
Positive Psychology

An Introduction

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*A science of positive subjective experience, positive individual traits, and positive institutions promises to improve quality of life and prevent the pathologies that arise when life is barren and meaningless. The exclusive focus on pathology that has dominated so much of our discipline results in a model of the human being lacking the positive features that make life worth living. Hope, wisdom, creativity, future mindedness, courage, spirituality, responsibility, and perseverance are ignored or explained as transformations of more authentic negative impulses. The 15 articles in this millennial issue of the *American Psychologist* discuss such issues as what enables happiness, the effects of autonomy and self-regulation, how optimism and hope affect health, what constitutes wisdom, and how talent and creativity come to fruition. The authors outline a framework for a science of positive psychology, point to gaps in our knowledge, and predict that the next century will see a science and profession that will come to understand and build the factors that allow individuals, communities, and societies to flourish.*

Entering a new millennium, Americans face a historical choice. Left alone on the pinnacle of economic and political leadership, the United States can continue to increase its material wealth while ignoring the human needs of its people and those of the rest of the planet. Such a course is likely to lead to increasing selfishness, to alienation between the more and the less fortunate, and eventually to chaos and despair.

At this juncture, the social and behavioral sciences can play an enormously important role. They can articulate a vision of the good life that is empirically sound while being understandable and attractive. They can show what actions lead to well-being, to positive individuals, and to thriving communities. Psychology should be able to help document what kinds of families result in children who flourish, what work settings support the greatest satisfaction among workers, what policies result in the strongest civic engagement, and how people's lives can be most worth living.

Yet psychologists have scant knowledge of what makes life worth living. They have come to understand quite a bit about how people survive and endure under conditions of adversity. (For recent surveys of the history of psychology, see, e.g., Benjamin, 1992; Koch & Leary, 1985; and Smith, 1997.) However, psychologists know very little about how normal people flourish under more benign conditions. Psychology has, since World War II,

become a science largely about healing. It concentrates on repairing damage within a disease model of human functioning. This almost exclusive attention to pathology neglects the fulfilled individual and the thriving community. The aim of positive psychology is to begin to catalyze a change in the focus of psychology from preoccupation only with repairing the worst things in life to also building positive qualities.

The field of positive psychology at the subjective level is about valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom. At the group level, it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic.

Two personal stories, one told by each author, explain how we arrived at the conviction that a movement toward positive psychology was needed and how this special issue of the *American Psychologist* came about. For Martin E. P. Seligman, it began at a moment a few months after being elected president of the American Psychological Association:

The moment took place in my garden while I was weeding with my five-year-old daughter, Nikki. I have to confess that even though I write books about children, I'm really not all that good with children. I am goal oriented and time urgent, and when I'm weeding in the garden, I'm actually trying to get the weeding done. Nikki, however, was throwing weeds into the air, singing, and dancing around. I yelled at her. She walked away, then came back and said,

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Martin E. P. Seligman

Photo by Bachrach

“Daddy, I want to talk to you.”

“Yes, Nikki?”

“Daddy, do you remember before my fifth birthday?”

From the time I was three to the time I was five, I was a whiner. I whined every day. When I turned five, I decided not to whine anymore. That was the hardest thing I’ve ever done. And if I can stop whining, you can stop being such a grouch.”

This was for me an epiphany, nothing less. I learned something about Nikki, about raising kids, about myself, and a great deal about my profession. First, I realized that raising Nikki was not about correcting whining. Nikki did that herself. Rather, I realized that raising Nikki is about taking this marvelous strength she has—I call it “seeing into the soul”—amplifying it, nurturing it, helping her to lead her life around it to buffer against her weaknesses and the storms of life. Raising children, I realized, is vastly more than fixing what is wrong with them. It is about identifying and nurturing their strongest qualities, what they own and are best at, and helping them find niches in which they can best live out these strengths.

As for my own life, Nikki hit the nail right on the head. I was a grouch. I had spent 50 years mostly enduring wet weather in my soul, and the past 10 years being a nimbus cloud in a household full of sunshine. Any good fortune I had was probably not due to my grumpiness, but in spite of it. In that moment, I resolved to change.

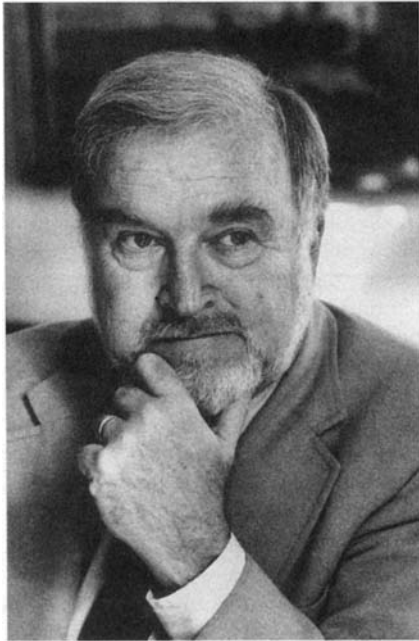
However, the broadest implication of Nikki’s teaching was about the science and profession of psychology: Before World War II, psychology had three distinct missions: curing mental illness, making the lives of all people more productive and fulfilling, and identifying and nurturing high talent. The early focus on positive psychology is exemplified by work such as Terman’s studies of giftedness

