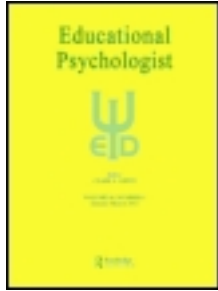


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Publisher: Routledge

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## Educational Psychologist

Publication details, including instructions for authors and subscription information:  
<http://www.tandfonline.com/loi/hedp20>

### Developing Who I Am: A Self-Determination Theory Approach to the Establishment of Healthy Identities

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Available online: 21 Apr 2009

To cite this article: JENNIFER G. LA GUARDIA (2009): Developing Who I Am: A Self-Determination Theory Approach to the Establishment of Healthy Identities, *Educational Psychologist*, 44:2, 90-104

To link to this article: <http://dx.doi.org/10.1080/00461520902832350>

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## Developing Who I Am: A Self-Determination Theory Approach to the Establishment of Healthy Identities

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According to traditional theories of identity development, exploration of one's potentials and commitment to a coherent set of values, goals, and behaviors are important to healthy identity development. In this article, I examine how the Self-determination Theory framework provides an understanding of motivational processes that influence these identity concepts of exploration and commitment. Specifically, I review evidence that suggests that the concept of basic psychological needs frames the development of identity through processes of intrinsic motivation and internalization and that need support for these processes by important relationship partners may facilitate outcomes, including academic interest, engagement, and achievement, as well as overall well-being. Finally, I provide a glimpse of potential future directions of research, particularly emphasizing the role of need support when identity is in flux (e.g., reactivated exploration either by self-directed or environmentally prompted events) or when challenged by macrolevel social pressures, such as high-stakes testing in education.

“Who am I?” This perennial question of identity, and strivings toward an understanding of how identity develops, has been the subject of empirical investigation and laypersons' self-queries alike. The process of identity development and maintenance extends across the lifespan (Adams & Marshall, 1996; Erikson, 1968). Quite early on, children begin to learn about what interests them, what they are good at, and how they “fit” in relation to the people that are important to them. The definition of “who they are” blossoms in early years around defined roles (e.g., daughter), initial competencies (e.g., playing well at sports), and available opportunities to try on different interests and stretch these capacities (both in terms of access to resources such as music, arts, and technology as well as social support to explore these). In adolescence, not only does identity continue to form around competencies and the career or profession that might naturally emerge from school activities or extracurricular pursuits, and adolescents begin to adopt role identities as romantic partners (boyfriend/girlfriend) and friends. Parents and teachers play critical roles in the nurturance of these identities, especially at important developmental crossroads (e.g., transitions into

schooling; transitions between junior high and high school). In adulthood, although many of the ideas about one's orientation toward a career and toward significant relationships are solidified, these identities may also see times of upheaval (e.g., job loss, career move, becoming a parent, ending a marriage, retirement) that challenge, stretch, and sometimes lead to dissolution of a once deeply rooted identity. Thus, people acquire multiple identities across the lifespan, and life transitions (whether developmentally normative or imposed) demand that people to take on new challenges, consider how to integrate new activities, roles, and relationships, and ultimately grapple with how they conceive of themselves. Arguably, how well people negotiate these tasks has a direct and deep impact on their sense of worth and personal well-being (Ryan & Deci, 2003).

Clearly, the study of self and identity has produced a vast literature examining self-representations, roles, goals, and associated behaviors with these identity components (Roeser, Peck, & Nasir, 2006). In this article I present the Self-determination Theory (SDT) perspective (Ryan & Deci, 2003) on the motivational processes that underlie identity formation and maintenance, as well as the social-contextual influences on these self-representations across the life span. The main premise of the SDT perspective is that although each person has his or her own unique set of interests, skills,

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and personality factors that are brought to bear on particular identity pathways, and these factors are cultivated within unique relational environments that help shape these pathways, we can define basic psychological needs that are universal and cut across developmental epochs and culture to explain *why* identities are adopted, *how* they are maintained, and to *what extent* they are healthy for the person. Specifically, the discussion herein examines (a) the concept of basic psychological needs and how support for these needs influences the processes of intrinsic and extrinsic motivation for important identity activities, (b) how need support by significant relational partners within important life domains contributes to identity development and maintenance, and (c) the extent to which need support around tasks that contribute to identity development (e.g., schoolwork) impacts optimal psychological functioning (La Guardia & Ryan, 2002; Ryan & Deci, 2003). Although identity formation and maintenance is life long, I specifically focus on childhood and adolescent development and the influence of parents and teachers on motivations leading to early school competencies and later academic pursuits to illustrate these ideas. Further, I draw attention to the current education movement and the challenges it poses for both parents and teachers to provide a need supportive environment, positively influence the trajectory of exploration and commitment to identity pathways, and ultimately affect the well-being of today's youth. Let's begin though first with a definition of identity and some important component processes that may contribute to its formation.

### WHAT IS IDENTITY?

Contemporary conceptualizations of identity and its formation hark back to the early work of Erikson (1968) and Marcia (1966). Erikson conceptualized the development of identity as the central struggle of adolescence, with successful achievement resulting in a coherent sense of one's roles and occupational pathway, one's self in relation to others, and one's values and purpose in life, whereas failure resulted in confusion within these self-aspects. Marcia (1966, 1993) elaborated the central processes that underlie identity development, identifying exploration and commitment as key to defining the status of identity formation. *Exploration* refers to actively questioning and evaluating a variety of values, beliefs, goals, and social roles, and *commitment* refers to clearly dedicating to a set of values, beliefs, goals, and roles and engaging in the associated activities to maintain them. Marcia outlined four potential identity resolutions that are distinguishable by the relative level of engagement on these dimensions of exploration and commitment. Identity *achievement* is evidenced when both substantial exploration has been undertaken and a commitment has been made, *moratorium* is evidenced when active exploration of viable alternatives has occurred without yet committing, *foreclosure* occurs when commitment is made without active exploration, and *diffu-*

*sion* is evidenced when neither exploration nor commitment has occurred. The empirical work that has followed from this theoretical framework has focused mainly on two key themes: (a) understanding the mechanisms that underlie the exploration and commitment processes and (b) understanding the consequences of identity status for personal well-being. I focus mainly here on programs of research by Berzonsky (1988, 1990) and Waterman (1990, 1993) as examples, as they have the most direct implications for the thesis of this article.

