholls & Miller, 1984; Stipek & Mac Iver, 1989; Suls & Miller, 1982). However, the minimal research that has been conducted on this issue has either failed to provide clear results or yielded evidence that temporal comparison is not utilized until a bit later (i.e., past the age of 5; Butler, 1998; Ruble, Eisenberg, & Higgins, 1994). At present, this issue remains unresolved. Past-referential competence motivation is a close derivative of task-referential competence motivation, and it seems likely that the two are often intertwined (Elliot, 1999; Elliot & McGregor, 2001), particularly during the time that children are just beginning to utilize temporal comparison. Like its predecessor, past-referential competence motivation affords a private, intrapersonal evaluative process that should help maintain task absorption. Nevertheless, past-referential competence motivation is not as likely as task-referential competence motivation to appear process-oriented or flow-like, given that the acquisition of competence feedback is more complex and relies on information beyond the immediate task performance.

Considerably more research has investigated a third component of the need for competence—*other-referential* competence motivation. The extant data suggest that children are able to define competence in terms of their performance relative to others as early as 3 years of age (Jennings, 1993). Specifically, children understand the concept of a simple competition to determine who can complete a task first, and they exhibit enhanced pleasure when they win a competition rather than simply master a task (Heckhausen, 1984; Stipek et al., 1992). Although children can comprehend the concept of other-referential competence at the age of 3, most researchers contend that children do not focus on acquiring this form of competence until 6 months to a year later (Butler, 1998; Jennings, 1993), and many believe that normative considerations do not become highly salient for children until the age of 6 or 7 (Jennings, 1993; Nicholls, 1989; Ruble & Frey, 1991; Stipek & Mac Iver, 1989; Veroff, 1969). Other-referential competence motivation may be contrasted with task-referential and past-referential competence motivation in that it necessitates an interpersonal evaluative process. In face-to-face competitions, competence information may be acquired rather directly during the process of task engagement, but in many instances, individuals do not have direct access to competence information and may not receive feedback until much later. Thus, although outperforming others may be as satisfying or even more satisfying than mastering a task or improving, other-referential competence motivation may not appear as process-oriented or flow-like as task-referential, or even past-referential, competence motivation.

Interindividual Variation in the Need for Competence

To this point, we have highlighted the role of cognitive maturation in the development of the need for competence in *all* individuals, but it is also important to note that there exists variation in this need *across* individuals. In fact, although the need for competence is innate and present in all individuals throughout the lifespan, we contend that there are biologically-based individual differences in this motivational source from birth onwards (see Elliot & Thrash, 2002). Interindividual variation in the need for competence is likely to be grounded, at least in part, in interindividual variation in neurophysiological activity such as behavioral activation system (BAS) sensitivity. The BAS represents an arousal system centered in the catecholaminergic pathways of the brain which is presumed responsible for activating approach-oriented responses to stimuli and for evoking positive anticipatory and reactive emotions (Gray, 1990; Sutton & Davidson, 1997). The need for competence is more specific than, and therefore clearly not isomorphic with, the BAS, but the BAS is likely to be one of a circuit of direct, biological contributors to the need for competence.

Early individual differences in the need for competence are likely to be manifest, in part, as variation in the infant's activity level. Activity level is a temperament variable representing the child's degree of motor activity, behavioral tempo, and physical energy level (Vondra, 1995). It has been shown to be heritable, and most developmentalists construe it as a foundational building block of adult personality (Buss & Plomin, 1984; Goldsmith et al., 1987). Although many factors clearly contribute to an infant's activity level, this temperament variable seems to reflect, in part, the child's inherent, biologically-based propensity to engage, interact with, and have an impact on the environment. As such, the infant's initial endowment of the need for competence is likely to be manifest (albeit in crude, imperfect form) in his or her degree of active, vigorous exploration of his/her environmental surrounds (see also Vondra, 1995).