(Terman, 1939) and marital happiness (Terman, Bottenwieser, Ferguson, Johnson, & Wilson, 1938), Watson’s writings on effective parenting (Watson, 1928), and Jung’s work concerning the search for and discovery of meaning in life (Jung, 1933). Right after the war, two events—both economic—changed the face of psychology: In 1946, the Veterans Administration (now Veterans Affairs) was founded, and thousands of psychologists found out that they could make a living treating mental illness. In 1947, the National Institute of Mental Health (which, in spite of its charter, has always been based on the disease model and should now more appropriately be renamed the National Institute of Mental Illness) was founded, and academics found out that they could get grants if their research was about pathology.

This arrangement has brought many benefits. There have been huge strides in the understanding of and therapy for mental illness: At least 14 disorders, previously intractable, have yielded their secrets to science and can now be either cured or considerably relieved (Seligman, 1994). The downside, however, was that the other two fundamental missions of psychology—making the lives of all people better and nurturing genius—were all but forgotten. It wasn’t only the subject matter that was altered by funding, but the currency of the theories underpinning how psychologists viewed themselves. They came to see themselves as part of a mere subfield of the health professions, and psychology became a victimology. Psychologists saw human beings as passive foci: Stimuli came on and elicited responses (what an extraordinarily passive word!). External reinforcements weakened or strengthened responses. Drives, tissue needs, instincts, and conflicts from childhood pushed each of us around.

Psychology’s empirical focus shifted to assessing and curing individual suffering. There has been an explosion in research on psychological disorders and the negative effects of environmental stressors, such as parental divorce, the deaths of loved ones, and physical and sexual abuse. Practitioners went about treating the mental illnesses of patients within a disease framework by repairing damage: damaged habits, damaged drives, damaged childhoods, and damaged brains.

Mihaly Csikszentmihalyi realized the need for a positive psychology in Europe during World War II: As a child, I witnessed the dissolution of the smug world in which I had been comfortably ensconced. I noticed with surprise how many of the adults I had known as successful and self-confident became helpless and dispirited once the war removed their social supports. Without jobs, money, or status, they were reduced to empty shells. Yet there were a few who kept their integrity and purpose despite the surrounding chaos. Their serenity was a beacon that kept others from losing hope. And these were not the men and women one would have expected to emerge unscathed: They were not necessarily the most respected, better educated, or more skilled individuals. This experience set me thinking: What sources of strength were these people drawing on?



**Mihaly
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Reading philosophy and dabbling in history and religion did not provide satisfying answers to that question. I found the ideas in these texts to be too subjective, to be dependent on faith or to be dubious assumptions; they lacked the clear-eyed skepticism and the slow cumulative growth that I associated with science. Then, for the first time, I came across psychology: first the writings of Jung, then Freud, then a few of the psychologists who were writing in Europe in the 1950s. Here, I thought, was a possible solution to my quest—a discipline that dealt with the fundamental issues of life and attempted to do so with the patient simplicity of the natural sciences.

However, at that time psychology was not yet a recognized discipline. In Italy, where I lived, one could take courses in it only as a minor while pursuing a degree in medicine or in philosophy, so I decided to come to the United States, where psychology had gained wider acceptance. The first courses I took were somewhat of a shock. It turned out that in the United States, psychology had indeed become a science, if by science one means only a skeptical attitude and a concern for measurement. What seemed to be lacking, however, was a vision that justified the attitude and the methodology. I was looking for a scientific approach to human behavior, but I never dreamed that this could yield a value-free understanding. In human behavior, what is most intriguing is not the average, but the improbable. Very few people kept their decency during the onslaught of World War II; yet it was those few who held the key to what humans could be like at their best. However, at the height of its behaviorist phase, psychology was being taught as if it were a branch of statistical mechanics. Ever since, I have struggled to reconcile the twin imperatives that a science of human beings should include: to understand what *is* and what *could be*.

A decade later, the “third way” heralded by Abraham Maslow, Carl Rogers, and other humanistic psychologists promised to add a new perspective to the entrenched clinical and behaviorist approaches. The generous humanistic vision had a strong effect on the culture at large and held enormous promise. Unfortunately, humanistic psychology did not attract much of a cumulative empirical base, and it spawned myriad therapeutic self-help movements. In some of its incarnations, it emphasized the self and encouraged a self-centeredness that played down concerns for collective well-being. Future debate will determine whether this came about because Maslow and Rogers were ahead of their times, because these flaws were inherent in their original vision, or because of overly enthusiastic followers. However, one legacy of the humanism of the 1960s is prominently displayed in any large bookstore: The “psychology” section contains at least 10 shelves on crystal healing, aromatherapy, and reaching the inner child for every shelf of books that tries to uphold some scholarly standard.

