

CHAPTER 1

Self-Determination Theory

An Introduction and Overview

Self-determination theory (SDT) is an empirically based, organismic theory of human behavior and personality development. SDT's analysis is focused primarily at the psychological level, and it differentiates types of motivation along a continuum from controlled to autonomous. The theory is particularly concerned with how social-contextual factors support or thwart people's thriving through the satisfaction of their basic psychological needs for competence, relatedness, and autonomy. Although the theory is psychological, research has also given attention to biological underpinnings of these psychological processes and places them in an evolutionary perspective. In this chapter we provide an overview of what appears in the chapters that follow, including a layout of SDT's six mini-theories; a discussion of a range of phenomena related to human development; an argument for the theory's applicability to real-life domains such as education, health care, work, psychotherapy, sport, and virtual worlds; and a consideration of social, political, and cultural factors that influence motivations and basic need satisfactions.

Self-determination theory (SDT), as reflected in both the scientific research and the applied practices stemming from it, is centrally concerned with the social conditions that facilitate or hinder human flourishing. The theory examines how biological, social, and cultural conditions either enhance or undermine the inherent human capacities for psychological growth, engagement, and wellness, both in general and in specific domains and endeavors. SDT research thus critically inquires into factors, both intrinsic to individual development and within social contexts, that facilitate vitality, motivation, social integration and well-being, and, alternatively, those that contribute to depletion, fragmentation, antisocial behaviors, and unhappiness.

This focus on wellness and flourishing and the conditions that support (or thwart) them is of obvious importance, because the outcomes of human development vary so widely. Clearly, it is in our "natures" (i.e., our evolved capacities and acquired propensities) to attain greater or lesser degrees of healthy psychological, social, and behavioral

functioning and to more or less realize our human capacities and talents. We can also see natural experiments everywhere in which promising human potentials are diminished by impoverished or oppressive social conditions. SDT thus uses both experimental studies and field observations of such natural experiments toward understanding what humans really need from their psychological and social environments to be fully functioning and to thrive.

Investigation of factors that optimize development and functional integrity in living entities has long been an important topic of research within the biological and psychological sciences (e.g., Harlow, 1953b; Mayr, 1982; Raff et al., 1993). Whether studying plants, single-cell entities, or multicellular animals, establishing an organism's needs for particular nutrients and supports has been, in fact, a traditionally Baconian endeavor. It entails observation or manipulation of variations in deprivation or provision of presumed nutrients and assessing their observable effects on growth and functioning. Such studies are common in fields from agriculture to comparative biology. SDT brings this same functional viewpoint to the study of *psychological* growth and development and, in doing so, investigates some of the basic features and mechanisms underlying social behavior, its development, and its pathology.

Besides its value for basic science, this functional approach of SDT also turns out to be both *practical* and *critical*. SDT is *practical* insofar as it points to how features of contexts more or less facilitate or undermine the motivations and satisfactions underlying effective self-regulation and wellness. By identifying (and measuring) varied types of motivational regulation and the conditions that foster them, SDT can be thoughtfully and systematically applied within varied social contexts, including families, classrooms, sports teams, health clinics, interactive media, and workplaces. At the same time, SDT is inherently *critical* insofar as it examines and compares social contexts in terms of their adequacy in supporting versus impairing human thriving. This critical approach applies to proximal social contexts, such as parent–child, classroom, and workplace relationships, as well as to analyses of more pervasive cultural, political, and economic conditions as they affect basic human need satisfactions and the developmental and social assets they foster. In this sense SDT is not a relativistic framework; it hits bedrock in its conception of certain universals in the social and cultural nutrients required to support healthy psychological and behavioral functioning.

An Organismic, Empirical Approach

SDT is an *organismic perspective*, approaching psychological growth, integrity, and wellness as a life science. SDT specifically assumes that humans have evolved to be inherently curious, physically active, and deeply social beings. Individual human development is characterized by proactive engagement, assimilating information and behavioral regulations, and finding integration within social groups. From infancy on (when in need supportive environments), people manifest intrinsic tendencies to take interest in, deeply learn about, and gain mastery with respect to both their inner and outer worlds. These inclinations include the inherent propensities to explore, manipulate, and understand associated with *intrinsic motivation* (discussed in Chapters 5–7) and the propensity to assimilate social norms and regulations through active *internalization and integration* (discussed in Chapter 8). SDT focuses on the circumstances under which these two deeply ingrained developmental processes optimally proceed, as well as how contexts can interfere with or compromise them.

Important within SDT is the idea that these active propensities for intrinsic motivation, internalization, and social integration are accompanied by, and indeed grounded in, specific phenomenal satisfactions. SDT posits that inherent in such pursuits are satisfactions in feeling competence, autonomy, and relatedness. These proximal satisfactions reflect, in the deepest sense, the essence of human thriving, and they predict any number of indicators of wellness and vitality. Moreover, SDT research documents that in social contexts in which there is psychological support for these satisfactions, people's curiosity, creativity, productivity, and compassion are most robustly expressed.

As humanistic as these formulations might sound, these active tendencies of intrinsic motivation and integration in development are by no means uniquely human. The early experiments on intrinsic motivation, for example, were done with primates (Harlow, 1950), and one can observe both intrinsic motivation and dependence on psychological needs in primates and other mammalian species (de Waal, 2009; Waller, 1998). Primates have built-in intrinsic motivations upon which their development substantially depends. In fact, mammalian psychological development reflects a more general principle that in theoretical biology is called *organization*—the tendency of living entities, under supportive conditions, to progress toward increased differentiation and integration (Jacob, 1973; Kauffmann, 2000; Maturana & Varela, 1992; Mayr, 1982). Simply stated, individual organisms are endowed with, and energized by, propensities to expand and elaborate themselves in the direction of organized complexity and integrated functioning.

In human development, organizational propensities are evident from the earliest stages of psychosocial development in infants' exploratory urges and their social interest and responsiveness. These propensities are continuously active across development, as children and adults, when healthy, strive to assimilate and integrate events and experiences and remain connected to and integral within their social groups. Through transformations in foci and integrative span, self-organization remains central to healthy functioning over the life course (Cicchetti, 2006; Ryan, Kuhl & Deci, 1997; Vansteenkiste & Ryan, 2013). SDT examines the perceptions, attributions, affective experiences, patterns of behavior, and mechanistic underpinnings that characterize healthy self-organization. In terms of the social-psychological aspect of the theory, SDT's interest is then focused on understanding the contextual factors that facilitate or thwart these "central-to-life" synthetic functions.

This principle of self-organization in psychological development and functioning is not new and has been recognized within many historically important and varied theories. These include cognitive-developmental perspectives (e.g., Werner, 1948; Piaget, 1971), humanistic psychology (e.g., Goldstein, 1939; Rogers, 1963), and psychodynamic approaches (e.g., Freud, 1923; Loevinger, 1976; White, 1963; Winnicott, 1965), among others (e.g., Assagioli, 1965; Hermans, 2002). In fact, the application of the organization framework to human psychological development and wellness has many precedents and has been supported by the observations of some of history's most renowned clinicians and theorists (discussed in Chapter 2).

SDT shares an organismic view of psychological development with these prior theories, yet unlike a number of them, SDT is deliberate in its embracing of empirical methods, placing emphasis on explicit hypotheses, operational definitions, observational methods, and statistical inferences, as central and meaningful to its epistemological strategy. Although we accept, and indeed draw upon, past theoretical approaches and clinical observations, SDT's theoretical propositions have been primarily formulated, sustained, and refined using empirical evidence as a core resource and focus. In doing such research, we have asserted that it is possible and appropriate to employ both descriptive

and experimental methods to study the active, synthetic nature of human beings. Indeed, SDT-based research has on occasion documented phenomena that had previously only been matters of speculation, as well as uncovered new insights on topics from the controlling aspects of rewards to the relations of benevolence to enhanced vitality. SDT's empirical approach also facilitates the development of evidence-supported interventions. At the same time, embracing an empirical approach acts as a strong constraint on SDT, setting limits on what the theory can meaningfully describe, predict, or prescribe.