Berzonsky (1988, 1990) models different social-cognitive styles in information processing and examines how identity-relevant information is employed by those with different identity statuses. His model suggests that those who have an *informational style* openly seek out and actively evaluate self-relevant information, and base their commitments, and changes to their commitments, on such constructions. Thus, informational styles are associated with high levels of exploration and characterize those who are either in the process of forming a commitment (moratorium) or who have achieved a more coherent identity (Berzonsky & Kuk, 2000; Berzonsky & Neimeyer, 1994). Those who have a *normative style* follow the expectations and prescriptions of others, with marked rigidity in exploring or incorporating new information that may challenge or threaten their self-structure. Expectedly they have typically foreclosed on identity (Berzonsky & Neimeyer, 1994). Finally those with a *diffuse-avoidant style* actively evade considering information and situations that challenge identity-relevant decisions until ultimately they are coerced by situational demands or incentives to follow a course of action. Thus, they neither explore nor truly commit to an identity and are thus characterized as having identity diffusion (Berzonsky & Neimeyer, 1994). Specifically relevant to academics, Berzonsky's information processing styles have been linked to students' abilities to find purpose and direction with regard to academic goals (e.g., educational involvement, career planning and commitment) as well as their abilities to regulate academically, emotionally, and instrumentally (Berzonsky & Kuk, 2000, 2005). These information-processing styles have also been linked to students' expectations for academic success and performance (Boyd, Hunt, Kandell, & Lucas, 2003) and actual performance (Berzonsky & Kuk, 2005). The pattern that emerges from this research is that those who are typically diffuse-avoidant do worse on all counts, whereas those who employ an informational-processing style are able to adjust quite readily and successfully to the tasks at hand (see Berzonsky & Kuk, 2005, for review). Of interest, those who follow normative styles are relatively successful at identifying and committing to educational goals and plans when structured by their social environment. However, they tend to be less able to self-regulate in their academic choices and emotional coping than those who employ an informational style. That is, they are less able to manage their academics on their own without external directives or structure and their behaviors

are emotionally tethered to significant others, as they more readily feel compelled to engage in their academics merely to gain the approval of others or to avoid disappointing others and feeling guilty (Berzonsky & Kuk, 2005). Of importance, this model provides some understanding of why commitment in itself does not necessarily conduce to optimal outcomes. That is, optimal outcomes require exploration that is active, open, and ultimately constructed from social experience.

Waterman (1992, 1993) added the dimension of personal expressiveness to the identity statuses conceptualization and has squarely focused on understanding how this component process impacts well-being. From this eudaimonic perspective, successful attainment of life goals and its consequences for well-being is a function of exploring and committing to identity choices that reflect a person's best potentials, or in other words, reflect that which is self-realizing. According to Waterman, the marker of whether a given identity pursuit or activity is self-realizing is the extent which it feels personally expressive—self-defining or fitting, engaging, energizing, purposeful, and fulfilling (Waterman, 1993). Waterman and colleagues' work on personal expressiveness has focused on its importance in the pursuit of and changes to intrinsically motivated activities within identity development. They have suggested that feelings of personal expressiveness within intrinsically motivated activities are an important basis for selecting personal goals essential to the identity pathways pursued (Schwartz & Waterman, 2005; Waterman, 1993, 2004; Waterman, Schwartz, Green, Miller, & Phillip, 2003). Further, this model emphasizes the role of innate strivings toward forming identity goals, purposes, and structures, and extends the understanding of differences in the quality of identity commitments, with those that are personally meaningful showing greatest benefits to well-being.

Notably, the conceptualizations of Berzonsky and Waterman raise fundamentally important questions about the motivational underpinnings of identity processes. Although both conceptualizations emphasize that optimal identity development requires exploration that is active and personally directed toward making choices about the values, goals, and activities which will comprise a coherent, committed identity, they differ conceptually in their assumptions about the origin and energization of these identity processes. Waterman's conceptualization suggests that the person is inherently an active agent, with identity arising from innate structures aimed at fulfilling one's true or authentic potential. In contrast, Berzonsky defines agency as the openness toward attending to, processing, and interpreting information and feedback from the social environment in order to formulate integrated personal cognitive structures of values, goals, and standards. Although both conceptualizations suggest that the social environment has a significant role in the trajectory of identity formation, each dedicates only minimal attention to the mechanisms by which the social context influences the development and maintenance of the core identity processes over time. Thus, differentiating those personal and

social-contextual factors that contribute to optimizing exploration and commitment (and according to Waterman also forwarding personal expression) becomes key to understanding healthy identity formation and maintenance. The SDT perspective brings together the important components of both Waterman and Berzonsky's models to demonstrate central roles for both innate propensities motivating identity pursuits and for the construction of important self-structures through social experience. Specifically, SDT employs the concept of basic psychological needs to understand innate tendencies toward the pursuit of intrinsic potential, it examines how support for these needs within the social context influences the internalization of and motivation for important extrinsic identity activities, and it examines how the interaction of these innate potentialities and social-contextual supports impact well-being (Ryan & Deci, 2003). I turn now to a discussion of the SDT perspective and how it may inform the important processes of identity development.

## ROLE OF NEED FULFILMENT

SDT suggests there are three *basic psychological needs*—autonomy, competence, and relatedness—that are the essential constituents for psychological development (including identity development) and well-being (Ryan & Deci, 2000a; Ryan & Deci, 2001). *Autonomy* literally means “self-rule” and refers to actions that are self-initiated and regulated. When autonomous, a person's behaviors are willingly endorsed and are experienced as wholeheartedly engaged and volitional (deCharms, 1968, Deci, 1975). When less autonomous, behavior feels compelled or controlled. *Competence* refers to the experience of mastery and challenge and is witnessed in curiosity, exploration and the stretching of one's capacities (White, 1959). Fulfillment of this need stands apart from the rewards and material benefits competent behavior might result in, as fulfilling the need for competence does not rest on expectations of success but instead relies on the act of simply “doing” or engaging in activity to broaden one's capacities. *Relatedness* refers to the feeling of belonging and being significant in the eyes of others (Baumeister & Leary, 1995; Ryan & Deci, 2000a). Relatedness refers to connecting to the person for who they are essentially (“real” self, Horney, 1950; “true” self, Winnicott, 1960/1965) and does not embody connections for the outcomes of a person's behavior, their appearance or status, or their possessions. In sum, the needs for autonomy, competence, and relatedness underlie natural inclinations towards engaging in interesting and self-valued activities, exercising capacities and skills, and the pursuit of connectedness with others.

According to SDT, identities are adopted in the service of these basic psychological needs (Ryan & Deci, 2003). That is, SDT suggests that people are naturally inclined to explore and dedicate much of their energies toward those

activities, roles, and relationships that promote basic psychological needs. Alternatively, people will avoid or engage only with significant costs to their well-being those domains or activities that threaten basic needs (Deci & Ryan, 2000; Ryan & Deci, 2000c). Of importance, from an SDT perspective, the social context—specifically relational partners' supports of needs—informs one's self-concept, goals, and identity-related behaviors and the extent to which maintaining these adopted identity components has an impact on health.

Before examining how relational supports impact identity development and consequently well-being, we must understand how core motivational processes might underlie what identities are adopted, why they are adopted, and how they are maintained. Clearly, people have multiple identities and these identities may be multiply determined, emanating from intrinsic interests and pursuits as well as derived from socialized values and activities. I now turn to a discussion of intrinsic motivation as well as the integration of socially prescribed values and behaviors, and I outline how needs serve as fundamental foundations of these processes (Ryan & Deci, 2000a, 2000c).