A heritable, biologically-determined starting point for the need for competence does not mean that persons will possess the same amount of need for competence across the lifecycle. As with physiological needs, psychological needs change over time as a function of maturation and experience. Individuals begin life with a particular level of need for competence, and this level is posited to vary to some degree in either direction (i.e., become somewhat stronger or weaker) as a function of life experience (see Buss and Plomin, 1984, for a similar argument regarding temperament *per se*). In other words, experience impacts the strength of the individual's need for competence, but the degree to which experience can exert its influence is constrained by the individual's biological makeup. By experience we mean to connote cumulative experience. In any given situation, the degree to which a person's need for competence is satisfied is presumed to affect, in a cumulative fashion, his or her degree of well-being.

In addition to positing biologically-based individual differences in the need for competence from the womb, we believe that other aspects of the person's biological makeup impact the need for competence indirectly, by influencing the person's competence-relevant experiences. Infants born with greater sensorimotor intelligence or better symbolic representational skills or those with strong muscular physiques are likely to have more success in interacting with their environment (McClelland, 1973; Vondra, 1995). Likewise, children blessed with abundant athletic skills or unusual musical or artistic talents are particularly likely to encounter feelings of efficacy and pride early and often. These success experiences and their accompanying affects are thought to maintain and facilitate the growth of the need for competence (Deci, 1980; Harter, 1981). Failure experiences can foster the need for competence to the extent that they provide information and are construed as a challenge to be overcome, but a disproportional number of successes to failures is certainly the ideal (Deci & Ryan, 1985; Harter, 1978).

The likelihood that a child will encounter mastery opportunities and experiences is further enhanced by the presence of a secure attachment with his or her caregiver(s). Securely attached children exhibit a greater desire to seek challenges in their environment and have been found to be more successful in conquering the challenges they undertake, even when variables such as IQ are held constant (Belsky, Garduque, & Hrcncir, 1984; Masiin-Cole & Spicker, 1990; Pipp, Easterbrooks, & Harmon, 1992; van den Boom, 1989). Characteristics of the home environment can also have an important influence on the development of the need for competence. Parents who provide a stimulating and optimally challenging environment for their children create an ideal training ground for the need for competence. Parents themselves may provide direct stimulation for their children by engaging them in games that arouse curiosity and afford challenge (Yarrow et al., 1984). The provision of age-appropriate toys and ensuring access to a wide variety of stimulating activities and experiences throughout the home environment is another way that parents can facilitate mastery experiences and foster the need for competence in their children (Shaffer, 1999; Veroff, 1969). More generally stated, any home, school, or work environment that provides individuals with opportunities for optimal challenge should sustain and/or enhance the need for competence.

Socialization agents also impact the development of the need for competence. Socialization may be indirect or direct (Saarni, 1993). Parents and other caregivers may exert an indirect influence by exhibiting vigor, enthusiasm, and persistence in their own competence-relevant strivings (Karkovskiy, Preston, & Crandall, 1964). Such modeling reinforces the importance and value of the child's own competence desires and provides him or her with concrete ideas as to how to go about channeling these urges into effective and structured pursuits (Harter, 1981). Caregivers may also exert a more direct influence by actively encouraging the child's competence-relevant actions and by responding to the

child's successes and, importantly, efforts (independent of outcome) with approval and excitement (McClelland, 1973; Rosen & D'Andrade, 1959; Winterbottom, 1958). This positive reinforcement is presumed to sustain and facilitate the need for competence by enhancing or intensifying the affective experience of efficacy and pride, and by clearly communicating the importance and value of this internal motivational energy (Veroff, 1969). Space considerations prohibit the discussion of additional factors that contribute to the development of the need for competence, but the following may be acknowledged in passing: gender, socio-economic status, and family structure (see McClelland, 1973; Shaffer, 1999 for reviews). It is also likely that many of the factors discussed or listed above interact with each other in exerting their influence on the need for competence (see Vondra, 1995).