A Psychological Theory

The fundamental norm for science is to advance descriptions and explanations that are organized by theories that, in turn, are validated by the demonstration of their capacities for prediction and control, especially in novel circumstances. Theories, as true “bodies” of knowledge with authentic, organic connections, have advantages over mere collections of facts because they afford generalizations that can address new events, as well as illuminate past ones. They also provide a common language for investigators, allowing them to better anticipate events, and observe, refine, compare, and extend understanding and prediction. Theories thereby help us select what information is important and prospectively provide useful principles for practice. In contrast, facts without theoretical extension or organization have little to no prescriptive value. As Loewinger (1957) long ago reasoned, they are merely *ad hoc*.

Theories not only organize facts but also connect with larger systematic philosophies or meta-theories. Disconnected, unsystematic collections of facts not only have limited applicability or predictive value but also often lack logical coherence and connectivity within larger frames of thought. Consider that many approaches in psychology today consist of “models” composed of hypothesized relations between several measured variables or constructs. These models fall short of being theories, however, often being either isolated from even neighboring models that are not similarly framed or assessed or ambiguous with respect to their implications across varied levels of analysis. Many are also poorly grounded in, or even inconsistent with, the foundational theories and philosophies from which they derive.

A good theory also *explains*—it makes sense of phenomena and allows an understanding of mediating processes that prove to be critical within experiments and systematic interventions. Insofar as SDT investigates how developmental propensities and social conditions interact to facilitate or undermine various forms of human motivation and wellness across domains, it thus identifies principles that can directly inform effective social practice. This relates to another characteristic of good theory: It can reliably guide action and intervention. One goal of science is to turn discovered knowledge into practice and, in an evidence-supported manner, apply what can enhance human functioning in real-world settings. Thus our approach has, in an ongoing way, iterated between systematically testing hypotheses in experimental contexts and then retesting them in field studies and controlled interventions that might further demonstrate the utility and generalizability of hypotheses and theory.

With regard to utility, we believe that the most practical of extant theories of human behavior are *psychological* in focus. As a psychological theory, SDT is concerned with behavior as a function of the conscious or nonconscious reasons or motives that organize it. These motives and reasons, frequently taking the form of desires, fears, reflective values, and goals, are sometimes salient in awareness and sometimes denied or defended

against. They can often be assessed using subjective reports, but they can also be assessed using other means, such as implicit measures, behavioral observations, or physiological indicators. Yet however assessed, values and motives are potent variables. Insofar as the causes of intentional (rather than reflexive) behaviors lie in the necessary events that initiate and sustain them, it is the forces that “move” people, as conceptualized within the scope of motivational psychology, that frequently supply the most relevant and practical predictive models and the most meaningful explanations of behavior. In other words, it is the perceived satisfactions, rewards, and values (and the imagined costs, drawbacks, and frustrations) that drive action, and therefore understanding the lawful dynamics underlying these psychological phenomena is what most practically informs behavior change.

In this regard we consider psychological constructs, whether conscious or nonconscious, to comprise the *regnant causes* of most intentional behaviors. It is at the level of motives and intentions, and the experiences of external and internal forces that instigate and affect them, where the most relevant determinants of behaviors are taking place (Ryan & Deci, 2004a). In stating explicitly the importance of psychological variables in the determination of behavior, we of course are merely echoing the views of Heider (1958). He famously argued that it is *naïve psychology*—people’s perceptions of their social environments—that guides their subsequent behaviors and actions. SDT concurs, and, as we shall review in Chapter 3, it is partly derived from Heider’s seminal work.

Psychological mediators reign. It is, for example, the perception of being controlled that undermines a worker’s initiative; the felt rejection implied by an insult that gives rise to withdrawal or aggression; the experience of mastery that gratifies and sustains an effort. Although such psychological phenomena can be described at various levels of analysis from micro-mechanisms to molar behaviors, it is at the psychological level that change can often be most readily leveraged. A boss, a parent, a teacher, or a clinician is not likely to influence behavior by directly manipulating another’s genes, brain tissue, or motor functioning. Instead, behavioral outcomes are most easily changed by appealing to the person’s motives, goals, and expectations or by altering the proximal features of social environments that give rise to them. Thus the level of analysis that is most needed for the scientific understanding of motivation and behavior change is the level encompassing the psychological processes operating within the individual and the variables and influences within social contexts that activate or diminish those processes.

In stating this point, we in no way suggest that psychological theories are distinct from biological or reductive accounts with which they must ultimately be fully coordinated and through which they can be refined (Ryan & Di Domenico, 2016). Autonomous actions, for example, are biologically distinct from controlled behaviors, but both are dependent on specific mechanisms (Ryan, Kuhl, Deci, 1997). Moreover, pervasive psychological experiences impact the brain, predisposing certain motivational orientations and regulatory capabilities (e.g., Bindman, Pomerantz, & Roisman, 2015; Vansteenkiste & Ryan, 2013). SDT is thus being meaningfully extended through the exploration of the mechanistic underpinnings of its core psychological processes (e.g., Di Domenico, Fournier, Ayaz, & Ruocco, 2013; Di Domenico, Le, Liu, Ayaz, & Fournier, 2016; Lee, Reeve, Xue, & Xiong, 2012). Yet too often we lose sight of how important, and lawful, psychological events are in their own right: Not only are they often the phenomenally proximal causes of behavior, but they also represent, again, typically the most practical level at which we can intervene in human behavioral affairs.

Similarly, SDT’s models of motivation and need satisfaction also link well with emerging theories within evolutionary psychology concerning more ultimate foundations of our nature. First, SDT as a psychological theory identifies the necessary and sufficient

proximal satisfactions associated with behavioral phenomena such as curiosity, internalization, and prosocial actions, in turn suggesting that these proximal satisfactions support multiple forms of adaptive functioning. Proximal psychological need satisfactions, that is, are seen as having been essential to procuring and expanding both individual and social resources important in group settings, thereby potentially playing a critical role in both individual and group selection processes (e.g., Ryan & Hawley, 2016).

SDT thus specifies social conditions and psychological processes through which growth, self-regulation, and social integrity are optimized and aspires to place these findings and principles within the larger frame of reference of integrated science. Our stance, applied throughout this work, is that SDT represents an empirically based psychological theory, fully oriented toward consilience. Its specification of motivational and psychological principles must not only fit within, but also be informed and constrained by, what we know about evolution, psychophysiology, and neuroscience on the reductive side and by economics and sociocultural theory, and the influences they specify, on a higher order level. Such is the fate of a nested science such as ours.

Supporting and Impairing Human Development

Being primarily a psychological theory, SDT is concerned with the nature, structure, and functioning of a person in action, including the person's inherent proactive capacities to selectively engage, interpret, and act on external environments. Contained within the conception of proactive, self-regulated engagement and functioning, and at the very heart of self-determination, is a specific view of *self* that is theoretically detailed throughout this book.

Extending the attribution traditions of Heider (1958) and de Charms (1968), SDT defines the self, first and foremost, phenomenologically. SDT is thus focused on the experiences underlying autonomous actions, those involving a sense of volition and self-endorsement, rather than on people's self-concept, identities, or self-evaluations and appraisals. In turn, acting with a sense of autonomy requires integration, as experiences of full volition are characterized by lack of inner conflict and willing engagement.

The development of capacities for self-regulation and volition, as expressed in persons who can openly experience events and reflectively and congruently choose and regulate behavior, is nonetheless highly dependent on supportive social conditions (Deci & Ryan, 1985b, 1987). These self-regulatory capacities are vulnerable to need-thwarting social contexts, which can foster more controlled and defensive functioning and hinder capacities for autonomy and integration.

Persons do not begin *tabula rasa*, but instead with what might be called a nascent self, a set of rudimentary processes and characteristics that represent the starting point for ongoing psychological development. Infants are intrinsically active, manifesting the inherent tendency to engage the environment and to act volitionally. Thus within each individual we observe a natural tendency toward growth and development, which represents an ongoing tendency toward organismic integration. Yet this integrative propensity, while natural, is also conditional; it requires social and environmental support for persons to satisfy basic psychological needs—the needs for autonomy, competence, and relatedness. These three needs describe, in fact, critical psychological satisfactions necessary for the healthy development of self as the individual engages the world within and around him- or herself. Finally, SDT recognizes and researches the role of an inherent human capacity for developing awareness and self-reflection, including being aware of

one's needs, values, and goals, and experiencing the difference between being autonomous and being controlled. This capacity for awareness plays a direct role in healthy self-regulation.