#### WHY IDENTITIES ARE ADOPTED AND MAINTAINED: A THEORETICAL ACCOUNT

##### Intrinsic Motivation

Some activities that later promote deeply held identities begin as intrinsically motivated behaviors (Waterman, 1984). Intrinsically motivated activities are those that are engaged for their inherent satisfaction or enjoyment (Csikszentmihalyi, 1975; Deci, 1975) and are experienced as spontaneous, volitional, and willingly engaged self-expressions (deCharms, 1968). In SDT terms, the essence of intrinsic motivation is thus based in people's needs for competence and autonomy (Deci & Ryan, 1985).

Children's first activities center around play, the prototypical intrinsically motivated activity (Deci & Ryan, 1985). These play activities—manipulating toys; stretching physical capacities by running, skipping, and jumping; making music from banging on pots and pans—are spontaneous and self-directed and are all first engaged for the enjoyment of and interest in the activities themselves. From this play, many children find that they are particularly intrigued by and have special talents and competencies in a given activity. So for example, a young boy who loves to draw with crayons and play with paints soon finds that he is quite skilled in these crafts. His play is then honed and refined—he learns new ways to manipulate tools, he explores new mediums, he creates more complex pieces—thereby developing greater mastery and competence. Intrinsic motivation is witnessed in his continued active, self-energized pursuit of and absorption in

these creative tasks (e.g., doodling on his notebooks, creating sculptures with clay, or constructing elaborate models from building blocks), separate from any external conditions requiring such engagement. Thus, drawing on perspectives of SDT (Deci & Ryan, 1985) and the teleonomic theory of the self (Csikszentmihalyi, 1988), intrinsic motivation requires both autonomy (Deci & Ryan, 1985) in pursuits and relatively high levels of skill and challenge in activity (Csikszentmihalyi, 1988; Deci & Ryan, 1985) and by its nature is a process of *exploration*.

Relationship partners such as parents and teachers will help provide the supportive backdrop for personal exploration and differentiation of intrinsic interests by providing *autonomy support* and *structure* (Grolnick, 2003; Ryan, Deci, Grolnick, & La Guardia, 2006). Parents and teachers who show autonomy support attempt to grasp, acknowledge, and convey understanding of the child's wishes, preferences, and perspectives, and encourage the child to initiate and explore new activities, interests, or roles. Provision of structure supports competence, as parents and teachers create opportunities for the child to stretch his or her skills in an optimally challenging way (so that tasks are not too easy but are also not too difficult or overwhelming) and provide clear feedback and guidance in order to help the child mobilize and organize action.

Using the example of the budding young artist, although his potentials can be self-evident in the enjoyment, interest, and the facility with which he engages his pursuits are likely contributors to him developing an identity as an artist, it is the encouragement by those who are close to him (or in other words support for *relatedness*) that may propel these intrinsic interests into a more rooted identity. Parents and teachers may promote intrinsic interests subtly (e.g., drawing notice to his creations, commenting on his talents) or through more direct encouragement (e.g., proudly displaying his works for others to see, signing him up for art class, helping him attempt new methods or art forms), but the key is that the parent or teacher is *involved* (Ryan et al., 2006) and shows care, warmth, and interest in the child's activities nonselectively (Assor, Roth, & Deci, 2004). In Waterman's terms, activities valued as self-realizing—those that promote life goals and purposes—are viewed to increase the relevance of these early intrinsic activities for identity. Thus, parents' and teachers' engagement and encouragement of personally salient intrinsic pursuits may be critical to the differentiation of these intrinsic pursuits into commitments to goals and structures that comprise identity.

##### Extrinsic Motivation

Even if identities are products of early intrinsic interests, they are often not maintained simply for intrinsic reasons. Almost inevitably they will also be guided by extrinsic reasons—performed to accomplish some outcome separable from the activity per se. That is, they will develop and be maintained

for outcomes other than sheer pleasure, interest, or to exercise one's potentials, and will serve an instrumental purpose in achieving life goals (Ryan, Sheldon, Kasser, & Deci, 1996). Using the example of the budding young artist, he may begin to enter his artwork into competitions or he may produce more pieces in his portfolio of work to obtain a job. His productions of art are then no longer simply for their inherent value but instead may also be the means to get a prize, recognition, or a paycheck.

Many identities are actually derived from activities and pursuits that are first valued by others rather than developed out of intrinsic interests or pleasures (Ryan, 1995). Thus, through culture and interactions with important relational partners, important tasks, goals, and roles that are not inherently appealing (e.g., doing homework) but may be instrumentally valuable for some later identity pursuits (e.g., doing homework) are socialized within the child (Grolnick, Deci, & Ryan, 1997).

The extent to which important tasks, goals, and roles are internalized, or adopted as self-valued pursuits, can vary considerably. Specifically, SDT suggests a continuum of extrinsically regulated behaviors that are differentiated by the relative autonomy with which they are enacted (Ryan & Connell, 1989). When behaviors are *externally* regulated, they are performed to attain a reward or avoid a punishment. Externally regulated activity is directly controlled or compelled by others, and these behaviors are poorly maintained when reward or punishment contingencies are removed. When behaviors are regulated by *introjection*, people behave in order to avoid guilt and shame or alternatively to obtain feelings of pride and self-worth in the eyes of others. Unlike externally regulated behaviors, introjects are contingencies that are not directly administered by someone else, but instead they are often experienced as the internal voice that the person has "swallowed whole" from others without digesting it and making it his or her own. When *identified*, behaviors are accepted, valued, and genuinely committed as one's own, and when *integrated*, the fullest form of internalization, behaviors are brought into harmony with other aspects of self. That is, when integrated, the behavioral pursuits are in line with and do not create a sense of conflict in their pursuit with other behaviors.

Each of the forms of regulation will be more or less active within any given identity (Ryan & Deci, 2003). That is, for each identity a person embodies, the reasons for formulating and maintaining that identity may be more or less driven by reward and punishment contingencies (external regulation), thoughts, feelings, or actions in the service of pleasing others (introjection), value for and investment in associated goals or behaviors (identification), the relative harmony with other self aspects (integration), as well as their intrinsic value. Accordingly, the degree to which tasks, goals, and roles are internalized corresponds directly to the relative autonomy with which they are engaged, with those that are more clearly pressured or compelled by outside forces (external, introjected) reflecting a low degree of autonomy, whereas those

that are personally endorsed and well-integrated (identified, integrated, intrinsic) reflecting a high degree of autonomy (Ryan & Deci, 2000c).

Collectively, a person's motivations across different domains give rise to global orientations or individual differences in the extent to which he or she is motivated to engage in life tasks. Those with an autonomous orientation behave volitionally and are aware of their self-interests, goals, and values, whereas those with a controlled orientation rely heavily on the contingencies of the social environment to behave, as they view their behavior as externally coerced and regulated. Those with an impersonal orientation feel that they have little effect on their own behaviors either due to lack of ability or resources. With respect to identity, the autonomous, controlled, and impersonal styles have been empirically shown to reflect Berzonsky's informational, normative, and diffuse-avoidant identity styles, respectively (Soenens, Berzonsky, Vansteenkiste, Beyers, & Goossens, 2005).