Thus far, we have highlighted the impact that various factors have on the quantitative nature (i.e., amount) of the need for competence, but it is important to note that many, if not most of the factors discussed or listed above may also influence the qualitative nature of the need for competence. Over time, an individual's need for competence may become weighted toward a desire for task-referential competence, past-referential competence, or other-referential competence. For example, a boy who daily strives to match the performance standards set by his near-age older brother may develop strong other-referential competence motivation (a process the senior author has observed in his own children); only children, in contrast, may be more likely to develop strong self-referential competence motivation given the absence of a live-in source of social comparison information. Likewise, parents who model competitiveness or directly encourage competitiveness in their children are more likely to raise children who have strong other-referential competence motivation. Indeed some have suggested that gender differences in competence-relevant motivation reflect the fact that males in our society are socialized to be more competitive than females (see Spence & Helmreich, 1983). Of course, the individual with the strongest overall need for competence would be the person who, over time, develops a high quantity of task-referential, past-referential, and other-referential competence motivation. Unfortunately, to date researchers have allocated little empirical attention to issues pertaining to the qualitative development of competence motivation.

A central feature of the conceptualization of the need for competence that we are espousing, and one that bears reiteration, is its innate nature. Although we acknowledge that experience plays an integral role in the shaping and molding of the need for competence over the life course, we view this motivational source as inherent to the organism. Thus, in contrast to other conceptualizations of competence-relevant motivation that construe such energization as entirely a product of learning (e.g., McClelland et al., 1953; although see McClelland's, 1985, later work on natural incentives), we believe that the motivational energy underlying competence strivings neither needs to be acquired via experience nor borrowed from some other source (see Hartman, 1958). The need for competence is pres-

ent at birth, albeit in rudimentary form as a nonconscious urge for effectiveness, and over the life course is filtered through cognitive structures of increasing complexity and channelled in various directions as a function of maturation, the individual's biological makeup, competence-relevant experiences, and socialization history. As the need for competence develops, it remains rooted in the effectiveness urge; new ways of defining or experiencing competence do not necessarily replace the old but differentiate from it and become integrated with it to form a multidimensional need for competence. Throughout the lifespan, all individuals possess the need for competence and require competence for optimal functioning and well-being. However, individual differences in the quantity and quality of the need for competence are clearly present such that some persons have a stronger desire for competence than others, and some persons have a desire for certain types of competence (i.e., task-referential, past-referential, or other-referential) relative to others. We believe that early life experiences have a disproportional impact on the strength and nature of the individual's competence (McClelland, 1951; Veroff, 1965), but we also contend that competence motivation remains somewhat malleable throughout childhood and even into the adult years (see McClelland & Winter, 1969).

Needs, Motives, and Goals

We would like to conclude this section on a general note, by briefly commenting on the distinction between the "need," "motive," and "goal" concepts in motivational theorizing. There is no consensual way to define the terms "need" and "motive;" some theorists over the years have considered them to be synonymous (Atkinson, 1964; McClelland, 1951), whereas others have offered various means of distinguishing between them (Liebert & Spielger, 1994; Nuttin, 1984). Our view is that the need and motive concepts are similar to each other, but differ in one extremely important way: Needs and motives are similar to each other in that both represent affectively-based motivational dispositions that energize the individual and orient him or her toward valenced possibilities. Needs differ from motives in that they are part of the individual's inherent psychological makeup and, therefore, represent a psychological requirement, which means they must be attended to and satisfied for the individual to function in optimal fashion and experience well-being. In essence, a need may be seen as a motive that has innate roots.

Although this approach to distinguishing between the need and motive concepts is based on a single distinction, the ramifications of this distinction are far reaching, both conceptually (e.g., concerning the important issue of the number of motivational dispositions that should be considered needs in human personality) and functionally (e.g., concerning which motivational dispositions are likely to have the deepest and most pervasive impact on affect, cognition, and behavior).

The need for competence is conceptualized herein as an innate, multidimensional need, and is presumed to have a powerful and widespread influence on personality functioning and well-being. In accord with SDT (Deci & Ryan, 1991), we view many motivational dispositions that have been proffered in the literature (some of which carry the label "need") as motives rather than needs; examples include the need for closure, the need for dominance, the self-presentation motive, and the self-verification motive. Such motive dispositions clearly have an important influence on everyday functioning, but we suspect that their influence is qualitatively different from that of basic needs such as the need for competence (see Deci & Ryan, 2000).