Whatever the personal origins of our conviction that the time has arrived for a positive psychology, our message is to remind our field that psychology is not just the study of pathology, weakness, and damage; it is also the study of strength and virtue. Treatment is not just fixing what is broken; it is nurturing what is best. Psychology is not just a branch of medicine concerned with illness or health; it is much larger. It is about work, education, insight, love, growth, and play. And in this quest for what is best, positive psychology does not rely on wishful thinking, faith, self-deception, fads, or hand waving; it tries to adapt what is best in the scientific method to the unique problems that human behavior presents to those who wish to understand it in all its complexity.

What foregrounds this approach is the issue of prevention. In the past decade, psychologists have become concerned with prevention, and this was the presidential theme of the 1998 American Psychological Association convention in San Francisco. How can psychologists prevent problems like depression or substance abuse or schizophrenia in young people who are genetically vulnerable or who live in worlds that nurture these problems? How can psychologists prevent murderous schoolyard violence in children who have access to weapons, poor parental supervision, and a mean streak? What psychologists have learned over 50 years is that the disease model does not move psychology closer to the prevention of these serious problems. Indeed, the major strides in prevention have come largely from a perspective focused on systematically building competency, not on correcting weakness.

Prevention researchers have discovered that there are human strengths that act as buffers against mental illness: courage, future mindedness, optimism, interpersonal skill, faith, work ethic, hope, honesty, perseverance, and the capacity for flow and insight, to name several. Much of the task of prevention in this new century will be to create a science of human strength whose mission will be to understand and learn how to foster these virtues in young people.

Working exclusively on personal weakness and on damaged brains, however, has rendered science poorly

equipped to effectively prevent illness. Psychologists need now to call for massive research on human strengths and virtues. Practitioners need to recognize that much of the best work they already do in the consulting room is to amplify strengths rather than repair the weaknesses of their clients. Psychologists working with families, schools, religious communities, and corporations, need to develop climates that foster these strengths. The major psychological theories have changed to undergird a new science of strength and resilience. No longer do the dominant theories view the individual as a passive vessel responding to stimuli; rather, individuals are now seen as decision makers, with choices, preferences, and the possibility of becoming masterful, efficacious, or in malignant circumstances, helpless and hopeless (Bandura, 1986; Seligman, 1992). Science and practice that rely on this worldview may have the direct effect of preventing many of the major emotional disorders. They may also have two side effects: They may make the lives of clients physically healthier, given all that psychologists are learning about the effects of mental well-being on the body. This science and practice will also reorient psychology back to its two neglected missions—making normal people stronger and more productive and making high human potential actual.

About This Issue

The 15 articles that follow this introduction present a remarkably varied and complex picture of the orientation in psychology—and the social sciences more generally—that might be included under the rubric of positive psychology. Of course, like all selections, this one is to some extent arbitrary and incomplete. For many of the topics included in this issue, the space allotted to an entire issue of the *American Psychologist* would be needed to print all the contributions worthy of inclusion. We hope only that these enticing hors d'oeuvres stimulate the reader's appetite to sample more widely from the offerings of the field.

As editors of this special issue, we have tried to be comprehensive without being redundant. The authors were asked to write at a level of generality appealing to the greatly varied and diverse specialties of the journal's readership, without sacrificing the intellectual rigor of their arguments. The articles were not intended to be specialized reviews of the literature, but broad overviews with an eye turned to cross-disciplinary links and practical applications. Finally, we invited mostly seasoned scholars to contribute, thereby excluding some of the most promising young researchers—but they are already preparing to edit a section of this journal devoted to the latest work on positive psychology.

There are three main topics that run through these contributions. The first concerns the positive experience. What makes one moment "better" than the next? If Daniel Kahneman is right, the hedonic quality of current experience is the basic building block of a positive psychology (Kahneman, 1999, p. 6). Diener (2000, this issue) focuses on subjective well-being, Massimini and Delle Fave (2000, this issue) on optimal experience, Peterson (2000, this issue) on optimism, Myers (2000, this issue) on happiness,

and Ryan and Deci (2000, this issue) on self-determination. Taylor, Kemeny, Reed, Bower, and Gruenwald (2000, this issue), and Salovey, Rothman, Detweiler, and Steward (2000, this issue) report on the relationship between positive emotions and physical health.

These topics can, of course, be seen as statelike or traitlike: One can investigate either what accounts for moments of happiness or what distinguishes happy from unhappy individuals. Thus, the second thread in these articles is the theme of the positive personality. The common denominator underlying all the approaches represented here is a perspective on human beings as self-organizing, self-directed, adaptive entities. Ryan and Deci (2000) focus on self-determination, Baltes and Staudinger (2000, this issue) on wisdom, and Vaillant (2000, this issue) on mature defenses. Lubinski and Benbow (2000, this issue), Simon-ton (2000, this issue), Winner (2000, this issue), and Larson (2000, this issue) focus on exceptional performance (i.e., creativity and talent). Some of these approaches adopt an explicit developmental perspective, taking into account that individual strengths unfold over an entire life span.