Growth and Defense

SDT's assumptions of intrinsic activity and organismic integration seem well supported by observations of early development and of people taking interest, seeking challenges, and striving for voice and connection across the lifespan, even in the face of countervailing social forces. Nonetheless, with equal readiness one can observe the human capacities to be apathetic and alienated, to disconnect from and dehumanize others, and to behave in ways that imply fragmentation and inner division rather than integration. These seemingly contradictory human natures, with capacities for activity *and* passivity, integrity *and* fragmentation, caring *and* cruelty, can be theoretically approached in different ways. As briefly mentioned, one approach, taken by the more behavioristic schools of thought, has assumed that organisms can be conditioned, programmed, or trained to be more "positive" in functioning, or they can be programmed, conditioned, or trained to be more "negative." In other words, the contradiction is resolved within such theories by assuming a relatively empty or highly plastic organism that is shaped to be either more positive or more negative, with little need to consider the constraints or contents of human nature.

The SDT alternative is to begin with the assumption that there is a human nature, which is deeply designed to be active and social and which, when afforded a "good enough" (i.e., a basic-need-supportive) environment, will move toward thriving, wellness, and integrity. Yet some of the very features of this adaptive nature also make people vulnerable to being derailed or fragmented when environments are deficient in basic need supports. Social contexts can be basic need-thwarting, with various developmental costs, including certain defensive or compensatory strategies. When individuals experience need-thwarting environments, such as contexts that are overly controlling, rejecting, critical, and negative or that otherwise frustrate autonomy, relatedness, and competence needs, individuals are more likely to become self-focused, defensive, amotivated, aggressive, and antisocial. Indeed, the presence of these more negative human capacities is typically indicative of social contexts that are thwarting of fundamental or basic psychological needs. According to SDT, therefore, our manifest human nature is, to a large degree, *experience dependent*—its forms of expression are contingent on the conditions of support versus thwarting and satisfaction versus frustration of these basic needs. SDT places human beings, with their active, integrative tendencies, in dialectical relation with ambient social contexts that can either support or thwart those tendencies.

More specifically, SDT's approach revolves around the proposition that the processes of active development and organization require specific nutrients from the social environment. As such, the nexus in the theory is a set of *basic psychological needs* that may be either satisfied or frustrated, conducive either to the relative prominence of healthy psychological growth or to psychological stagnation and psychopathology. Need-supportive environments facilitate the development of integrated self-regulation, including capacities to manage the multiple drives, impulses, emotions, and motives that arise within every individual (e.g., Bindman, et al. 2015; Di Domenico et al., 2013). If basic needs are thwarted, there is alternatively fragmentation and defense rather than integration (Ryan, Legate, Niemiec, & Deci, 2012; Ryan, Deci & Vansteenkiste, 2016). Thus the interpersonal vulnerabilities, emotion dysregulation, and compromised behavioral functioning that people manifest are understood within SDT to frequently be the result of the active

thwarting of these fundamental human needs during development. In short, the support versus neglect of basic needs is critical in influencing the flourishing or diminishment of people's inherent capacities to fully function.

Human Needs

Within the history of empirical psychology, various theories have considered the concept of *human needs* (see Chapter 4). Some have focused on needs that are based in physiological processes that underlie drive states (Hull, 1943), whereas others have focused on needs that are conceptualized in terms of psychological processes (Baumeister & Leary, 1995; McClelland, Atkinson, Clark, & Lowell, 1953; Murray, 1938). SDT falls within the second category in that we conceptualize needs at the psychological level. Yet our approach differs from most other approaches that theorize about psychological needs because we posit a core set of psychological needs that, like physiological needs, are universally essential for optimal human functioning, regardless of developmental epoch or cultural setting. That is, we use the term *need* in a manner that is both specific (as there can be relatively few universal needs) and functional. It is also a usage of the concept of need that has considerable support from philosophical analyses, which have provided ample arguments for the viability of human needs, including psychological needs, as constructs within both scientific theories and practical knowledge (e.g., Braybrooke, 1987; Deci & Ryan, 2000; Dover, 2016; Doyal & Gough, 1991; May, 2010).

Within SDT, needs are specifically defined as *nutrients that are essential for growth, integrity, and well-being*. Accordingly, *basic physiological needs* pertain to nutrients required for bodily health and safety, and include such requirements as oxygen, clean water, adequate nutrition, and freedom from physical harms. Alongside such physical needs, SDT posits that there are also *basic psychological needs* that must be satisfied for psychological interest, development, and wellness to be sustained.

As mentioned, SDT's three basic psychological needs are those for *autonomy, competence, and relatedness*. Like physical needs, these needs are said to be *objective* phenomena in that their deprivation or satisfaction has clear and measurable functional effects, effects that obtain regardless of one's subjective goals or values. Insofar as they are needs, thwarting or deprivation of any of them will lead to observable decrements in growth, integrity, and wellness, irrespective of whether they are valued by the individuals or their cultures. Thus, although the desire, goal, or value for any of these nutrients may have an impact upon the likelihood of their being satisfied, value alone is not determinative of their functional effects (e.g., Chen, Vansteenkiste, et al., 2015). This assertion is analogous to the idea that whether or not one subjectively values, desires, or prefers vitamin C, extended deprivation of it will still lead to scurvy.

The first of the basic needs specified within SDT is *autonomy*, or the need to self-regulate one's experiences and actions. Autonomy is a form of functioning associated with feeling volitional, congruent, and integrated (de Charms, 1968; Friedman, 2003; Ryan, 1993; Shapiro, 1981). Autonomy considered as this sense of voluntariness is, therefore, not the same as independence (or self-reliance), as people can be either autonomously or heteronomously dependent, independent, or interdependent depending on the context and behaviors entailed (Ryan & Lynch, 1989). The hallmark of autonomy is instead that one's behaviors are self-endorsed, or congruent with one's authentic interests and values (see Chapter 3). When acting with autonomy, behaviors are engaged wholeheartedly, whereas one experiences incongruence and conflict when doing what is contrary to one's volition. In SDT's view only some intentional actions are truly self-regulated

or autonomous—others are regulated by external forces or by relatively nonintegrated aspects of one's personality. As such, a person may behave without a sense of volition or self-endorsement of her or his actions. Self is, in this sense, *not* synonymous with person. Indeed, we shall show much of people's behavior and expression of values can be initiated and/or regulated by internal or external pressures that either overrule or bypass true self-regulation.

Competence is one of the most researched issues in psychology and is widely seen as a core element in motivated actions (Bandura, 1989; Deci, 1975; Harter, 2012; White, 1959). In SDT, competence refers to our basic need to feel effectance and mastery. People need to feel able to operate effectively within their important life contexts. The need for competence is evident as an inherent striving, manifested in curiosity, manipulation, and a wide range of epistemic motives (Deci & Moller, 2005). It energizes myriad behaviors, from people in leisure moments playing mobile video games to scientists discovering the laws of the universe. Competence is, however, readily thwarted. It wanes in contexts in which challenges are too difficult, negative feedback is pervasive, or feelings of mastery and effectiveness are diminished or undermined by interpersonal factors such as person-focused criticism and social comparisons.

Relatedness (Bowlby, 1979; Baumeister & Leary, 1995; Ryan, 1995) concerns feeling socially connected. People feel relatedness most typically when they feel cared for by others. Yet relatedness is also about belonging and feeling significant among others. Thus equally important to relatedness is experiencing oneself as giving or contributing to others (Deci & Ryan, 2014a). Relatedness pertains, moreover, to a sense of being integral to social organizations beyond oneself, or what Angyal (1941) so aptly described in his construct of *homonomy*. That is, both by feeling connected to close others and by being a significant member of social groups, people experience relatedness and belonging, for example through contributing to the group or showing benevolence (see especially Chapters 12 and 24).

These three basic needs of autonomy, competence, and relatedness were initially identified functionally because they served well to integrate the results of behavioral experiments concerning the effects of environmental events and interpersonal contexts on intrinsic motivation (see Chapters 6 and 7) and the internalization of extrinsic regulations (see Chapter 8). Subsequent investigations confirmed that these needs, unlike a variety of other human desires or gratifications that motivate behavior, are essential not only for optimal motivation but also for well-being (see Chapter 10). Need satisfaction is strongly linked with vitality, whereas need-frustration predicts motivational depletion (Ryan & Deci, 2008a). Further work has shown that, when basic needs are thwarted, people will predictably react, albeit in complicated and dynamic ways. Some will fall into passive or fragmented modes of functioning, often characterized as psychopathology (see Chapter 16). Others attempt to compensate for what is missing, as manifested in motives of greed, power, addictive distractions, or aggression that follow from need-frustrating contexts (see Chapters 11 and 24). In fact, throughout this book, we detail many "dark sides" to human nature resulting from threatened or thwarted basic psychological needs in social development.