Notably, while the *level* of internalization of the tasks, goals, and behaviors associated with identity may be characterized by the relative autonomy with which they are engaged (or in other words by the person's motivational orientation), the *process* of internalization is purported to be energized by each of the three needs (Grolnick, Deci, & Ryan, 1997).<sup>1</sup> That is, according to SDT, the internalization of activities and pursuits that are valued by others is regarded as a basic process in development, and the needs for autonomy, competence, and relatedness fuels the active, sustained, motivated activity of this basic integrative tendency (Ryan & Deci, 2001). Specifically, according to SDT, through the *process* of internalization, the child is able to connect more fully with others who also share their abiding interests, goals, values, and behaviors (relatedness); the child is able to develop competencies to capitalize on new opportunities for growth and mastery and cope with environmental challenges as they arise (competence); and through the transformation of values, goals, and behaviors from being externally imposed to being personally owned, the child is able to more flexibly consider their own interests, thoughts, and feelings and more volitionally engage challenges posed in the world as they arise (autonomy). Thus, the added utility of defining needs as the constituents underlying internalization, we can consider how relational partners support or alternatively

<sup>1</sup>Internalization from the SDT perspective refers to how people incorporate inputs from the environment to form self structures and specifically refers to relative position of a given behavior on the autonomy continuum. Thus, although behaviors may have a variety of motivations underlying them, internalization refers to the extent to which the behavior is enacted autonomously. This concept thus encompasses the assimilation process as described by Piaget (1952, 1981), but it also describes the extent to which the person has accommodated their behavior in accord with external demands. As I note throughout this article, SDT makes an important distinction about the extent to which accommodation is actually healthy, with the relative autonomy with which behaviors are enacted showing differences in sustained engagement in identity pursuits and personal well-being.

thwart internalization processes and thereby impact the person's subsequent motivational orientations toward important life tasks.

Indeed, primary socializing agents such as parents and teachers can be more or less encouraging in helping children willingly assimilate various identities (Grolnick, Deci, & Ryan, 1997). Effective socialization is aimed at having children value and feel volitional with regard to their behaviors and not merely be obedient or compliant with external demands. Less integrated forms of identity are expected when children's identity development is driven by the parents' and teachers' own wants (e.g., correcting for their own missed opportunities or vicariously pursuing their own desires through their children), needs (e.g., shoring up a sense of self-worth, reputation, or status by banking on the success of the child), or pressures (e.g., making sure the child achieves high grades or settles into an acceptable career; investing in the child to provide later familial support), to the neglect of the child's basic psychological needs.

In sum, theoretically the social context has implications for both intrinsically and extrinsically regulated activity and thus may significantly impact what identities are adopted, why they are adopted, and how they are maintained. Nearly 30 years of research in the SDT tradition attests to this influence of relational partners on intrinsic motivation and the assimilation of values, goals, and behaviors into extrinsic motivations. I now turn to a brief review of this literature to illustrate this, specifically focusing on the extent to which parents and teachers influence intrinsic and extrinsic motivations towards school tasks and vocational development, and argue how these processes may serve as the building blocks for a critical piece of identity.

#### HOW DO RELATIONAL PARTNERS SUPPORT MOTIVATION UNDERLYING IDENTITY?

In the SDT tradition, researchers have operationalized need support in early development by the extent to which parents and teachers provide children with opportunities for autonomy, create structure, and show warmth and involvement (Grolnick & Ryan, 1989). Specifically with regards to schooling, researchers have looked at the role of parents expectancies, affective regard, and parenting practices (see Pomerantz, Grolnick, & Price, 2005, for review) and the impact of teachers orientations toward their students and contextual factors in the classrooms (such as rewards or other external contingencies) that promote or undermine motivation for important school related tasks (see Ryan & La Guardia, 1999, for review).

Overall, autonomy support is witnessed the more that partners attempt to grasp, acknowledge, and convey understanding of the child's wishes, preferences, and perspectives (e.g., Deci, Eghrari, Patrick, & Leone, 1994; Koestner, Ryan, Bernieri, & Holt, 1984; Ryan & Stiller, 1991), provide choice (Zuckerman, Porac, Lathan, Smith, & Deci, 1978), and en-

courage the child to initiate and "try on" new activities, interests, or roles (e.g., Ryan, Mims, & Koester, 1983) and the less that partners orient around deadlines (Amabile, DeJong, & Lepper, 1976), threats (Deci & Cascio, 1972), surveillance (Lepper & Greene, 1975), evaluation (Harackiewicz, Manderlink, & Sansone, 1984), or pressuring rewards (see Deci, Koestner, & Ryan, 1999a, 1999b, 2001). Research has shown that autonomy supportive partner behaviors are associated with greater intrinsic motivation in the child, whereas controlling behaviors (such as the pressured rewards, threats, surveillance, and evaluation) undermine the child's intrinsic motivation (see Grolnick, 2003; Reeve, Bolt, & Cai, 1999, for reviews).

Structure and involvement by the partner also provides key scaffolding for the child to navigate new or challenging tasks and remain engaged and persist in their behaviors. Research has shown that when partners guide children by providing optimal challenges (Danner & Lonky, 1981) and provide feedback that is clear and informational (Ryan, 1982; Ryan, Mims, & Koestner, 1983), children are able to navigate tasks more effectively (rather than feel that they are too difficult or overwhelming) and greater intrinsic motivation is witnessed. When parents and teachers provide less structure and are less involved, children have a poorer understanding of how to personally control their own outcomes, such as completing a homework assignment successfully (Grolnick & Ryan, 1989; Skinner, Zimmer-Gembeck, & Connell, 1998). Further, when feedback is controlling (conveying expectations of compliance) and does not supply a rationale, guidance, or acknowledgment of the child's inner experiences, it undermines intrinsic motivation (Ryan, 1982; Ryan et al., 1983). Indeed, reliance on grades or other reward contingencies that do not provide guidance or information for the child robustly shows this undermining effect (see Deci, Koestner, & Ryan, 1999a, 1999b, 2001).

In sum, autonomy supportive environments encourage exploration and self-authorship in cultivating one's potentials, and structure and involvement provides the supportive backdrop from which the child can stretch and challenge these capacities and obtain feedback to guide subsequent behavior. Thus, need support underlies processes central to identity formation (Marcia, 1966, 1993; Waterman, 1992, 1993).