The third thread that runs through these contributions is the recognition that people and experiences are embedded in a social context. Thus, a positive psychology needs to take positive communities and positive institutions into account. At the broadest level, Buss (2000, this issue) and Massimini and Delle Fave (2000) describe the evolutionary milieu that shapes positive human experience. Myers (2000) describes the contributions of social relationships to happiness, and Schwartz (2000, this issue) reflects on the necessity for cultural norms to relieve individuals of the burden of choice. Larson (2000) emphasizes the importance of voluntary activities for the development of resourceful young people, and Winner (2000) describes the effects of families on the development of talent. In fact, to a degree that is exceedingly rare in psychological literature, every one of these contributions looks at behavior in its ecologically valid social setting. A more detailed introduction to the articles in this issue follows.

Evolutionary Perspectives

The first section comprises two articles that place positive psychology in the broadest context within which it can be understood, namely that of evolution. To some people, evolutionary approaches are distasteful because they deny the importance of learning and self-determination, but this need not be necessarily so. These two articles are exceptional in that they not only provide ambitious theoretical perspectives, but—mirabile dictu—they also provide uplifting practical examples of how a psychology based on evolutionary principles can be applied to the improvement of the human condition.

In the first article, David Buss (2000) reminds readers that the dead hand of the past weighs heavily on the present. He focuses primarily on three reasons why positive states of mind are so elusive. First, because the environments people currently live in are so different from the ancestral environments to which their bodies and minds have been adapted, they are often misfit in modern sur-

roundings. Second, evolved distress mechanisms are often functional—for instance, jealousy alerts people to make sure of the fidelity of their spouses. Finally, selection tends to be competitive and to involve zero-sum outcomes. What makes Buss's article unusually interesting is that after identifying these major obstacles to well-being, he then outlines some concrete strategies for overcoming them. For instance, one of the major differences between ancestral and current environments is the paradoxical change in people's relationships to others: On the one hand, people live surrounded by many more people than their ancestors did, yet they are intimate with fewer individuals and thus experience greater loneliness and alienation. The solutions to this and other impasses are not only conceptually justified within the theoretical framework but are also eminently practical. So what are they? At the risk of creating unbearable suspense, we think it is better for readers to find out for themselves.

Whereas Buss (2000) bases his arguments on the solid foundations of biological evolution, Fausto Massimini and Antonella Delle Fave (2000) venture into the less explored realm of psychological and cultural evolution. In a sense, they start where Buss leaves off: by looking analytically at the effects of changes in the ancestral environment and by looking specifically at how the production of *memes* (e.g., artifacts and values) affect and are affected by human consciousness. They start with the assumption that living systems are self-organizing and oriented toward increasing complexity. Thus, individuals are the authors of their own evolution. They are continuously involved in the selection of the memes that will define their own individuality, and when added to the memes selected by others, they shape the future of the culture. Massimini and Delle Fave make the point—so essential to the argument for positive psychology—that psychological selection is motivated not solely by the pressures of adaptation and survival, but also by the need to reproduce optimal experiences. Whenever possible, people choose behaviors that make them feel fully alive, competent, and creative. These authors conclude their visionary call for individual development in harmony with global evolution by providing instances drawn from their own experience of cross-cultural interventions, where psychology has been applied to remedy traumatic social conditions created by runaway modernization.

Positive Personal Traits

The second section includes five articles dealing with four different personal traits that contribute to positive psychology: subjective well-being, optimism, happiness, and self-determination. These are topics that in the past three decades have been extensively studied and have produced an impressive array of findings—many of them unexpected and counterintuitive.

The first article in this set is a review of what is known about subjective well-being written by Edward Diener (2000), whose research in this field now spans three decades. Subjective well-being refers to what people think and how they feel about their lives—to the cognitive and affective conclusions they reach when they evaluate their

existence. In practice, subjective well-being is a more scientific-sounding term for what people usually mean by happiness. Even though subjective well-being research relies primarily on rather global self-ratings that could be criticized on various grounds, its findings are plausible and coherent. Diener's account begins with a review of the temperament and personality correlates of subjective well-being and the demographic characteristics of groups high in subjective well-being. The extensive cross-cultural research on the topic is then reviewed, suggesting interesting links between macrosocial conditions and happiness. A central issue is how a person's values and goals mediate between external events and the quality of experience. These investigations promise to bring psychologists closer to understanding the insights of such philosophers of antiquity as Democritus or Epictetus, who argued that it is not what happens to people that determines how happy they are, but how they interpret what happens.