Our postulate of the essentialness and universality of certain basic psychological needs sets the stage for a *dynamic* theory of motivation. We can analyze behavior in terms of its relation to the three psychological needs, even when the surface content of a behavior may not appear to be directly related. For example, we argue in Chapter 16 that many forms of psychopathology have their etiology in developmental deprivations of basic psychological needs for autonomy, competence, or relatedness (Ryan, Deci,

Grolnick, & La Guardia, 2006; Vansteenkiste & Ryan, 2013). Perfectionism, for example, can be a battle for love via competence, yet accompanied by a loss of autonomy. Antisocial behavior can reflect the impairment of internalization in contexts that have been controlling and cold.

In fact, many behaviors are driven by substitute and compensatory motives resulting from the frustration of basic psychological needs. SDT's analysis of materialism and status seeking (Chapter 11) indeed suggests that these motives often result from insecurities fostered by non-nurturing, rejecting, or controlling psychological conditions in earlier development (e.g., Kasser, Ryan, Zax, & Sameroff, 1995; Williams, Hedberg, Cox, & Deci, 2000) and that they can be activated by more proximal threats and frustrations (Kasser, 2002a). Still other analyses, reviewed in Chapter 13, indicate that parents' use of conditional regard creates a conflict between the needs for autonomy and relatedness, resulting in a variety of psychological disturbances (e.g., Assor, Roth & Deci, 2004). SDT is also able to address the split between nonconscious and conscious motives as a result of controlling forces and the deleterious impact of the resulting inner lack of integration (e.g., Weinstein, W. S. Ryan, DeHaan, et al., 2012). These selective examples suggest how positing basic needs implicates a deep structure of the psyche, around which secondary motivations, desires, and defenses are built, that results in dynamically patterned behavioral outcomes.

The Importance of Social Contexts

Specifying fundamental human needs serves a variety of purposes. It gives content to human nature by describing inherent tendencies and inclinations readily manifested under conditions of environmental supports. It also provides a basis for understanding the development of individual differences in integration versus fragmentation or defense. In addition, it represents a framework for making a priori predictions about which aspects of a given social context will enhance versus undermine high-quality motivation, healthy development, and well-being. Simply stated, aspects of a social context that are likely to support satisfaction of the fundamental psychological needs are predicted to promote effective functioning and integrated development, whereas features of a social context that are likely to thwart need satisfaction are predicted to diminish effective functioning and to support nonoptimal developmental trajectories (e.g., Joussemet et al., 2008).

We thus characterize social environments in terms of the extent to which they are: (1) *autonomy supportive* (versus demanding and controlling); (2) *effectance supporting* (versus overly challenging, inconsistent, or otherwise discouraging); and (3) *relationally supportive* (versus impersonal or rejecting). Autonomy support includes affordances of choice and encouragement of self-regulation, competence supports include provisions of structure and positive informational feedback, and relatedness supports include the caring involvement of others. Predictions about the effects of specific contextual factors (e.g., positive feedback, presence of contingent rewards, provision of choice) on people's engagement, performance, and experience are based on a consideration of the expected relations of these factors to satisfaction of the basic psychological needs.

Our conceptualization of the effects of social contexts is pertinent to both motivation and behavior in immediate situations and to development and wellness over time. In other words, supports for autonomy, competence, and relatedness not only are theorized to facilitate more self-determined and high-quality functioning in the immediate situation, but they are also understood to promote the development of more effective self-functioning, resilience, and enduring psychological health for the long term. Indeed,

as we shall see in various chapters, the dynamics of psychological need satisfaction predict cultural, organizational, and personal functioning and vitality and their fluctuations over time.

Motivation and Self-Determination

Our analysis of the relation of self-determination to development, behavior, performance, and well-being is based, first and foremost, in motivational processes. In other words, we employ motivational concepts to address these important human issues and use empirical methods for hypothesis testing and theory building. To show the relation of our theoretical constructs to those of other empirically based motivation approaches, we turn to a brief discussion of the concept of motivation as it has been treated within empirical psychology.

Motivation, etymologically, concerns what “moves” people to action. Theories of motivation more specifically focus on both what *energizes* and *gives direction* to behavior. Throughout the history of experimental psychology various theories of motivation have thus attempted to predict learning, performance, and behavior change. Within these theories, the concept of motivation has generally been treated as a unitary entity, which is to say that it has been studied in terms of amount or strength but has not typically been differentiated with respect to types, qualities, or orientations. As early as 1908, Yerkes and Dodson related the amount of motivation to performance, proposing an inverted-U relation in which small amounts of motivation yield poor performance, moderate amounts yield maximal performance, and large amounts again yield poor performance, presumably because being “too aroused” interferes with one’s effectiveness. Later in the 20th century, when drive theories (Hull, 1943) dominated the field of motivation and learning, the central motivational concept was drive state. Different types of physiological disequilibria—hunger, thirst, and sexual appetite, for example—combined to yield the total amount of drive state (i.e., of motivation). Together with associative bonds, which developed through past instances of drive reduction, the amount of motivation was used to predict learning and performance.

The advent of cognitive theories brought many changes to empirical psychology, but cognitive theories of motivation still for the most part clung to a unitary view of motivation. Specifically, the cognitive theories that replaced drive theories as the leading approach to conceptualizing motivation and behavior change within the experimental tradition (Bandura, 1996; Lewin, 1951; Tolman, 1959; Vroom, 1964) were of two types: expectancy–valence theories and cognitive-behavioral or social learning theories. Expectancy–valence theories (e.g., Feather, 1990; Vroom, 1964) predict behaviors and attitudes from the amount of motivation, which is said to result from the valence or psychological value of outcomes multiplied by the probability of being able to attain those outcomes. Similarly, cognitive-behavioral theories predict motivation from the strength of one’s beliefs about being able to achieve outcomes (Rotter, 1954; Seligman, 1975) or, in a somewhat more differentiated formulation, one’s contingency and efficacy expectations (Bandura, 1977, 1996). Cognitive theories contrast this undifferentiated or unitary concept of motivation with the lack of motivation (i.e., with being unmotivated). For example, in Bandura’s (1996) theory, the concept of self-efficacy is said to be the central mechanism underlying all motivated behaviors, and being unmotivated is what results from lack of self-efficacy. Thus, across cognitive theories, the focus has been on the level of motivation, considered as a unitary concept.

The Differentiation of Motivation

Where SDT is especially different from other approaches to motivation is in its emphasis on the different types and sources of motivation that impact the quality and dynamics of behavior. Rather than simply seeing motivation as a unitary phenomenon, SDT suggests that some forms of motivation are entirely volitional, reflecting one's interests or values, whereas others can be wholly external, as when one is coerced or pressured into doing something he or she does not find of value. Clearly, sources of motivations differ, as do the effects of being energized by these different motives. Put simply, different motives are not just different in magnitude; they vary in the phenomenal sources that initiate them, the affects and experiences that therefore accompany them, and their behavioral consequences, including the quality of persistence, performance, and health benefits (or costs) they yield. SDT therefore explicitly differentiates the concept of motivation in order to consider the varied effects of different types of motivation on such relevant outcomes.

A central dimension used within SDT to differentiate types of motivation is the *autonomy-control continuum*. Varied types of motivation can be characterized in terms of the extent to which they represent *autonomous* versus *controlled* regulations. As we mentioned, behaviors are autonomously motivated to the extent that the person experiences volition—to the extent that he or she assents to, concurs with, and is wholly willing to engage in the behaviors. When autonomous, behaviors are experienced as emanating from, and an expression of, one's *self*. In contrast, behaviors characterized within SDT as controlled are those in which a person feels externally or internally pressured or compelled to act. For example, a person is controlled when his or her motivations to act are based in feeling coerced by external persons or forces to act in ways that are incongruent or alien with respect to the person's sense of self.