As with the need and motive concepts, there is no consensual way to define the term "goal," nor is there a widely shared understanding of how goals differ conceptually from needs and motives (see, e.g., Austin & Vancouver, 1996; Locke & Latham, 1990; Pervin, 1982). Our view is that goals may be distinguished from needs and motives in that the latter are affectively-based dispositions that energize behavior and orient the individual in a general way, whereas the former are cognitive representations that serve a directional function for behavior by focusing the individual on more specific possibilities (Elliot, 1997; Thrash & Elliot, 2001). Goals are related to needs and motives in the self-regulatory process, in that individuals sometimes adopt goals that help serve their dispositional desires by channeling them in a more concrete direction. Needs or motives can and often do lead directly to behavior, but these general dispositional desires sometimes need to be strategically channelled in a specific direction to be satisfied in an effective and efficient manner. Thus, the need for competence can influence behavior in two ways: it can impel competence-based behavior directly, or it can lead to competence-based behavior indirectly by prompting the adoption of competence goals that proximally regulate behavior (Elliot & Thrash, 2001).

Like the need for competence, competence goals are differentiated in terms of the type of competence that the individual focuses on. Convention in the literature has been to collapse task-referential and past-referential competence together into a "mastery goal," and to distinguish this goal from a performance goal focused on other-referential competence (Ames & Archer, 1987; Dweck & Elliot, 1983; Maehr, 1983; Nicholls, 1984), but we have recently suggested the need to additionally consider bifurcating "mastery" goals according to the task-referential/past-referent distinction (Elliot, 1999; Elliot & McGregor, 2001). Interestingly, the relationship between the need for competence and competence goals may take on many different manifestations. For example other-referential competence motivation may straightforwardly prompt the adoption of an other-referential competence goal, but in many instances the desire for other-referential competence may actually be better served when it leads to a task-referential mastery goal that helps facilitate task absorption.

The Need for Competence and Competence Strivings in the Context of Other Sources of Motivation

Conceptually, the need for competence may be discussed in terms of a pure, isolated source of motivational energy, but in everyday life, the need for competence is often operative in conjunction with other forms of motivation. Furthermore, in some settings, competence strivings may be impelled by motivational sources in addition to, or even instead of the need for competence. In the following, we briefly discuss some (interrelated) ways in which the need for competence and competence strivings may become linked to other sources of motivation.

Links to Other Sources of Motivation

Self-enhancement motivation. With the advent of the objective self-concept, the child may not only evaluate the self's actions and accomplishments, but may evaluate the self in general. As such, competence strivings may emerge from a general desire for self-enhancement (Sedikides & Strube, 1997), and competence may become a means to the end of feeling good about the global self, rather than an end sought for its own sake. The emotional satisfaction accompanying competence may be seen as a marker of which form of self-relevant motivation is (or was) operative. In the need for competence, the emotional satisfaction is joyful pride in accomplishment, which represents a specific positive evaluation of the actions that the self has produced; in self-enhancement motivation, the emotional satisfaction is hubris, which represents a global positive evaluation of the entire self (see Lewis, 1997, for a discussion of the pride vs. hubris distinction). Accomplishments may be construed in terms of doing well on situation-specific tasks, developing skills or abilities, or even becoming the best person that one can become. This illustrates that it is not necessarily the globality/specificity dimension that distinguishes the need for competence from self-enhancement motivation, but whether the emotional satisfaction resides or does not reside in the accomplishment itself. However, it should be noted that the more general or abstract the focus of one's competence strivings, the more likely it is that the underlying motivation is separate from the accomplishment itself.

Instrumental competence motivation. Competence clearly has instrumental as well as inherent value. Early on, around the age of two, children become aware of the fact that their accomplishments can evoke smiles, hugs, and applause from others, in addition to feelings of joy and pride (Stipek et al., 1992; Thompson, 1998). Throughout the life-course competence is the gateway to multifarious benefits including money, material possessions, power, prestige, attention, fame, etc. These accomplishments represent concrete, symbolic indicators of competence

and may be viewed simply as a source of competence information (Harackiewicz, 1989), but they may also supersede competence to become an end in themselves. As such, competence strivings may reflect an instrumental desire to acquire some external outcome that is completely independent of the accomplishment itself (see Harter's, 1981, conceptualization of extrinsic motivation), and this form of regulation has little to do with the need for competence per se.