One dispositional trait that appears to mediate between external events and a person's interpretation of them is optimism. This trait includes both *little optimism* (e.g., "I will find a convenient parking space this evening") and *big optimism* (e.g., "Our nation is on the verge of something great"). Christopher Peterson (2000) describes the research on this beneficial psychological characteristic in the second article of this set. He considers optimism to involve cognitive, emotional, and motivational components. People high in optimism tend to have better moods, to be more persevering and successful, and to experience better physical health. How does optimism work? How can it be increased? When does it begin to distort reality? These are some of the questions Peterson addresses. As is true of the other authors in this issue, this author is aware that complex psychological issues cannot be understood in isolation from the social and cultural contexts in which they are embedded. Hence, he asks questions such as the following: How does an overly pessimistic culture affect the well-being of its members? And conversely, does an overly optimistic culture lead to shallow materialism?

David Myers (2000) presents his synthesis of research on happiness in the third article of this section. His perspective, although strictly based on empirical evidence, is informed by a belief that traditional values must contain important elements of truth if they are to survive across generations. Hence, he is more attuned than most to issues that are not very fashionable in the field, such as the often-found association between religious faith and happiness. The other two candidates for promoting happiness that Myers considers are economic growth and income (not much there, after a minimum threshold of affluence is passed) and close personal relationships (a strong association). Although based on correlational survey studies of self-reported happiness, the robustness of the findings, replicated across time and different cultures, suggests that these findings ought to be taken seriously by anyone interested in understanding the elements that contribute to a positive quality of life.

In the first of two articles that focus on self-determination, Richard Ryan and Edward Deci (2000) discuss

another trait that is central to positive psychology and has been extensively researched. Self-determination theory investigates three related human needs: the need for competence, the need for belongingness, and the need for autonomy. When these needs are satisfied, Ryan and Deci claim personal well-being and social development are optimized. Persons in this condition are intrinsically motivated, able to fulfill their potentialities, and able to seek out progressively greater challenges. These authors consider the kinds of social contexts that support autonomy, competence, and relatedness, and those that stand in the way of personal growth. Especially important is their discussion of how a person can maintain autonomy even under external pressures that seem to deny it. Ryan and Deci's contribution shows that the promises of the *humanistic psychology* of the 1960s can generate a vital program of empirical research.

Is an emphasis on autonomy an unmitigated good? Barry Schwartz (2000) takes on the subject of self-determination from a more philosophical and historical angle. He is concerned that the emphasis on autonomy in our culture results in a kind of psychological tyranny—an excess of freedom that may lead to dissatisfaction and depression. He finds particularly problematic the influence of rational-choice theory on our conception of human motivation. The burden of responsibility for autonomous choices often becomes too heavy, leading to insecurity and regrets. For most people in the world, he argues, individual choice is neither expected nor desired. Cultural constraints are necessary for leading a meaningful and satisfying life. Although Ryan and Deci's (2000) self-determination theory takes relatedness into account as one of the three components of personal fulfillment, Schwartz's argument highlights even further the benefits of relying on cultural norms and values.

Implications for Mental and Physical Health

One of the arguments for positive psychology is that during the past half century, psychology has become increasingly focused on mental illness and, as a result, has developed a distorted view of what normal—and exceptional—human experience is like. How does mental health look when seen from the perspective of positive psychology? The next three articles deal with this topic.

Beethoven was suicidal and despairing at age 31, yet two dozen years later he composed the "Ode to Joy," translating into sublime music Schiller's lines, "Be embraced, all ye millions. . . ." What made it possible for him to overcome despair despite poverty and deafness? In the first article of this section, the psychiatrist George Vaillant (2000) reminds readers that it is impossible to describe positive psychological processes without taking a life span, or at least a longitudinal, approach. "Call no man happy till he dies," for a truly positive psychological adaptation should unfold over a lifetime. Relying on the results obtained from three large samples of adults studied over several decades, Vaillant summarizes the contributions of mature defenses—altruism, sublimation, suppression, humor, anticipation—to a successful and joyful life. Even

though Vaillant still uses the pathocentric terminology of *defenses*, his view of mature functioning, which takes into full account the importance of creative, proactive solutions, breaks the mold of the victimology that has been one legacy of psychoanalytic approaches.

It is generally assumed that it is healthy to be rigorously objective about one's situation. To paint a rosier picture than the facts warrant is often seen as a sign of pathology (cf. Peterson, 2000; Schwartz, 2000; and Vaillant, 2000, in this issue). However, in the second article of this section, Shelley Taylor and her collaborators argue that unrealistically optimistic beliefs about the future can protect people from illness (Taylor et al., 2000). The results of numerous studies of patients with life-threatening diseases, such as AIDS, suggest that those who remain optimistic show symptoms later and survive longer than patients who confront reality more objectively. According to these authors, the positive effects of optimism are mediated mainly at a cognitive level. An optimistic patient is more likely to practice habits that enhance health and to enlist social support. It is also possible, but not proven, that positive affective states may have a direct physiological effect that retards the course of illness. As Taylor et al. note, this line of research has enormously important implications for ameliorating health through prevention and care.