More importantly, given that many school tasks (e.g., homework) are undertaken for extrinsic rather than intrinsic reasons, greater autonomy support, structure, and involvement from parents and teachers has also been associated with more autonomous regulations for school tasks in children and adolescents (e.g., Chirkov & Ryan, 2001, Grolnick & Ryan, 1989, Niemiec et al., 2006; Soenens & Vansteenkiste, 2005). In contrast, less supportive behaviors by parents and teachers are predictive of less integrated motivation and poorer engagement in school in children (e.g., Assor & Kaplan, 2001; Assor, Kaplan, Kanat-Maymon, & Roth, 2005; Grolnick & Slowiaczek, 1994). Thus, need support from the social environment also encourages, in Berzonsky's terms,

an informational orientation—openness toward attending to, processing, and interpreting information from the social environment in order to grow values and goals within academic identity (Berzonsky & Kuk, 2005; Soenens et al., 2005).

Further, more internalized forms of academic motivation have been associated with better student outcomes, such as greater interest, curiosity, confidence, and less anxiety and boredom in school (Black & Deci, 2000; Miserandino, 1996; Ryan & Connell, 1989) as well as higher well-being (Chirkov & Ryan, 2001; Niemiec et al., 2005). More internalized forms of motivation have also been linked to better school performance as evidenced by better grades and test scores (Black & Deci, 2000; Grolnick & Ryan, 1989; Miserandino, 1996), and greater exploration of vocational identity, greater intentions to engage in job search behaviors (writing letters, contacting employers), greater commitment to and self-confidence for vocational identity (Soenens & Vansteenkiste, 2005), and greater pursuit of specialized training when students are already immersed in a profession (Williams, Saizow, Ross, & Deci, 1997). Finally, motivations toward school have been linked to school retention, such that more controlled regulation (e.g., external, introjected) toward school is related to greater school dropout, whereas more autonomous regulation is associated with students remaining in school (Vallerand, Fortier, & Guay, 1997). Thus, as these studies suggest, the more autonomously oriented children are in their identity pursuits, the more actively and energetically they engage in their pursuits (likely, in Berzonsky's terms, employing an informational style) and the more they obtain markers of successful identity commitment.

Notably, the effect of children's internalization of school tasks on student achievement has been shown to be a product of parents' and teachers' need support, such that greater need support instills greater value for the importance of school and this in turn relates to higher student functioning (Grolnick, Ryan, & Deci, 1991; Soenens & Vansteenkiste, 2005). Teacher and parent warmth or relatedness seems to be key to this association, as greater relatedness to parents and teachers is associated with a more autonomous orientation for school activities (Connell & Wellborn, 1991; Ryan, Stiller, & Lynch, 1994) as well more positive school outcomes (Furrer & Skinner, 2003; Grolnick & Slowiaczek, 1994; Klem & Connell, 2004; Wentzel, 1997).

In sum, from this brief review, we see that need support clearly impacts the pursuit of intrinsic interests and the adoption of more deeply self-valued motives, and results in fuller engagement of important tasks of academic identity development. It is evident that parent and teacher warmth and involvement, structure, and autonomy support are necessary for children to optimally internalize regulations for academic tasks. Parents and teachers who are need supportive afford opportunities and experiences to explore and develop interests, and they socialize other important behaviors to be personally valued, rather than merely complied with. Failure to provide these supports results in poorer school achieve-

ment as well as less effective navigation of tasks that later inform this piece of identity (e.g., job search, commitment to vocational pathways). Thus, specifically in terms of identity, key processes of exploration and commitment to values, goals, and behaviors for academic pursuits, as well as the academic outcomes that result from these processes, are significantly impacted by the need supportiveness of the social environment.

There are important further implications of this research for future work. First, less than optimal support may leave children and adolescents ill-equipped to self-regulate around future challenges posed in their identity development (e.g., change in jobs or career pathways) and subsequent pursuits relevant for maintenance (e.g., development of new skill sets). Indeed, Flum and Blustein (2002) suggested that the continual evolution of exploratory processes is warranted by the changing socioeconomic and vocational climate. That is, this shifting climate requires greater flexibility; continued re-examination of skills, goals, and the personal relevance of identity pursuits; and the flexible integration of new information that arises from these challenges. Future work incorporating the SDT tradition could potentially examine how times of natural change (e.g., transitions to school) or unexpected upheaval (e.g., job loss) stimulate exploratory processes and supports the re-examination of self-potentials and interests, and ultimately how engagement of these events informs subsequent motivation. Further, given that social relationships are important to these processes, it will be essential to assess the extent to which relational partners are thereby flexible and open to providing basic need support through these identity shifts.

Another implication of this work is that significant challenges in early tasks of identity formation may set the stage for more profound disturbances in personal well-being and relational functioning (Westen, 1992; Westen & Heim, 2003). To understand the implications of identity development and maintenance for well-being more clearly, I elaborate on two distinct philosophies of the conceptualization of well-being, one concerning hedonic value and the other concerning the actualization of human potentials (Ryan & Deci, 2001; Ryff & Singer, 1998; Waterman, 1993). I now turn to this discussion.

#### TO WHAT EXTENT ARE THE IDENTITIES ADOPTED HEALTHY FOR THE PERSON: AUTHENTICITY VERSUS COMPENSATION

Hedonic perspectives (see Kahneman, Diener, & Schwartz, 1999) typically follow classic "expectancy-valence" theories, suggesting that happiness is derived by attaining any internalized goal, value, or behavior, irrespective of the nature of their aims. Thus, hedonic philosophies are ultimately focused on pleasure, rewards, and efficacy as the basic forces of human action and suggest that whatever one's goals, values, or behaviors, one will be happy and therefore "subjectively



well” when these goals, values, or behaviors are attained, embodied, or successfully completed. In contrast, the eudaimonic approach suggests that optimal psychological functioning is a result of self-realization, or living in accord with one’s “true self” (Waterman, 1993). Winnicott (1960/1965) specifically distinguished between “true” and “false” self, suggesting that when acting from the true self, people feel real and “in touch” with their core needs and emotions, whereas acting from a false self signals a split between one’s outer presentation and one’s deeper feelings and needs. The true self gives direction and meaning to action, essentially energizing human development, whereas alienation from the real self (akin to “true self”) is viewed as the foundation of neurosis (Horney, 1950) or ill-being (Winnicott, 1960/1965). It is important to note from this perspective that not all goals, values, or behaviors are thereby equally “good,” as attaining, embodying, or successfully completing them does not necessarily signify well-being. Rather, only those activities that are in line with the true self will result in well-being. The SDT philosophy is more clearly in line with this eudaimonic tradition.

A large body of research, reviewed extensively elsewhere (Deci & Ryan, 2000; Sheldon et al., 2004), has shown that goals, values, and behaviors that are more well-integrated and assimilated—that is, performed for more identified or integrated reasons as opposed to rooted in more external or introjected motivations—are associated with greater personal well-being and relational functioning. As goals, values, and behaviors underlie important identities, herein I spend more time specifically reviewing recent work that has more explicitly looked at how greater *authenticity* in identity predicts healthier functioning.