Intrinsic motivation. Intrinsic motivation is commonly defined in terms of engaging in an activity for the enjoyment or interest of the activity itself (Deci & Ryan, 1985). When intrinsically motivated, the individual is not pursuing any separable outcome, but is simply seeking the pleasure that comes directly and immediately from the experience of the activity. Intrinsic motivation may be contrasted with competence motivation, in which the individual is pursuing a separable outcome, the pleasure of experiencing or attaining competence in the activity. Thus, conceptually, we view the need for competence and intrinsic motivation as distinct entities. Although conceptually distinct, the need for competence and intrinsic motivation are often closely related in any given experience of activity engagement. Intrinsic motivation is a descriptive term that refers to the pursuit of enjoyment and fun for its own sake, but an in-depth analysis of the construct requires a consideration of what it is that individuals experience as enjoyable or fun. Attaining competence at an activity is one important psychological determinant of enjoyment and fun, thus the pursuit of competence and seeking enjoyment/fun in the task can, in some instances, be inextricably intertwined. In addition, the relationship between competence and enjoyment is undoubtedly reciprocal (attaining competence is enjoyable and enjoyment yields greater competence), leading to a further entangling of the two constructs.

The intertwining of competence motivation and intrinsic motivation is most likely when the individual is seeking task-referential competence, as competence information in such instances is received directly and immediately from the task itself and allows the individual to remained fully absorbed in the enjoyment of task engagement. The pursuit of past-referential or other-referential competence can also be closely associated with intrinsic motivation, but only in situations in which competence information is readily available during or immediately after task engagement (e.g., a one-on-one competition such as a chess match or a racquetball game).

Self-worth motivation. The precise manner in which parents respond to their child's successful and unsuccessful competence pursuits has a deep and pervasive influence on the child's sense of self. To the extent that parents convey that their acceptance, approval, or love of the child is contingent upon his or her performance, competence will become linked to self-worth and security concerns, and the need for competence and competence strivings will suffer accordingly. Parents may establish competence-relevant contingencies in many ways, often unknowingly. For example, in response to a specific success, a parent may lavish person-focused praise on his or her child (e.g., "You're such a good boy/girl") or may

comment on the child's broad-level attributes (e.g., "You're so smart"). Global feedback of this nature is likely to establish an association between the child's specific performances and his or her general value and worthiness (see Dweck, 1999, for related arguments). More invidiously, a parent may withdraw affection or love from his or her child upon failure, thereby sending an unequivocal message that the child's loveability and worth is contingent upon his or her performance in competence-relevant settings. In essence, these forms of socialization communicate to the child a lack of inherent self-worth and put the child in a position where he or she must earn approval, affection, and worth through his or her competence strivings (see Rogers', 1959, on conditions of worth). A child in this position is likely to develop a working model of the self as unworthy of love (Bowly, 1973; Bretherton, 1990), and to manifest signs of ego-involvement in competence-relevant settings (Ryan, 1982). This view of the self is likely to be carried into adulthood, where it will be readily reinforced by a culture that implicitly presumes one must be competent to be a valuable member of society (Covington & Beery, 1976). The broad point to be made is that the need for competence is likely to be undermined to the extent that it becomes intermingled with self-worth and/or affiliation issues. Indeed, to the extent that competence becomes a means to the end of validating one's worth (Dykmann, 1998) or gaining the approval of others (Smith, 1968), competence strivings are simply servants of other forms of motivation.