Our initial window into the distinction between autonomous and controlled motivation stemmed from early empirical research on *intrinsic motivation* (Deci, 1975; Deci & Ryan, 1980a; see also Chapters 5 and 6 in this volume). Intrinsically motivated behaviors are those that are performed out of interest and for which the primary "reward" is the spontaneous feelings of effectance and enjoyment that accompany the behaviors. Intrinsic motivation contrasts with *extrinsic motivation*, represented by behaviors that are instrumental for some separable consequence such as an external reward or social approval, avoidance of punishment, or the attainment of a valued outcome (Ryan & Deci, 2000a). Intrinsically motivated behaviors are, by definition, autonomous; they are experienced as being volitional and emanating from one's self, a point made early on by de Charms (1968). In contrast, extrinsically motivated behaviors can vary widely in the degree to which they are controlled versus autonomous (Ryan & Connell, 1989). One can be extrinsically motivated because of externally imposed reward or punishment contingencies, in which case one's behavioral regulation is likely to be characterized as relatively controlled; but one can also be extrinsically motivated insofar as the behavior yields outcomes that are personally valued or important, in which case the behavior is likely to be experienced as relatively autonomous.

More specifically, SDT proposes that extrinsic motivation may be more or less *internalized* to or congruent with one's self, so the degree of internalization reflects the degree to which the behavioral regulation is relatively autonomous versus controlled. Behaviors can be *externally regulated*, meaning they are directly controlled by external and self-alien forces; or they can be controlled through *introjection*, in which case the person has taken in but not fully accepted external controls. In introjection the person is motivated by guilt, shame, contingent self-esteem, and fear of disapproval, or by their "approach" counterparts, namely a sense of self and other approval, self-aggrandizement, and ego

enhancement. Introjected behaviors are thus experienced as “internally controlling” (Ryan, 1982), whereas external regulations are phenomenally controlled by external entities or persons. Although both external and introjected types of regulation represent controlled motives, it is important to note that they differ in both the nature of the phenomenal drivers and the qualities of behavior that follow from them. For example, whereas external regulation tends to be highly dependent on the ambient contingencies of rewards and punishments, introjected motivation, being internally driven, can drive behaviors even when external contingencies are absent. Instead, introjected regulations are typically associated with internal pressure, tension, and conflict.

Extrinsically motivated behaviors can also be more autonomously motivated through one’s *identification* with and acceptance of the value of the extrinsic behavior. Extrinsic motivation can be even more autonomous when such identifications have been *integrated* with one’s other values and beliefs. These more autonomous forms of regulation are experienced as more volitional, and quality of persistence and performance is higher than with controlled motives for acting.

Thus each of the varied forms of extrinsic motivation specified within SDT (i.e., external, introjected, identified, or integrated) has its own dynamic causes, supports, and character, and yet they are phenomenally “ordered” in their degrees of autonomy (Ryan & Connell, 1989). The more autonomous the motivational form, generally the more the individual has access to organismic supports for acting, which in part explains the energetic, affective, and cognitive advantages of autonomy as a characteristic of action. Chapter 8 details SDT’s conceptualization of internalization and the causes and consequences of the varied forms of motivation depicted within it.

Autonomous and controlled types of motivation are, of course, hypothetical concepts, reflecting psychological processes within individuals that are not typically directly observable by researchers. Still, individuals reliably experience the differences between these varied volitional and controlled behaviors, and the differential results that follow from these experiences are observable. In fact, explicit and implicit measures of psychological processes both represent windows through which researchers can gain access to the regulatory processes underlying behavior. This is especially so when both between- and within-person variations in experience are considered (Brown & Ryan, 2004). Moreover, the neurological processes that subserve autonomous versus controlled motives are increasingly being distinguished (e.g., Lee et al., 2012; Leotti & Delgado, 2011; Murayama, Matsumoto, Izuma, & Matsumoto, 2010; Murayama, Matsumoto, et al., 2015).

Researchers can also directly examine the functional impact of conditions that vary in their support for autonomy on people’s quality of experience, performance, and subsequent behavior. For instance, one can stimulate external regulation by using controlling reward contingencies (see Deci, Koestner & Ryan, 1999); stimulate introjection by fostering ego involvement and contingent self-esteem (e.g., Roth, 2008; Ryan, 1982); promote identification by providing convincing rationales for acting (e.g., Reeve, Jang, Hardre, & Omura, 2002); facilitate integrated regulation with a combination of acknowledging feelings, providing a rationale, and highlighting choice instead of control (Deci, Eghrari, Patrick, & Leone, 1994); or incite intrinsic motivation by affording people interesting and optimally challenging tasks (e.g., Danner & Lonky, 1981; Grolnick & Ryan, 1987). That is, particular types of regulation can be reliably instigated through exposure to different social environments.

Phenomenally based reports and experimental investigations thus both provide important inroads to the understanding of the varied types of motivational regulation

underlying human behavior. They are complemented within SDT by domain-specific field studies that focus on naturally occurring variations in contextual supports for psychological needs as they relate to variations in the quality of human functioning.

In sum, within SDT human motivation is considered in a differentiated way. People are not only more or less motivated, as most motivation theories have suggested, but they can be motivated by intrinsic and by varied types of extrinsic motivations, often simultaneously. SDT research details the functional differences in both the quality of behavior and psychological health and well-being that follow from behaviors that are to different degrees underpinned by external, introjected, identified, integrated, and intrinsic forms of motivation.

Amotivation

Intrinsic and the varied types of extrinsic motivation all represent *intentional* or *personally caused* actions (de Charms, 1968; Ryan & Deci, 2000a). Differentiation of these intentional behaviors constitutes a critical point of divergence between the traditional cognitive theories of motivation and SDT. In fact, much of the research reported in this book focuses on the importance of distinguishing between various autonomous and controlled forms of intentional behavior, because they are accompanied by different experiences and are differentially associated with quality of action and degree of well-being.

Increasingly, just as SDT research compelled us to differentiate motivation into different types, recent research and theory suggests varied types of *amotivation*. We use the concept of amotivation to describe people's lack of intentionality and motivation—that is, to describe the extent to which they are passive, ineffective, or without purpose with respect to any given set of potential actions. Yet, within SDT, amotivation can take several forms (e.g., Pelletier, Dion, Tuson & Green-Demers, 1999; Vansteenkiste, Lens, De Witte, & Feather, 2005). In the first form, people do not act because they feel they are not able to effectively attain outcomes. This type of amotivation occurs either as the result of a person's perception that people cannot, through any action, control outcomes (universal helplessness) or because the person perceives that he or she personally cannot effectively perform the required actions. In either case, this first form of amotivation is based in a felt lack of competence. A second form of amotivation stems not from competence or control concerns but, rather, from a lack of interest, relevance, or value. People remain amotivated when behaviors have no meaning or interest for them, especially when it fails to connect with the fulfillment of needs. This second type of amotivation may be present even when the individual has the efficacy or competence to act. A third type of amotivation concerns defiance or resistance to influence (e.g., Van Petegem, Soenens, Vansteenkiste & Beyers, 2015). Here, what appears to be amotivation for a specific act is really a motivated nonaction or oppositional behavior to defy demands that are thwarting a basic need for autonomy or relatedness. Each of these types of amotivation may have different duration and impact, and each has a unique set of determinants and dynamic implications.

Motivation in Social Contexts

The concepts of autonomous motivation, controlled motivation, and amotivation are theorized to mediate between social contexts and outcomes such as effective performance and well-being. For example, social contexts that support satisfaction of all three psychological needs also facilitate more autonomous functioning, which in turn yields more effective performance and greater wellness, whereas social contexts that fail to support

and/or actively thwart these basic psychological needs tend to promote controlled motivation or amotivation, which in turn yields poorer performance and ill-being.

Research on social contexts began with experiments exploring the effects of various contextual factors on intrinsic motivation. As the results accumulated, it became clear that intrinsic motivation could be facilitated by supports for competence and autonomy and undermined by conditions hostile to those needs (Deci & Ryan, 1980a; 2000). Factors as diverse as rewards, evaluations, deadlines, surveillance, and negative feedback were all explored in experimental and field studies. Repeatedly it was found that factors that engender perceptions of being externally regulated and/or incompetent undermine intrinsic motivation, whereas those—such as opportunities for choice, positive feedback, and acknowledgment of people’s internal frame of reference—that support perceptions of autonomy and feelings of competence maintain or enhance intrinsic motivation. Additional research, particularly with children, showed that feelings of relational security are also necessary for curiosity and intrinsic exploration to be robust.