The concept of an authentic self is deeply rooted in writings in philosophy (Heidegger, 1968; Kierkegaard, 1849/1968) and psychology (Horney, 1950; Winnicott, 1960/1965). *Authenticity* has been described as the phenomenological experience of being “true to oneself” (Laing, 1969, p. 127), and at its core is an emphasis of knowing and freely accepting the self *within* the context of the social world. Kernis and Goldman (2006) have extensively examined the relations of authenticity, the self-concept, and functioning. Their operationalization of authenticity involves awareness of one’s core motivations, open and unbiased processing of associated thoughts and feelings, and behavior in accord with these associated thoughts and feelings, all in the service of creating connections with others from these experiences. Using their newly devised dispositional measure of authenticity, they examined the extent to which authenticity relates to self-concept organization and consequently impacts the person’s sense of self-worth or self-esteem. Notably, Kernis and Goldman (2006) used several widely used constructs of self-concept organization to assess the role of authentic functioning, including identity styles (Berzonsky, 1988, 1990), identity integration (O’Brien & Epstein, 1988), implicit theories of self (Dweck, Chiu, & Hong, 1995), self-concept dif-

ferentiation (Donahue, Robins, Roberts, & John, 1993), and self-concept clarity (Campbell et al., 1996). Although each of these theories has a unique conceptualization of identity, results showed that commonality was found in their relation to authenticity. That is, the more authentic people are, the more they endorse an identity style characterized by actively seeking out, processing, and evaluating self-relevant information rather than avoiding or being unwilling to engage challenges to identity (identity style), the more their identity directs their life experiences and is organized to assimilate new information (identity integration), the more they believe that important personality traits are malleable as opposed to fixed or unchangeable (implicit theories), the greater consistency of traits they express across roles (self-concept differentiation), and the more their identity is clearly defined and stable (self-concept clarity). Importantly, the relationship of authenticity to these identity constructs was not simply a function of self-esteem. That is, although greater authenticity was associated with greater overall feelings of self-worth (general level as measured on the Rosenberg, 1965) and a sense that worth was less dependent on achievements or other outcomes such as appearance or social status (level of contingent self-esteem as measured by Kernis & Paradise, 2002), its utility as an explanatory concept of healthy identity functioning remains when controlling for feelings of self-worth. Thus, authentic behavior emanates from core motivations, and it is the awareness, open and unbiased processing, and behavior in accord with these motivations aimed at connection with others that is associated with optimal self-functioning.

In SDT terms the extent to which a person’s identity represents “true” or “authentic” self is precisely the extent to which the person’s goals, values, and behaviors are integrated into a coherent, organized self-structure in line with needs. Sheldon and colleagues have actually examined the extent to which people’s goals are self-concordant, or in other words, are authentic and fall in line with basic psychological needs. Sheldon and Elliot (1998) compared students’ success at goals that were pursued for less integrated reasons (introjected or external) with those that were pursued for more integrated reasons (identified and intrinsic). The more students were well integrated around their goals, the more they showed persistent effort and energy toward their goal strivings. Sheldon and Kasser (1998) further found that success at the goals per se did not relate to well-being, but these outcomes depended on the extent to which the goal was well integrated or self-concordant. Thus, well-being is evidenced as a function of more authentic action.

As I have argued, the social environment appears to be a key determinant in how needs are satisfied and identity is thereby structured. Earlier work by Sheldon, Ryan, Rawsthorne, and Iardi (1997) lends further support to this claim. They examined how the trait self-concept is structured across important life roles (e.g., son/daughter, student, friend). They found that in roles where people felt they could be more authentic or “truly themselves,” people reported a

more positive trait profile (feeling less neurotic, and more extraverted, agreeable, conscientious, and open) relative to their general or overall level of trait expression, and greater authenticity was related to greater overall well-being. Lynch, La Guardia, and Ryan (in press) extended this work by measuring the relation of autonomy support within several significant close relationships (mother, father, best friend, romantic partner, and roommate) to trait self-concepts in three diverse cultures (United States, China, Russia). Results showed that again trait expressions varied systematically with the perceived autonomy-supportiveness of relational partners, such that when people felt greater autonomy support they departed from their general trait expressions in their relationships in a direction toward feeling more extraverted, agreeable, open, and conscientious and less neurotic relative to their own general level of these trait expressions. Notably, the more autonomy supportive people experienced their relationship partners to be, the more positively they rated the quality of that relationship (as indicated by greater satisfaction and vitality for the relationship). Thus autonomy support has important implications for self-organization and ultimately personal and relational well-being.

This work seems to suggest that people adapt their “self” to the situational context, yet these adaptations can have costs. Indeed, when immersed in a nonaccepting social context (or in SDT terms, when need support is less than optimal), people will often compensate, embodying “false self” by adopting practices, roles, or other such pursuits in the service of gaining some form of approval from others (Miller, 1981). In other words, people compensate in an attempt to gain or preserve relatedness. Their aims are not primarily performed out of interest or identified value but are instead maintained to please or not be punished by others. To the extent that a given identity is adopted and maintained for these purposes, negative consequences on functioning is predicted.

One example of how inauthentic behavior may emerge in children is found in instances of parents’ use of conditional regard. Conditional regard conveys that the child will only be loved or shown care if he or she behaves in ways that are acceptable to the parent. That is, in the service of gaining relatedness, the child is asked to give up his or her autonomy. Assor et al. (2004) assessed university students’ perceptions of their mothers and fathers’ use of conditional regard with them while they were growing up in several domains, including academic pursuits. The more children perceived that their parents used conditional regard, the more pressured and compelled they felt to enact the parents’ desired behaviors and the more shame and guilt they experienced for failure to engage in these behaviors. Thus, greater use of conditional regard promoted more introjected regulation and more negative self-directed emotions. Importantly for health, parents’ use of conditional regard was also associated with their children reporting more fluctuations in self-esteem (contingent on parent’s approval), sense of rejection, and resentment toward their parents. Thus, having to give up one’s autonomy

to gain relatedness to parents can be quite costly to healthy engagement in a variety of identity-related activities.

In sum, this body of work suggests that the health of any identity relies on the extent to which it is authentic, and thus more closely aligned with need fulfillment. Authentic engagement is associated with greater personal and relational health, whereas embodying a false self in the service of pleasing or appeasing others results in costs to well-being. As the concept of needs helps to frame and define what it means to be authentically engaged, it allows us to be *prescriptive* about how the values, goals, roles and behaviors that make up identity may inform health. Although I have already argued how authentic identities may be nurtured or thwarted by the critical players in development, such as parents and teachers, it is also crucial to look at the environmental factors that may help us to understand why parents and teachers are more or less able to provide optimal need support for the children in their care. Although there are many factors that likely contribute, Ryan and La Guardia (1999) argued that the recent education reform movement in the United States is one of the macrolevel factors that poses significant challenges to providing optimal need support for healthy development. Returning to this topic, I now briefly examine some of the potential consequences of the climate produced by this school reform.