Self-presentation/self-assessment motivation. Implicit theories of intelligence (or ability) are likely to exert an important impact on the nature of competence strivings (Dweck, 1990). The tendency to view intelligence as a stable, fixed trait is thought to emerge sometime around the age of 7 (see Dweck & Elliott, 1983; Heyman & Dweck, 1998; Nicholls & Miller, 1984; Pomeranz & Ruble, 1997; Stipek & Mac Iver, 1989.). When intelligence is construed as stable, one's focus is no longer on being competent in a single act or set of actions, acquiring skill/abilities, or acquiring ability; rather, one's focus is on *determining* or *demonstrating* the degree to which one possesses immutable intelligence. Thus, when one holds an entity theory of intelligence, competence strivings are likely to be manifestations of self-assessment motivation (if one desires to *determine* one's intelligence) or self-presentation motivation (if one desires to *demonstrate* one's intelligence), rather than competence motivation per se (see Elliott, 1999). Given the consensual value of intelligence in our society, the competence strivings of entity theorists are also likely to be undergirded by (and laden with) self-worth and approval concerns.

A separate, learned competence motive? The need for competence is an innate form of appetitive competence motivation, and it is interesting to contemplate whether persons can develop an appetitive competence motive that is independent of the need for competence. McClelland et al. (1989) would likely answer in the affirmative, drawing on their distinction between implicit and self-attributed motives. McClelland and colleagues might argue that a person can learn, from one's parents or one's culture more broadly, that competence is something to value and, in response, may embrace this value to the point that it becomes, over

time, a conscious, cognitively-elaborated, dispositional desire for competence (a self-attributed motive) separate from their non-conscious, emotion-based, dispositional desire for competence (an implicit motive). Although we acknowledge this possibility, we would like to raise two points regarding the likelihood of a separate, entirely learned, appetitive competence motive. First, if one presumes, as we do, the existence of an innate desire for competence in all persons, it seems likely that information regarding the value of competence would simply bolster and reinforce the individual's inherent urges and tendencies (i.e., be incorporated into the existing motivational system), rather than establish an entirely separate motivational system. Second, to the extent that the conscious valuing of competence is based in a desire for social recognition or a desire to view or present oneself in a particular light (as McClelland and colleagues presume), we would question whether this motive disposition should be viewed in terms of competence per se. Indeed, Koestner and McClelland (1990) describe this self-attributed form of competence motivation as "extrinsic," a label that implies an interest in competence not as an end in itself, but as a means to some other end. At present, we remain open to the possibility of a separate, entirely learned, appetitive competence motive, but we prefer to emphasize the inherent nature of the desire for competence per se. We see the value of the implicit/self-attributed distinction but think it is best suited to address the fact that the need for competence may become cognitively-elaborated to varying degrees and that individuals may or may not be consciously aware of and, therefore, may or may not be able to accurately self-report their level of innate, appetitive competence motivation (see Thrash & Elliott, 2001 for a more detailed consideration of these issues).

Aversive competence motivation. To this point, we have discussed competence motivation exclusively in appetitive terms, but it is important to acknowledge that competence motivation also includes an aversive component—the desire to avoid incompetence. Aversive competence motivation clearly deserves a chapter in its own right; at present we will simply raise the question of whether such motivation should be conceptualized as an entirely learned motive that derives from the need for competence or as an innate source of energy independent of the need for competence (i.e., the need to avoid incompetence). On one hand, it seems reasonable to construe aversive competence motivation as derivative, essentially as the need for competence gone astray. Repeated failure experiences, insecure attachment, and socialization practices such as person-focused criticism or love withdrawal upon failure are all factors that can prompt the individual to reorient his or her desires toward avoiding incompetence rather than acquiring competence. On the other hand, aversive competence motivation may be construed as having an inherent basis to the extent that it is grounded in neuroanatomical structures such as the behavioral inhibition system (see Gray, 1990), and early individual differences in this motivational source might be manifest, in part, in the heritable, biologically-based infant temperament of fearfulness (see Rothbart & Ahadi, 1994) or behavioral inhibition (Kagan, Reznick, & Suidman, 1987). At

present it is not clear which conceptualization is more accurate, although we suspect that the weight of the cumulative evidence will eventually support the latter. Regardless, it is important to note that aversive competence motivation is highly susceptible to becoming linked to other forms of motivation (i.e., self-worth concerns, affiliative concerns), and indeed much of what appears to be aversive competence motivation on the surface is probably not competence motivation at all, but is simply avoidance striving serving some other motivational aim (for further discussion of aversive competence motivation see Elliot & Church, 1997; Elliot & McGregor, 1999; Elliot & Sheldon, 1997).