At the beginning of their extensive review of the impacts of a broad range of emotions on physical health, Peter Salovey and his coauthors (Salovey et al., 2000) ruefully admit that because of the pathological bias of most research in the field, a great deal more is known about how negative emotions promote illness than is known about how positive emotions promote health. However, as positive and negative emotions are generally inversely correlated, they argue that substituting the former for the latter can have preventive and therapeutic effects. The research considered includes the direct effects of affect on physiology and the immune system, as well as the indirect effects of affect, such as the marshalling of psychological and social resources and the motivation of health-promoting behaviors. One of the most interesting sets of studies they discuss is the one that shows that persons high in optimism and hope are actually more likely to provide themselves with unfavorable information about their disease, thereby being better prepared to face up to realities even though their positive outcome estimates may be inflated.

Fostering Excellence

If psychologists wish to improve the human condition, it is not enough to help those who suffer. The majority of "normal" people also need examples and advice to reach a richer and more fulfilling existence. This is why early investigators, such as William James (1902/1958), Carl Jung (1936/1969), Gordon Allport (1961), and Abraham Maslow (1971), were interested in exploring spiritual ecstasy, play, creativity, and peak experiences. When these interests were eclipsed by medicalization and "physics envy," psychology neglected an essential segment of its agenda. As a gesture toward redressing such neglect, the last section of this issue presents six articles dealing with

phenomena at the opposite end of the pathological tail of the normal curve—the end that includes the most positive human experiences.

Wisdom is one of the most prized traits in all cultures; according to the Old Testament, its price is above rubies (Job 28:18). It is a widespread belief that wisdom comes with age, but as the gerontologist Bernice Neugarten used to say, “You can’t expect a dumb youngster to grow up to be a wise senior.” Although the first president of the American Psychological Association, G. Stanley Hall, tried to develop a model of wisdom in aging as far back as 1922 (Hall, 1922), the topic has not been a popular one in the intervening years. Recently, however, interest in wisdom has revived, and nowhere more vigorously than at the Max Planck Institute of Berlin, where the “Berlin wisdom paradigm” has been developed. Paul Baltes and Ursula Staudinger (2000) report on a series of studies that has resulted in a complex model that views wisdom as a cognitive and motivational heuristic for organizing knowledge in pursuit of individual and collective excellence. Seen as the embodiment of the best subjective beliefs and laws of life that have been sifted and selected through the experience of succeeding generations, wisdom is defined as an expert knowledge system concerning the fundamental pragmatic issues of existence.

The second article in this section, by David Lubinski and Camilla Benbow (2000), deals with excellence of a different sort. In this article, the authors review the large literature concerning children with exceptional intellectual abilities. If one asked a layperson at what point in the distribution of intelligence the largest gap in ability is found, the modal answer would probably be that it is the gifted people in the top 1% or 2% who differ most in ability from the rest of the population. As the authors point out, however, one third of the total ability range is found within the top 1%—a child with an IQ of 200 is quite different and needs a different educational environment from a gifted student with “only” an IQ of 140. Lubinski and Benbow consider issues of how to identify, nurture, counsel, and teach children in these high ability ranges, arguing that neglecting the potentialities of such exceptional children would be a grievous loss to society as a whole.

One of the most poignant paradoxes in psychology concerns the complex relationships between pathology and creativity. Ever since Cesare Lombroso raised the issue over a century ago, the uneasy relationship between these two seemingly opposite traits has been explored again and again (on this topic, cf. also Vaillant, 2000, in this issue). A related paradox is that some of the most creative adults were reared in unusually adverse childhood situations. This and many other puzzles concerning the nature and nurture of creativity are reviewed in Dean K. Simonton’s (2000) article, which examines the cognitive, personality, and developmental dimensions of the process, as well as the environmental conditions that foster or hinder creativity. For instance, on the basis of his exhaustive historiometric analyses that measure rates of creative contributions decade by decade, Simonton concludes that nationalistic revolts

against oppressive rules are followed a generation later by greater frequencies of creative output.

The topics of giftedness and exceptional performance dealt with in the previous two articles are also taken up by Ellen Winner (2000). Her definition of giftedness is more inclusive than the previous ones: It relates to children who are precocious and self-motivated and approach problems in their domain of talent in an original way. Contrary to some of the findings concerning creative individuals just mentioned, such children tend to be well-adjusted and to have supportive families. Winner describes the current state of knowledge about this topic by focusing on the origins of giftedness; the motivation of gifted children; and the social, emotional, and cognitive correlates of exceptional performance. As is true of most other contributors to this issue, this author is sensitive throughout to the practical implications of research findings, such as what can be done to nurture and to keep giftedness alive.

Developing excellence in young people is also the theme of Reed Larson’s (2000) article, which begins with the ominous and often replicated finding that the average student reports being bored about one third of the time he or she is in school. Considering that people go to school for at least one fifth of their lives, this is not good news. Larson argues that youths in our society rarely have the opportunity to take initiative, and that their education encourages passive adaptation to external rules instead. He explores the contribution of voluntary activities, such as participation in sport, art, and civic organizations, to providing opportunities for concentrated, self-directed effort applied over time. Although this article deals with issues central also to previous articles (e.g., Massimini & Delle Fave, 2000; Ryan & Deci, 2000; Winner, 2000), it does so from the perspective of naturalistic studies of youth programs, thereby adding a welcome confirmatory triangulation to previous approaches.