### Implications for Educational Practice

In the United States the current educational climate emphasizes accountability by way of state and federally mandated standardized testing of all students, with rewards or sanctions based on the results (Carnoy, Elmore, & Siskin, 2003). For students, high-stakes test results can be the basis for promotion versus retention, and failure on these indicators can in some cases result in the denial of a high school diploma. For many teachers and school districts, those that do well are rewarded by bonuses or more federal monies, and those that do poorly are punished through public derision or loss of funding.

As a result of this pressure, multiple changes have occurred in how the school day is structured and what is offered, what activities get valued in the classroom, and the emphasis of performance over the pathways of exploration (Meier & Wood, 2003). For example, emphasis on testing has made cultural arts and enriched depth-oriented learning programs less represented in the curricula (Jones, Jones, & Hargrove, 2003). Teachers report that the high-stakes climate encourages them to dedicate their class time to “teach to the test” and orient toward achievement of high test scores, despite the fact that it goes against their philosophies of good teaching (Abrams, Pedulla, & Madeus, 2003). As greater student efforts are aimed toward passing the tests, many have suggested that students are in essence learning to be test-takers rather than learning how to cultivate inherent interests and skills (Kohn, 1999, 2000). Indeed, the current high-stakes

testing movement largely results in narrowing of the focus of schools to those skills or interests that are deemed important by the state or federal government.

In 1999, Ryan and La Guardia outlined probable outcomes of the “higher standards movement” that now permeates the U.S. school systems of today. Specifically, we suggested that “higher standards” (embodied today by high-stakes testing and many of the regulations outlined by the No Child Left Behind legislation) would undermine classroom practices and processes that enhance student interest, inner motivation, and long-term persistence, and in the end, would produce “a lower quality of education, precisely because its tactics constrict the means by which teachers most successfully inspire students engagement in learning and commitment to achieve” (p. 46). In other words, we suggested that this reform movement would undermine the provision of need support, and consequently would deeply affect student motivation and well-being. Thus, we suggested that when the bottom line of “higher standards” is an orientation toward demonstrable outcomes (e.g., high grades, high standardized test scores), the environment created will have significant consequences for children’s attitudes and experiences of school (academic and social), and will have a deep and abiding impact on the development of identity and well-being (Kohn, 2000).

Why would this be the case? Simply put, “pressure from without” breeds “pressure from within” (Grolnick & Aposhtoleris, 2002). Empirical support for this phenomenon of pressure breeding pressure has long been substantiated in the laboratory (e.g., Deci, Spiegel, Ryan, Koestner, & Kauffman, 1982) and field research (e.g., Flink, Boggiano, & Barrett, 1990; Pelletier, Sequin-Levesque, & Legault, 2002) but is now also emerging in qualitative reports from students and teachers alike (e.g., Barksdale-Ladd & Thomas, 2000; Carnoy et al., 2003).

Specifically, the high-stakes achievement standards create pressures for parents and teachers to keep children on task and perform up to standards, which in turn makes parents and teachers more likely to use more controlling behaviour with the children in the process (see Ryan & La Guardia, 1999, for review). Indeed, these high-stakes standards may create a unique internalized “pressure from within”, or what has become known in the literature as *ego involvement*.

Theoretically, when parents or teachers get ego-involved, the child’s performance has ramifications for their own self-worth. Thus, a parent might hinge their own sense of self on the child’s outcomes, feeling proud when the child is “good” (performing successfully in school tasks), while ashamed, embarrassed, or angry if the child is “bad” (performing poorly at school tasks). Thus, if the testing movement emphasizes ego involvement—how a student “lives up to standards” is viewed as a reflection of how good the teacher or parents are at their respective roles—this pressure may influence how parents and teachers subsequently engage children around important tasks that inform their academic identity.

A recent empirical study begins to help us understand this effect. In an experimental paradigm, Grolnick, Gurland, DeCoursey, and Jacob (2002) examined the impact of mothers’ styles in assisting their children in school-like tasks. Before interacting in the tasks with their children, mothers were assigned to either a high-performance or low-performance standards conditions, with mothers in the high-performance condition told that their children would be tested on the task and it was their job to ensure that their child does well, whereas those in the low-performance condition were made aware that their children would later be asked questions about the tasks although they were not pressured to perform up to a stated standard. Results showed that when working on a relatively unstructured creative task, mothers in the high-pressure condition showed more verbal control with their children, more verbal interventions, and less structure and were more susceptible to the manipulation than mothers in the low-pressure condition. Further, in a relatively structured task with well-defined correct and incorrect responses, mothers who were in the high-pressure condition were the most controlling in their interventions with their children (e.g., used directives, took over), but this was especially true if they were more controlling as a parent to begin with. Notably, this pressure on the mother also affected the child. When working on their own, children performed objectively worse on structured tasks and were less creative in less structured tasks if their mothers were more controlling.

In sum, it seems that parents may relieve the “pressure from without” by pressuring their children (thereby thwarting autonomy), and in the process, the children’s engagement with tasks suffers. Further, it seems that when this pressure is transmitted to the child, they too may be more likely to be ego involved with their tasks as well (Ryan, 1982). Indeed, other research has also shown that when people are ego-involved in tasks, they experience greater pressure and tension, but also exhibit less intrinsic motivation for their tasks (Ryan, 1982), and lower quality learning (Grolnick & Ryan, 1987), including less depth in processing and conceptual learning (Nolen, 1988). Notably, whereas the child’s phenomenological sense of ego-involvement was not directly tested within the Grolnick et al. study, the child’s performance outcomes seem to resonate with this explanation. Future work should directly test this “pressure breeding pressure” hypothesis.

As demonstrated by the Grolnick et al. (2002) study, “pressure from without” may also leave little time and psychological availability necessary for parents and teachers to support children’s growing sense of competence. Indeed, to allow children to find their own unique solutions and skills to solve problems requires sensitive pacing, time and patience rather than quick foreclosure of the process by solving problems for them (Grolnick, 2003). Given constraints on the curriculum and the ever-impending test deadlines imposed by the high-stakes testing movement, it is likely that there is little flexibility left for parents and teachers to effectively respond to students’ skill level, needed pace, and requirements when

challenged (Jones et al., 2003). As a result, opportunities may be foreclosed, and potentially the development of competencies to adequately handle challenges later on when the support of others is not readily available may be compromised.

Finally, “pressure from without” may also make it more difficult to be involved in a warm, caring, and noncontingently regarding way (thereby thwarting relatedness). That is, when report cards, passing tests, and other achievements take center focus, students’ worth often becomes dependent on producing acceptable outcomes (contingent regard). This affects all students in the system (Kohn, 2004), but particularly, as failures on these high-stakes tests have actually been linked to increased drop-out rates (Amrein & Berliner, 2002), the impact on self-esteem for those that have dropped out is substantial. Further, as teachers’ time and inner resources are taxed by the high-stakes standards, they may be even less available to create meaningful collaborations with parents around their children’s learning, outside of simply offering information about the students’ performance standings. As teacher attitudes and practices toward involving parents have been shown to be related to parents’ actual involvement in their child’s schooling (Grolnick, Benjet, Kurowski, & Apostoleris, 1997), the pressures of high-stakes standards potentially become a critical issue then for creating an optimal need supportive environment for children.