The broader motivational context. Although the need for competence is clearly a positive and adaptive source of motivation, in the broad context of overall personality functioning there are instances in which the need for competence can interfere with optimal self-regulation. In addition to the need for competence, individuals possess a need for relatedness (Baumeister & Leary, 1995; Ryan, 1995), and to the extent that attending to the need for competence precludes sufficient attention to the need for relatedness, well-being will suffer. Specific manifestations of this would include the child who receives such strong gratification from developing Nintendo skills that interaction with peers is all but ignored, or the adult who becomes so absorbed in exciting accomplishments at the workplace that familial relations are neglected. Some aspects of the need for competence seem more likely to conflict with broader personality processes than others. A desire for other-referential competence, in particular, seems most likely to interfere with the need for relatedness, as in some situations, one's own competence may come at the direct expense of a relational other. The desire for other-referential competence can even interfere with other aspects of the need for competence itself, as when the individual ignores opportunities for challenge or skill development in the process of pursuing the thrill of competitive victory. It is even possible that the need for competence unrestrained by the occasional consideration of possible incompetence could be maladaptive, as individuals may find themselves so enthralled by the possibility of competence that potential pitfalls along the way are ignored or never even perceived (see Arnett, Smith, & Newman, 1997, for a conceptual parallel). Thus, satisfaction of the need for competence may lead to well-being in general, but balance within the need itself and within the broader context of personhood is important to ensure optimal functioning.

Closing Comments

In this chapter we have attempted to make the case for conceptualizing the need for competence in broad terms, as an innate, appetitive desire to be competent in one's actions, skills, and abilities. This broad conceptualization of the

need for competence is grounded in White's notion of effectance motivation, but is not limited to it. Effectance motivation is clearly an important manifestation of the need for competence, and in many respects may be considered its prototypic form. The experiential aim of the need for competence is the pleasure of accomplishment *per se*, and the inherent urge to seek competence for its own sake is often witnessed most clearly and purely in the form of effectance pursuits. However, we believe equating the need for competence and effectance motivation unnecessarily restricts the scope of the need for competence construct. Accordingly, we posit that effectance motivation is best viewed as the initial manifestation of the need for competence and that this inherent desire for competence develops over time, both quantitatively and qualitatively, to the point that, in its "adult" form, it represents a multidimensional motivational disposition that includes a desire for past-referential and other-referential competence, in addition to a desire for task-referential competence (i.e., effectance).

Portraying the need for competence in broad, inclusive terms has many benefits. For example, extending the need for competence beyond effectance motivation enables SDT to account for more conceptual space in the competence domain. Furthermore, broadening the need for competence construct would seem to bring SDT's operationalization and conceptualization of the need for competence into concordance. In empirical research in the SDT tradition, competence is sometimes operationalized in terms of effectance, but other times it is operationalized in broader, more inclusive terms. For example, in recent research on need satisfaction, participants' state level of competence has been assessed by simply asking participants to report "how competent they felt" while doing selected daily activities during the previous 24 hours (Sheldon & Elliot, 1999, p. 488), and participants' trait level of competence has been assessed using the competence subscale of the Multidimensional Self-Esteem Inventory which is comprised of items such as "Most people who know me consider me to be a highly talented and competent person" and "How often do you approach new tasks with a lot of confidence in your ability?" (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon, Ryan, & Reis, 1996). Thus, it seems that conceptually, SDT has often portrayed the need for competence as synonymous with effectance motivation, whereas operationally, it has allowed for a broader portrayal of the need for competence. Extending the need for competence construct to include task-referential, past-referential, and other-referential competence motivation would eliminate this problem.

In addition to benefiting SDT, we believe that the present portrait of competence motivation addresses an important shortcoming of White's theorizing. White's framework of motivation and personality has been critiqued for its lack of precision, specifically regarding the issues of how effectance motivation develops over the lifecourse and what type of motivation underlies the competence construct. We have directly discussed these issues in detail in the process of articulating the nature of the need for competence construct and, we believe, we have

done so in a manner that is consistent with, and indeed maintains a prominent, foundational place for, White's classic conceptualization.