Challenges for the Future

The 15 articles contained in this issue make a powerful contribution to positive psychology. At the same time, the issues raised in these articles point to huge gaps in knowledge that may be the challenges at the forefront of positive psychology. What, can we guess, are the great problems that will occupy this science for the next decade or two?

The Calculus of Well-Being

One fundamental gap concerns the relationship between momentary experiences of happiness and long-lasting well-being. A simple hedonic calculus suggests that by adding up a person’s positive events in consciousness, subtracting the negatives, and aggregating over time, one will get a sum that represents that person’s overall well-being. This makes sense, up to a point (Kahneman, 1999), but as several articles in this issue suggest, what makes people happy in small doses does not necessarily add satisfaction in larger amounts; a point of diminishing returns is quickly reached in many instances, ranging from the amount of income one earns to the pleasures of eating good food.

What, exactly, is the mechanism that governs the rewarding quality of stimuli?

The Development of Positivity

It is also necessary to realize that a person at time N is a different entity from the same person at time $N + 1$; thus, psychologists can't assume that what makes a teenager happy will also contribute to his or her happiness as an adult. For example, watching television and hanging out with friends tend to be positive experiences for most teenagers. However, to the extent that TV and friends become the main source of happiness, and thus attract increasing amounts of attention, the teenager is likely to grow into an adult who is limited in the ability to obtain positive experiences from a wide range of opportunities. How much delayed gratification is necessary to increase the chances of long-term well-being? Is the future mindedness necessary for serious delay of gratification antagonistic to momentary happiness, to living in the moment? What are the childhood building blocks of later happiness or of long-lasting well-being?

Neuroscience and Heritability

A flourishing neuroscience of pathology has begun in the past 20 years. Psychologists have more than rudimentary ideas about what the neurochemistry and pharmacology of depression are. They have reasonable ideas about brain loci and pathways for schizophrenia, substance abuse, anxiety, and obsessive-compulsive disorder. Somehow, it has gone unobserved (and unfunded) that all of these pathological states have their opposites (LeDoux & Armony, 1999). What are the neurochemistry and anatomy of flow, good cheer, realism, future mindedness, resistance to temptation, courage, and rational or flexible thinking?

Similarly, psychologists are learning about the heritability of negative states, like aggression, depression, and schizophrenia, but they know very little of the genetic contribution of gene-environment interaction and covariance. Can psychologists develop a biology of positive experience and positive traits?

Enjoyment Versus Pleasure

In a similar vein, it is useful to distinguish positive experiences that are *pleasurable* from those that are *enjoyable*. Pleasure is the good feeling that comes from satisfying homeostatic needs such as hunger, sex, and bodily comfort. Enjoyment, on the other hand, refers to the good feelings people experience when they break through the limits of homeostasis—when they do something that stretches them beyond what they were—in an athletic event, an artistic performance, a good deed, a stimulating conversation. Enjoyment, rather than pleasure, is what leads to personal growth and long-term happiness, but why is that when given a chance, most people opt for pleasure over enjoyment? Why do people choose to watch television over reading a challenging book, even when they know that their usual hedonic state during television is mild dysphoria, whereas the book can produce flow?

Collective Well-Being

This question leads directly to the issue of the balance between individual and collective well-being. Some hedonic rewards tend to be zero-sum when viewed from a systemic perspective. If running a speedboat for an hour provides the same amount of well-being to Person A as reading from a book of poems provides to Person B, but the speedboat consumes 10 gallons of gasoline and irritates 200 bathers, should the two experiences be weighed equally? Will a social science of positive community and positive institutions arise?

Authenticity

It has been a common but unspoken assumption in the social sciences that negative traits are authentic and positive traits are derivative, compensatory, or even inauthentic, but there are two other possibilities: that negative traits are derivative from positive traits and that the positive and negative systems are separate systems. However, if the two systems are separate, how do they interact? Is it necessary to be resilient, to overcome hardship and suffering to experience positive emotion and to develop positive traits? Does too much positive experience create a fragile and brittle personality?

Buffering

As positive psychology finds its way into prevention and therapy, techniques that build positive traits will become commonplace. Psychologists have good reason to believe that techniques that build positive traits and positive subjective experiences work, both in therapy and perhaps more importantly in prevention. Building optimism, for example, prevents depression (Seligman, Schulman, DeRubeis, & Hollon, 1999). The question is, how? By what mechanisms does courage or interpersonal skill or hope or future mindedness buffer against depression or schizophrenia or substance abuse?

Descriptive or Prescriptive

Is a science of positive psychology descriptive or prescriptive? The study of the relations among enabling conditions, individual strengths, institutions, and outcomes such as well-being or income might merely result in an empirical matrix. Such a matrix would describe, for example, what talents under what enabling conditions lead to what kinds of outcomes. This matrix would inform individuals' choices along the course of their lives, but would take no stand on the desirability of different life courses. Alternatively, positive psychology might become a prescriptive discipline like clinical psychology, in which the paths out of depression, for example, are not only described, but also held to be desirable.