Although many of these suppositions have not withstood field tests within the educational climate since the introduction of the high-stakes movement, alternatives to the high-stakes testing and the No Child Left Behind approaches have emerged and lend credence to these propositions. These alternative programs are based in motivational concepts, like those forwarded by SDT, and are aimed at providing schools, teachers, students, and parents with the best “leg up” toward developing students with healthy identities.

One example is a program called First Things First developed by the Institute for Research and Reform in Education (<http://www.irre.org/>). First Things First emphasizes small learning communities, family advocacy, and growth-oriented aims of learning (in contrast to test-oriented aims) as key features to develop higher functioning students and communities. Each learning community has a thematic emphasis, allowing students to address core skills (e.g., reading, writing) by working together in curricular areas of interest, and activities are designed to help provide students with opportunities to stretch and extend their skills creatively and obtain extra assistance in arenas that are challenging. Thus, the community aim is toward identifying and exploring potentials and developing intrinsic interests, providing structure for developing competencies at a pace that is in line with strengths and challenges of the students making up the community, and fostering interests toward identity commitments that follow from these processes. The development of each student and nurturance of their interests and needs is paramount. In fact, individual development of students is addressed in

staff meetings weekly, and staff meet regularly with students and their families to collaboratively create action plans to track student progress, strengths and challenges. Staff too have their own weekly team meetings to get social support for challenges they are facing as well as work together to improve their own teaching within the learning communities. As the students stay in their same learning community for several years, continuity of relationships among students, families, and staff is created and thus greater relatedness and a sense of belongingness is fostered. In all, the First Things First system makes its primary aim creating an optimal need supportive environment to foster the development of healthy children. Thereby, rather than “pressure breeding pressure,” the orientation is toward “support building support.”

Outcomes of this intervention have been striking, meeting expectations of higher standards without making education high stakes. For example, since the introduction of First Things First in the Kansas City School District (Institute for Research and Reform in Education, 2003), students scores on proficiency exams have nearly doubled and the numbers of those showing difficulty with reading have dropped substantially (importantly this trend is even more pronounced for minority students and those with socioeconomic disadvantages). Further, students attend school more often and the graduation rate has doubled from preceding years, indicating that these changes are not simply weeding out students who are having trouble but are instead fostering the whole of the student community. This intervention has showed similar successes in several other school systems across the country, and continues to grow (see <http://www.irre.org/> for review of current programs and outcomes).

What this example suggests is that social systems, such as schools, can provide support the development of children through attention to how needs may be optimally fostered. Future research in this domain requires the assessment of how the high-stakes movement directly impacts need fulfillment and the extent to which this mediates identity development. Specifically, observational designs could be used to compare classroom structure and didactic practices of mainstream and alternative schools for state or federally mandated topical areas of the curricula, assessing the climate of need fulfillment, opportunities for exploration, and outcomes of test performance, depth of processing and conceptual learning, and student interest and enjoyment. Further, as I have suggested that the high-stakes mandates may limit pursuit of intrinsic interests and foreclose commitments as a result of either a lack of or constrained opportunities by the educational context, cohort analyses could assess whether the extent to which students were afforded diverse opportunities to pursue intrinsic interests and the extent to which they were supported to explore or “try on” different interests within their school curricula has changed from the inception of the high-stakes movement. Another important avenue of research will be to examine the extent to which experimental findings on ego-involvement reflect the experience of parents and teachers

under the high-stakes movement and have consequences for students' motivation and performance in school activities over time. Finally, broader models of the influence of relational supports on motivations for academic identity should include peer and romantic relations and examine the relative importance of these figures on discrete exploratory and commitment behaviors at different developmental epochs.

## CONCLUSIONS AND FUTURE DIRECTIONS

Active exploration of one's potentials and integration of experiences into a committed set of personally defining and meaningful values, goals, and roles is deemed essential to healthy identity formation. I have suggested that psychological needs both energize these constituent identity processes through intrinsically and extrinsically motivated activity. Further, I have argued that needs define the necessary requirements of the social environment toward fostering optimal identity development. Indeed, the evidence presented suggests that when parents and teachers support children and adolescents' psychological needs, intrinsic interests are developed, social values are more willingly internalized and engaged, and personal well-being is positively impacted.

Although a large body of work in the SDT literature examines identity concepts (e.g., exploratory processes involved in intrinsic motivation), some may argue that many of the links made in this article between SDT and traditional identity theories have not been explicitly tested in the literature (see exceptions such as Soenens et al., 2005; Waterman et al., 2003). These research traditions could forge important explicit empirical links by examining how partners' need support can (a) actively stimulate one's ongoing, authentic assessment of skills and goals toward identity potentials; (b) impact the flexibility by which one can reinstate and successfully navigate exploration to examine skills, goals, and personal relevance of identity pursuits in periods of natural change (e.g., transitions to school) or unexpected upheaval (e.g., job loss); and (c) help one to maintain or change commitments to identity pathways (both through emotional and instrumental support) when challenges arise. As identities are often linked to a varied cast of players (e.g., parents, teachers, peers, romantic partners, colleagues) and these players change across developmental epochs, it is important to assess each partners' roles and their relevant importance to a person's identity pursuits at any given time. Further, although the work on conditional regard between parents and children points to one important way in which needs are made to compete with each other, future research will need to identify the means by which needs are made to compete within different relationships pertinent to authentic engagement of identity pursuits. For example, as peer support might play a relatively stronger role in late adolescence, the manner by which peers force the needs to compete may be substantially different from how parents

or teachers do, and the impact of competing needs in these relationships may have a tremendous impact not only on academic pursuits but more globally on personal functioning. In addition, as formation of and sustained commitment to an identity reflects dynamic processes of exploration as well as active evaluation and incorporation of information about one's interests, skills, and social exchanges within a given identity, research designs should necessarily incorporate multiple assessments to model change over time and assess the impact of earlier identity processes on the trajectory of personal and relational functioning.

Finally, as school is a central place where children begin to develop their academic and later career identities, the implication of providing a need supportive educational environment is enormous. I have suggested that the current "high-stakes" education movement potentially constrains identity development by directly limiting opportunities for exploring diverse identity options (e.g., curricula, emphasis on test taking) and by creating greater challenges for parents and teachers to be need supportive and thereby foster optimal exploration of children's potentials, values, and goals, as well as a commitment to identities that follow from this process. Although there are many places in development that authentic identities might be highjacked, the opportunity to provide optimal educational environments is within reach. Indeed, as coordinated community school interventions centered on need support have shown that they can provide a positive foundation to successfully navigate identity development, broader utilization of such interventions can potentially provide us with viable solutions to address challenges posed for identity development in youth.

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