Subsequent research determined that the same contextual supports that maintained and enhanced intrinsic motivation also play a critical role in promoting the internalization and integration of extrinsic motivations. Whereas perceived autonomy and competence were the main proximal psychological factors implicated in intrinsic motivation (see Deci & Ryan, 2000), relational supports played an invariant and far more salient role in the internalization of extrinsic motivation. Indeed, the internalization of socially transmitted regulations, goals, and values is largely based in the desire to connect with relevant groups (e.g., family, peer groups, or society). That is, people “naturally” tend to internalize the values and goals of those with whom they are or wish to be connected or affiliated. For example, teenagers who are alienated from parents may reject the parents’ values and goals, but they may readily adopt the standards and ideals of peers they admire (e.g., Ryan & Lynch, 1989). Similarly, persons readily learn and adapt to cultures with which they identify but do not easily adopt or fully internalize the norms of groups to which they have less desire to belong. Yet, although internalization is based in actual or desired relatedness to others, the individuals will not become securely connected to those others and the internalizations will not become fully integrated and volitionally persistent without supports for autonomy and competence (e.g., La Guardia, Ryan, Couchman, & Deci, 2000). Thus the dynamics of autonomy, competence, and relatedness are crucial for understanding human agency and volition with respect to the internalization and transformation of extrinsically motivated activities into self-regulations (Ryan, 1993; Deci & Ryan, 2000).

SDT Applied to Life’s Domains

Considerable research to be reviewed in this book supports the contention that contextual supports for the three needs facilitate internalization and integration of behavioral regulations and also the idea that more self-determined functioning is associated with greater creativity, superior learning, better performance, enhanced well-being, and higher quality relationships. A few examples of the work from later chapters will suggest how the basic research models of SDT speak to issues of applied significance.

Schools and Learning

Much SDT work in educational contexts has shown how teacher and parent approaches to motivation can be either controlling or autonomy-supportive (Niemic & Ryan, 2009; Ryan & Deci, 2000b, 2013, 2016). More controlling motivational climates for learning

foster external regulation, and the result is more superficial and less transferable learning. In fact, controlled motivation has been shown to predict not only more impoverished learning but also greater behavioral problems and risk of disengagement or dropout. By contrast school climates that support autonomy foster more self-motivation, persistence, and quality of learning. Structure, as a scaffolding and support for competence, is shown in many SDT studies to complement autonomy support. In fact, classroom climates supporting autonomy, providing high structure, and conveying relatedness and inclusion foster personal well-being and feelings of connection to one's school and community (e.g., Assor, Kaplan, Feinberg & Tal, 2009). The implications of SDT educational research for parenting (Grolnick, 2002; Grolnick & Seal, 2008), classroom teaching behaviors (Reeve & Halusic 2009), and school policies and reforms (Deci & Ryan, 2016) are manifold and cut across age and cultural lines (e.g., Jang, Reeve, Ryan, & Kim, 2009). We review many of these in Chapters 13 and 14.

Workplace Motivation

Just as the issues of support for autonomy, competence, and relatedness affect learning and achievement, they also affect worker motivation and productivity. SDT research investigates managerial styles and why some engender alienation and apathy whereas others lead to committed and energized employees (e.g., Deci, Olafsen, & Ryan, 2017; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010). In addition, specific experimental work in SDT on rewards, evaluations, and directives speaks to why some incentives and feedback systems work and others backfire (Gagné, Deci, & Ryan, 2017). We review the research on SDT and organizational psychology in Chapter 21.

Sport and Exercise

The intrinsic inclinations of humans to play, compete, challenge themselves, and exercise inherent potentials are nowhere better manifested than in sport and exercise. However, because sport for most people depends largely upon their intrinsic motivation (Frederick & Ryan, 1995), coaching climates can heavily impact athletes' enjoyment, persistence, and performance (e.g., Gagné, Ryan, & Bargmann, 2003; Hagger & Chatzisarantis, 2007). Moreover, exercise and sport persistence and engagement is strongly affected by the type of motivation most salient to people at that time, and SDT predicts differential outcomes that result from differences in what energizes people to engage in physical activities—from ego-involvement to interest, and from the goals of attractiveness to health enhancement (e.g., Owen, Smith, Lubans, Ng, & Lonsdale, 2014; Standage & Ryan, 2012). We further explicate these ideas concerning sport and exercise motivation in Chapter 19.

Health Care and Psychotherapy

As a theory of motivation and persistence, SDT has much to say about the conditions that lead not just to short-term behavior change but to change that becomes internalized or assimilated into the person's ongoing way of being (Ryan & Deci, 2008b). Studies in SDT investigate both how patient motivations and practitioner methods of promoting change interact to predict adherence to mental-health-related therapies for both children (e.g., Ziviani & Poulsen, 2015) and adults (e.g., Zuroff, Koestner, Moskowitz, McBride, & Bagby, 2012). Moreover, specific treatment approaches based on SDT are being used

in clinical trials to promote healthier behavior and treatment adherence (Ryan, Patrick, Deci, & Williams, 2008) and better training of health practitioners toward support for autonomy (e.g., Williams & Deci, 1996). These ideas concerning motivation in psychotherapy and in health interventions are described further in Chapters 17 and 18, respectively.

Cultural and Religious Socialization

SDT predicts that people within different religions and cultures internalize ambient norms, rules, and values to varied degrees. Some religious practices (e.g., Ryan, Rigby, & King, 1993) and cultural norms (e.g., Chirkov, Ryan, Kim, & Kaplan, 2003) are externally regulated and/or introjected; others are more fully internalized and integrated. SDT shows the positive effects of greater integration on health and well-being and on cultural (Chirkov, Sheldon, & Ryan, 2011) and religious (Neyrinck, Vansteenkiste, Lens, Duriez, & Hutsebaut, 2006) identification, as well as pointing to techniques of socialization that are less or more effective in engaging a culture's constituents. As religious practices are central examples of cultural internalizations, we discuss them in Chapter 8.

Virtual Worlds

Although SDT is a real-world theory in the sense of having applications to everyday life, it is also applicable to media and virtual worlds and people's participation in them (Rigby & Ryan, 2011). SDT explains how factors within media and game worlds enhance or detract from intrinsic motivation to watch or play (e.g., Ryan, Rigby & Przybylski, 2006) and how the role of elements such as violence can be related to the dynamics of psychological need satisfaction (Przybylski, Rigby, & Ryan, 2010; Przybylski, Ryan, & Rigby, 2009). Virtual worlds are increasingly a part of people's experiential lives in our technological age, and thus we discuss in depth the example of motivation in video games as illustrative of the issues involved in this emerging domain of studies (Chapter 20).

These and other topics, including parenting, sustainability, psychopathology, politics, and aging, have all been analyzed using SDT motivational concepts showing further how a basic science concerning the issues of human needs and motivational types bears on practical endeavors across people's life domains. Because motivation is a central issue in every domain, SDT has far-reaching practical implications and applications.

Fields of Psychology and SDT's Mini-Theories

The implications of SDT cut across traditional fields of psychology. The different phenomena to which the theory extends belong to social, personality, developmental, and clinical psychologies and, more recently, to neuropsychology and behavioral economics. It informs applied fields such as educational, sport, and organizational psychologies. Although psychological in focus, the theory further relates to evolutionary and biological factors on the one hand and to cultural and economic factors on the other. Accordingly, the mini-theories within SDT do not correspond directly to traditional subdisciplines of psychology but rather to different aspects of motivation and psychological integration. Each mini-theory is in turn informed by every level of analysis, from the mechanistic to the sociological.

As already noted, early research leading to self-determination theory began with social-psychological experiments (e.g., Deci, 1971) exploring the effects of events such as the offer of rewards, the provision of feedback, or the opportunity for choice on intrinsic motivation. The interest was in how external inputs affected the natural and spontaneous propensities of people to seek challenges, and assimilate new information, as well as to play and be creative with what they already know. As this work progressed, *cognitive evaluation theory* (CET) was formulated (see Deci & Ryan, 1980a). CET is a mini-theory that describes the processes through which social environments influence (i.e., facilitate or undermine) intrinsic motivation and, in turn, high-quality performance and well-being. It was the first of our formal proposition sets (see Deci & Ryan, 1985b), and it has effectively organized research on intrinsic motivation since that time (e.g., Deci et al., 1999). It is described in Chapters 6 and 7.