Realism

What is the relationship between positive traits like optimism and positive experiences like happiness on the one hand, and being realistic on the other? Many doubt the possibility of being both. This suspicion is well illustrated

in the reaction attributed to Charles de Gaulle, then President of the French Republic, to a journalist's inquiry:

"Mr. President, are you a happy man?"

"What sort of a fool do you take me for?"

Is the world simply too full of tragedy to allow a wise person to be happy? As the articles in this issue suggest, a person can be happy while confronting life realistically and while working productively to improve the conditions of existence. Whether this view is accurate only time will tell; in the meantime, we hope that you will find what follows enjoyable and enlightening to read.

Conclusions

We end this introduction by hazarding a prediction about psychology in the new century. We believe that a psychology of positive human functioning will arise that achieves a scientific understanding and effective interventions to build thriving in individuals, families, and communities.

You may think that this is pure fantasy. You may think that psychology will never look beyond the victim, the underdog, and the remedial, but we want to suggest that the time is finally right for positive psychology. We well recognize that positive psychology is not a new idea. It has many distinguished ancestors, and we make no claim of originality. However, these ancestors somehow failed to attract a cumulative, empirical body of research to ground their ideas.

Why didn't they attract this research, and why has psychology been so focused on the negative? Why has psychology adopted the premise—without a shred of evidence—that negative motivations are authentic and positive emotions are derivative? There are several possible explanations. Negative emotions and experiences may be more urgent and therefore may override positive ones. This would make evolutionary sense. Because negative emotions often reflect immediate problems or objective dangers, they should be powerful enough to force people to stop, increase their vigilance, reflect on their behavior, and change their actions if necessary. (Of course, in some dangerous situations, it is most adaptive to respond without taking a great deal of time to reflect.) In contrast, when people are adapting well to the world, no such alarm is needed. Experiences that promote happiness often seem to pass effortlessly. Therefore, on one level, psychology's focus on the negative may reflect differences in the survival value of negative versus positive emotions.

Perhaps, however, people are blinded to the survival value of positive emotions precisely because they are so important. Like the fish who is unaware of the water in which it swims, people take for granted a certain amount of hope, love, enjoyment, and trust because these are the very conditions that allow them to go on living. These conditions are fundamental to existence, and if they are present, any number of objective obstacles can be faced with equanimity and even joy. Camus wrote that the foremost question of philosophy is why one should not commit suicide. One cannot answer that question just by curing depression; there must be positive reasons for living as well.

There are also historical reasons for psychology's negative focus. When cultures face military threat, shortages of goods, poverty, or instability, they may most naturally be concerned with defense and damage control. Cultures may turn their attention to creativity, virtue, and the highest qualities in life only when they are stable, prosperous, and at peace. Athens in the 5th century B.C., Florence in the 15th century, and Victorian England are examples of cultures that focused on positive qualities. Athenian philosophy focused on the human virtues: What is good action and good character? What makes life most worthwhile? Democracy was born during this era. Florence chose not to become the most important military power in Europe, but to invest its surplus in beauty. Victorian England affirmed honor, discipline, valor, and duty as central human virtues.

We are not suggesting that American culture should now erect an aesthetic monument. Rather, we believe that the nation—wealthy, at peace, and stable—provides the world with a historical opportunity. Psychologists can choose to create a scientific monument—a science that takes as its primary task the understanding of what makes life worth living. Such an endeavor will move all of the social sciences away from their negative bias. The prevailing social sciences tend to view the authentic forces governing human behavior to be self-interest, aggressiveness, territoriality, class conflict, and the like. Such a science, even at its best, is by necessity incomplete. Even if utopically successful, it would then have to proceed to ask how humanity can achieve what is best in life.

We predict that positive psychology in this new century will allow psychologists to understand and build those factors that allow individuals, communities, and societies to flourish. Such a science will not need to start afresh. It requires for the most part just a redirecting of scientific energy. In the 50 years since psychology and psychiatry became healing disciplines, they have developed a highly transferable science of mental illness. They developed a usable taxonomy, as well as reliable and valid ways of measuring such fuzzy concepts as schizophrenia, anger, and depression. They developed sophisticated methods—both experimental and longitudinal—for understanding the causal pathways that lead to such undesirable outcomes. Most important, they developed pharmacological and psychological interventions that have allowed many untreatable mental disorders to become highly treatable and, in a couple of cases, even curable. These same methods and in many cases the same laboratories and the next generation of scientists, with a slight shift of emphasis and funding, will be used to measure, understand, and build those characteristics that make life most worth living. As a side effect of studying positive human traits, science will learn how to buffer against and better prevent mental, as well as some physical, illnesses. As a main effect, psychologists will learn how to build the qualities that help individuals and communities, not just to endure and survive, but also to flourish.

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