A further benefit of the proposed conceptualization of the need for competence is that it (implicitly) integrates two of the most influential analyses of competence-relevant motivation that have been offered to date—White's work on competence-relevant motivation and the work of Murray (1938, 1948), McClelland (1951, 1985), and Atkinson (1957, 1964) on the need for achievement. Murray defined the need for achievement as the desire: "to accomplish something difficult. To master, manipulate, or organize physical objects, human beings, or ideas. To do this as rapidly, and as independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent." (1938, p. 164). The need for achievement was conceptualized as a motive disposition on which individuals vary considerably, and this disposition was presumed to be acquired via early learning experiences. McClelland and Atkinson embraced Murray's concept of the need for achievement but developed a more thorough analysis of the construct (including a clear explication of the nature of the satisfaction associated with the need—pride in accomplishment), and an objective scoring system to facilitate the assessment of individual differences.¹ Despite the clear overlap in

1. McClelland and Atkinson adopted an empirical rather than theoretical approach to operationally defining and devising a measure of dispositional need for achievement. Specifically, they used an experimental procedure whereby male university undergraduates (mostly ex-servicemen) encountered achievement-arousing cues or not prior to writing brief stories to TAT-like pictures. The achievement-arousing cues were characterized as "ego involving" and included instructions describing the story-writing task as a test of intelligence conducted by the Office of Naval Research designed to determine who was best suited to be a leader (interestingly, such cues had been shown to "frighten impressionable subjects into incoherence" in early pilot work; McClelland et al., 1953, p. 103). Any story content that differed between the achievement-arousing and neutral conditions was presumed to reflect need for achievement, and the need for achievement scoring system was derived on this basis. Consequently, the need for achievement was operationally defined as a desire for "success in competition with some standard of excellence" (McClelland et al., 1953, p. 110) and various types of achievement imagery were incorporated into the system including: competitive activity involving winning or doing better than others; self-imposed requirements for good performance such as doing a "thorough, workmanlike job" on a task, unique or extraordinary personal accomplishments, and striving to attain a long-term goal such as becoming a doctor or lawyer. An individual's need for achievement score is comprised of this achievement imagery category plus several subcategories representing processes (e.g., cognitive anticipation, affect) presumably associated with striving for the achievement standard. Many of these subcategories are positively valenced, but a number focus on failure-relevant processes such as anticipatory failure and negative affect upon failure. As such, although need for achievement was conceptualized by McClelland and Atkinson as a rather pure form of approach motivation (i.e., striving for achievement for its own sake), operationally it appears to be a somewhat heterogeneous compilation of motivational concerns (cf. Koestner and McClelland, 1990).

content domain, White made little mention of the work of Murray, McClelland, and Atkinson, and vice versa. White simply noted that competence motivation differentiates over time into other motives including a motive for achievement; McClelland (alone) made passing reference to competence motivation, but only in the context of discussing the rudiments of the power motive. Contemporary researchers working out of these two traditions have typically followed their pioneers by making little mention of the other tradition. The few who do discuss both usually contrast them and emphasize the ways in which they differ (Barrett, MacTurk, & Morgan, 1995; Harter & Connell, 1984; Heckhausen, 1987); for exceptions, see Dweck and Elliott (1983) and Nicholls (1989).

The need for competence, as conceptualized herein, incorporates aspects of both the competence motivation and need for achievement traditions. Drawing on White, the need for competence is portrayed as an innate form of appetitive competence motivation, of which competence motivation is an important component. Drawing on Murray, McClelland, and Atkinson, the need for competence is viewed as developing over time into a multidimensional disposition that includes the desire for task-referential, past-referential, and other-referential competence (each of which is represented in Murray's definition of the need for achievement) and varies across individuals. Although in the present chapter, we have focused primarily on the relationship between the need for competence and competence motivation, our view of the need for competence is clearly grounded in the need for achievement tradition as well. We believe that further consideration of the links between these two highly influential and generative traditions promises to yield further insight into the nature of competence motivation.

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