Organismic integration theory (OIT; Ryan, Connell & Deci, 1985) is a second mini-theory within SDT, which concerns the development of extrinsic motivation through the process of integration, thus describing the means through which extrinsically motivated behaviors become autonomous. OIT deals with both the inherent tendencies to internalize and integrate social and cultural regulations and the factors in social contexts that promote or inhibit internalization and integration (Ryan & Connell, 1989). It is thus at the interface of developmental and social psychology. Furthermore, because the dynamic between socialization and internalization is at work in all contexts across the globe, OIT is also the cornerstone of SDT's cross-cultural models (e.g., Chirkov et al., 2003; Miller, Das, & Chakravarthy, 2011; Roth, Assor, Kanat-Maymon, & Kaplan, 2006). We review the tenets of OIT in Chapter 8.

The personality aspects of self-determination theory have been researched in part with individual-difference concepts outlined in a third mini-theory called *causality orientations theory* (COT). For us, individual differences represent a developmental outcome of the person interacting with the social environment over time. Assessing these relatively enduring characteristics of the person allows for prediction of various meaningful outcomes.

Although a number of individual-difference concepts have been of interest to SDT researchers, those concerning *causality orientations* (Deci & Ryan, 1985b) have been the most extensively researched individual differences. There are three general causality orientations—the autonomy orientation, the controlled orientation, and the impersonal orientation—which parallel at a more global level the concepts of autonomous motivation, controlled motivation, and amotivation. The autonomy orientation refers to propensities to organize behavior by orienting toward interests, values, and supports for them in the interpersonal context. It also encompasses the capacity to act with autonomy even when the environment contains salient controlling elements. The control orientation refers to propensities to organize and regulate behavior by orienting toward social controls and reward contingencies and either complying with or defying them. As well, it can lead people to experience a context as quite controlling, even if it might, in fact, afford autonomy. The impersonal orientation concerns tendencies to orient toward aspects of the interpersonal context that signify lack of control over outcomes and incompetence and that promote amotivation.

An instrument to assess general causality orientations (Deci & Ryan, 1985a) has provided a personality (i.e., individual-difference) approach to studying the issues associated with the different styles people have in orienting to the regulation of behavior. In addition, COT has been used to understand the nature and impact of *motivational primes*—that is, nonconsciously processed cues that can activate these various orientations within

a person and thus affect both the quality of behavior and its consequences (e.g., Weinstein, Hodgins, & Ryan, 2010). Both the causality orientations and the idea of potentiating them via priming methods are addressed in Chapter 9.

As SDT progressed, it became increasingly clear that the three basic need satisfactions that we had identified as facilitating intrinsic and well-internalized motivations also affected psychological health and well-being. Accordingly we developed a fourth mini-theory, namely, *basic psychological needs theory* (BPNT), to detail how the dynamics of basic needs affect well-being and vitality. Especially interesting in BPNT is how need support promotes and need thwarting undermines healthy functioning at all levels of human development and across cultural backdrops and settings. More deeply, the dynamics of need thwarting explain the development of many forms of psychopathology and even negative physical health outcomes (Ryan, Deci, et al., 2006). BPNT has been especially advanced by the advent of multilevel modeling, which has allowed researchers to address not only how between-person differences in need satisfaction affect wellness but also how within-person fluctuations in need dynamics result in changes in mood, mental health states, and even physical symptoms (e.g., Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Ryan, Bernstein, & Brown, 2010). We also see how need satisfaction impacts human energy, or vitality, as a central marker of wellness (Martela, DeHaan, & Ryan, 2016). Finally, we have researched how awareness supports need satisfaction and therefore full, healthy functioning. BPNT research is reviewed in Chapter 10.

A fifth mini-theory derived through SDT concerns people's goals and their relations to basic need satisfactions and wellness, namely *goal contents theory* (GCT), which we review in Chapter 11. People hold a range of abiding life goals, which, empirically as well as theoretically, fall into two general categories that have been labeled *intrinsic AND extrinsic aspirations* (Kasser & Ryan, 1996). Intrinsic aspirations are those goals that are rewarding in their own right, providing relatively direct satisfaction of the fundamental psychological needs for autonomy, competence, and relatedness. Examples are personal growth, meaningful relationships, and community contributions. Extrinsic aspirations, in contrast, are those built around contingent satisfactions—they make a priority of goals that are not in themselves satisfying but that may be seen as instrumental to getting unmet needs fulfilled. They include such goals as attaining wealth and material goods, acquiring fame and power, and maintaining one's attractiveness and outer image. Research relating intrinsic versus extrinsic life aspirations to behavior and well-being has shown that goal contents differ in their relations to basic need satisfaction, and in turn to mental health, a result which has stood up to cross-cultural analyses. Moreover, Vansteenkiste and his colleagues, among others, have shown that behavioral goals can be framed in either intrinsic or extrinsic terms and thus yield differential outcomes through specifiable microprocesses (e.g., Vansteenkiste, Lens & Deci, 2006). These studies have focused on learning and performance, in addition to well-being, as their outcomes.

The most recent mini-theory within SDT, *relationship motivation theory* (RMT), both frames and summarizes what research has increasingly shown—that high-quality interpersonal relationships, both between individuals and within groups, depend upon the individuals' ability to experience not only positivity or regard but also respect for autonomy. This is true from early infant attachment through old age. RMT recognizes that relatedness, a core psychological need in its own right, not only fuels internalization of social practices but is itself also reciprocally facilitated or undermined by them. RMT also more specifically addresses the intertwined nature of relatedness and autonomy needs and their synergism in truly responsive, mutually satisfying relationships. We discuss these relationship issues in Chapter 12.

To summarize, the core of our basic empirical work can be characterized as falling within the purviews of social, personality, and developmental psychologies. The various programs of research can be grouped so far into six mini-theories that together constitute the formal propositions of self-determination theory.

Yet, because SDT is also a theory of motivation and behavior change, it is also a *clinical* theory (Ryan & Deci, 2008b). Indeed, as clinicians ourselves, it has been our ongoing interest to find methods by which to tap the wellspring of energies that are intrinsic to human nature and to avoid the pitfalls of fostering motivation for change through external control. Throughout this book we illustrate this practice, especially in the relevant applied chapters on psychotherapy and health care. Recently, an increasing number of controlled clinical trials and experiments have demonstrated the power of autonomy-supportive interactions in inspiring behavior change in the direction of health, in contrast to approaches that either attempt to control or regulate the person from without (see, e.g., Ryan, Lynch, Vansteenkiste, & Deci, 2011; Ryan, Patrick, et al., 2008).

Our clinical interests also led us to apply SDT toward the understanding of the development of psychopathology and its functional consequences (Ryan, Deci, & Vansteenkiste, 2016). Autonomy disturbances are central to various forms of mental illness and maladjustment. These include those in which controlling external or internal forces are a central element (e.g., obsessive-compulsive personality, introjective depression), and those in which lack of internalization and impoverished self-regulation are defining elements (e.g., conduct disorders, antisocial personality). In addition, we have considered the central role of need thwarting in severe disorders of self, such as borderline and dissociative disorders (e.g., Ryan, 2005). In Chapter 16 we review these and a wide range of clinical issues in terms of the role of basic need frustrations in childhood and their cascading effects on subsequent development.

Between Biology and Culture

A theory of self, particularly an empirically based one, goes against many modern intellectual strains. Certainly numerous contemporary scientists and philosophers have tried to sell us the idea that our sense of self is just an illusion, a fiction, or an epiphenomenon (e.g., Dennett, 1991; Hood, 2012; Wegner, 2002). This idea that the self has no reality or meaning, so implausible to laypeople and so dysfunctional if truly acted upon, comes indeed from many diverse quarters. It comes out occasionally from reductionist neuroscientists, who by no means represent neuroscientists in general. Reductionists consider theories of self to be merely “fanciful homunculi.” For example, they explain that the seemingly coherent and volitional functioning that one typically attributes to the self is simply the outcome of “non-conscious bits of organic machinery, as utterly lacking in point of view or inner life as a kidney or a kneecap” (Hofstadter & Dennett, 1981, p. 12). Another related perspective comes from cognitive scientists in the artificial intelligence domain, who conceive of behavior in terms of computational mechanisms—and sometimes of people as machines that think (see Dietrich & Markman, 2000; Turkle, 1995). Using such metaphors, there is no need for postulating or investing in first-person or experiential explanations, which, even if fitting, would be merely epiphenomenal.

Of course, there also remain a few radical behaviorists, who insist that organisms are entirely controlled by their environments, thus making self-determination by definition a nonsensical idea (e.g., Cameron & Pierce, 1994; Reiss, 2013). Skinner (1953, 1971) long ago claimed that any sense of autonomy or agency was simply an ignorance

of the actual causes of behavior, which by (his) definition lie in the contingencies of reinforcement in the “external” world. Initiative, choice, and the values that support them are, in this framework, vacuous phenomena, a view still espoused by modern followers. Even most new-look, cognitive-behaviorist schools, while tipping a hat to concepts such as activity and agency, maintain an underlying metapsychology of associationism—the self being so many templates or schema that are activated by environmental cues (e.g., Mischel & Shoda, 1995).

Finally, many postmodernists and cultural relativists have denigrated the self, portraying self and autonomy as simply Western intellectual preoccupations rather than universal concerns. Gergen (1991) portrays the metaphor of a core self that strives for integration to be a Western, postromantic perspective. He suggests instead that the contemporary postmodern self is in reality without a core or unity but rather is fragmented, saturated, and diversely populated by imputed and largely compartmentalized identities. Cultural relativists, as we discuss in Chapter 22, similarly assert that concepts of self, or inherent tendencies toward autonomy and integrity, are merely Western ideals without relevance outside a few individualistic nations, arguing instead that personality is basically imprinted by one’s ambient culture (e.g., Cross, Gore, & Morris, 2003; Markus & Kitayama, 2003).

These are just samplings from a somewhat cacophonous intellectual chorus that would have us abandon the idea of self-organization once and for all. Yet what would they leave us with? The idea that we have no self—that we are simply upheavals of bits of machinery or passively programmed by cultural transmissions—seems not only nihilistic but also implausible as a general psychology. In everyday existence people have, regarding at least some experiences and actions, a very clear sense of “my-ness” attached to them. Most all of us can distinguish actions that we “own,” endorse, and feel responsible for, from those that seem forced, alien, or imposed. Indeed, it is often a matter of great clinical import when patients report that their thoughts or actions do not “come from themselves” or were not “under their control.” Inner conflict, alienation, heteronomy, and “divided selves” are the everyday grist in the mill of clinical practitioners, an issue that few of these negative views on self meaningfully address.

Moreover, most of us also feel we *can* make coherent decisions about what is most important, relevant, meaningful, and in the best interests of ourselves or others for whom we care. Yet to do so we must synthetically process and evaluate events and make choices—weighty responsibilities that no mature human escapes. The role of the self in the organization and mobilization of our capacities to act is perhaps the most practical and functional concern in human life. In the view espoused in this book, the phenomenal senses of self and of autonomy have a direct relationship to the organization of behavior and are emergent properties of the activities of reflective processing and regulation. There is therefore a correspondence between self-organized actions and particular types of brain processes (e.g., Lee & Reeve, 2013; Legault & Inzlicht, 2013; Ryan & Di Domenico, 2016) and, more importantly, psychological experiences. The degree of autonomy entailed in behavioral regulation has, in turn, enormous ramifications for performance, persistence, and well-being. That human actions can be autonomous and self-regulated is therefore not a fiction—it is a functional attribute that can be more or less robust.

Accordingly, we plan in this book to explicate a psychological theory of self and its development that is phenomenologically grounded, has functional implications, and yet can be coordinated with what we know about the diversities of cultural backdrops, on the one hand, and the workings of the brain and its evolved and acquired propensities

on the other. Accepting that humans are characterized by intrinsic activity and organismic integration tendencies precludes a uniformly reductionist analysis. Because humans have a quasi-unique self-reflective capacity that allows them to experience the difference between acting volitionally and being controlled, it becomes mandatory to consider the “downward” causal influence that reflective human experience has on behavior and on the biology that underlies it (Ryan & Deci, 2006). Provocative ideas such as autonomy and responsibility are central concerns within SDT. Still, self-reflective capacities do not grant humans a transcendent status, for it is clear that human regulatory processes operate in lawful, specifiable, and predictable ways and are themselves embedded in, and influenced by, one’s social and cultural contexts. The results of our analysis will in fact make very clear that the capacities for autonomy and integration in personality only fully develop with multilevel supports from biological systems, proximal interpersonal relationships, and more pervasive institutional and cultural contexts.

It is sometimes said that the purpose of science is to create knowledge and that knowledge is its own justification. Although that may, in some senses, be a worthy ideal, we believe that if knowledge cannot foster change in support of human life and wellness—if it cannot help better the human condition—its value is relatively minimal, particularly given the monumental problems faced in this world related to aggression, pathology, acquisitiveness, and dominance of various sorts. We thus believe in the importance of designing research and interpreting results in ways that have practical import for facilitating the realization of human potentials. In turn, intervention research often reverberates back to basic principles and generates yet greater knowledge.

The fact that SDT does have applied value, and indeed has spawned numerous interventions, clinical trials, and organizational changes, derives in part from our belief that putting theories into practice and evaluating the results is the ultimate test of a theory. It is with that in mind that we have applied SDT to issues of child care, education, work, health care, sport, and virtual worlds, and it is our intention to continue SDT’s extension into applied domains.

About This Book

Our last formal theoretical statement of SDT in book form—*Intrinsic Motivation and Self-Determination in Human Behavior* (Deci & Ryan, 1985b)—was published more than three decades before this one. In those intervening years, SDT has been substantially elaborated and refined based on results from now thousands of laboratory and field studies by hundreds of researchers. We have continually been amazed by the utility of the concepts for interpreting research results and for providing a new way to think about a broad array of human concerns and processes. We have also been inspired by the contributions of scholars around the globe who have engaged SDT’s theoretical propositions and empirical methods. In this book, we review only a portion of that research, extend the theory in several new directions, and discuss SDT’s relevance to manifold macro and micro societal issues.

In essence, SDT attempts to articulate the basic, vital nature of human beings—of how that nature expresses itself, what is required to sustain energy and motivation, and how that vital energy is depleted. To begin that story, however, we must start with certain root issues—such as the nature of organization as a feature of living things, what it means to be a self in connection with others, and the history and conceptualizations of psychological needs and intrinsic motivation. Thus, although our primary intention in

this book is to review empirical research and to organize the findings within a coherent theoretical perspective, our discussion begins with meta-theoretical and historical considerations that highlight the intellectual traditions with which SDT is aligned.

Reflecting this, in Part II of this volume (Chapters 2–5), we review the philosophical and historical themes that led to the emergence of SDT and that provided its conceptual foundations. These meta-theoretical and historical considerations highlight the past intellectual traditions that have either inspired or informed SDT's core constructs. In addition in these chapters we discuss some commonalities and contrasts of SDT with other paradigmatic approaches to human motivation and self-regulation.

Those readers who might be impatient to get right to SDT research itself can simply pass over this section and move on to Part III (Chapters 6–12) in which we articulate SDT's formal theoretical propositions and review some of the empirical findings supporting these propositions. We have organized Part III in terms of the presentation of CET, OIT, COT, BPNT, GCT, and RMT—the six mini-theories comprising SDT. From this foundation we then turn in Part IV (Chapters 13–16) to various extensions and considerations that are based in a developmental perspective and stem from the formal mini-theories to address the concepts of parenting, education, the acquisition of self-concepts and identities, and finally how need thwarting in development contributes to various forms of psychopathology.

Part V (Chapters 17–21) presents applied work based on SDT covering domains of psychotherapy, health care, virtual worlds, sport, and work. For us this is a crucial section of the book because, again, we see the value of psychological science as based not only in its explanatory power but also in its capacity to inform social practice.

Finally, we conclude in Part VI with three chapters on the pervasive influences of cultural, political, and economic forms on human motivation and well-being and the brighter and darker manifestations of human nature and the evolutionary and social conditions that catalyze them. These final chapters hopefully place this work in the larger context of evolving societies and their formidable impact on individuals' thriving, well-being, and positive humanity.