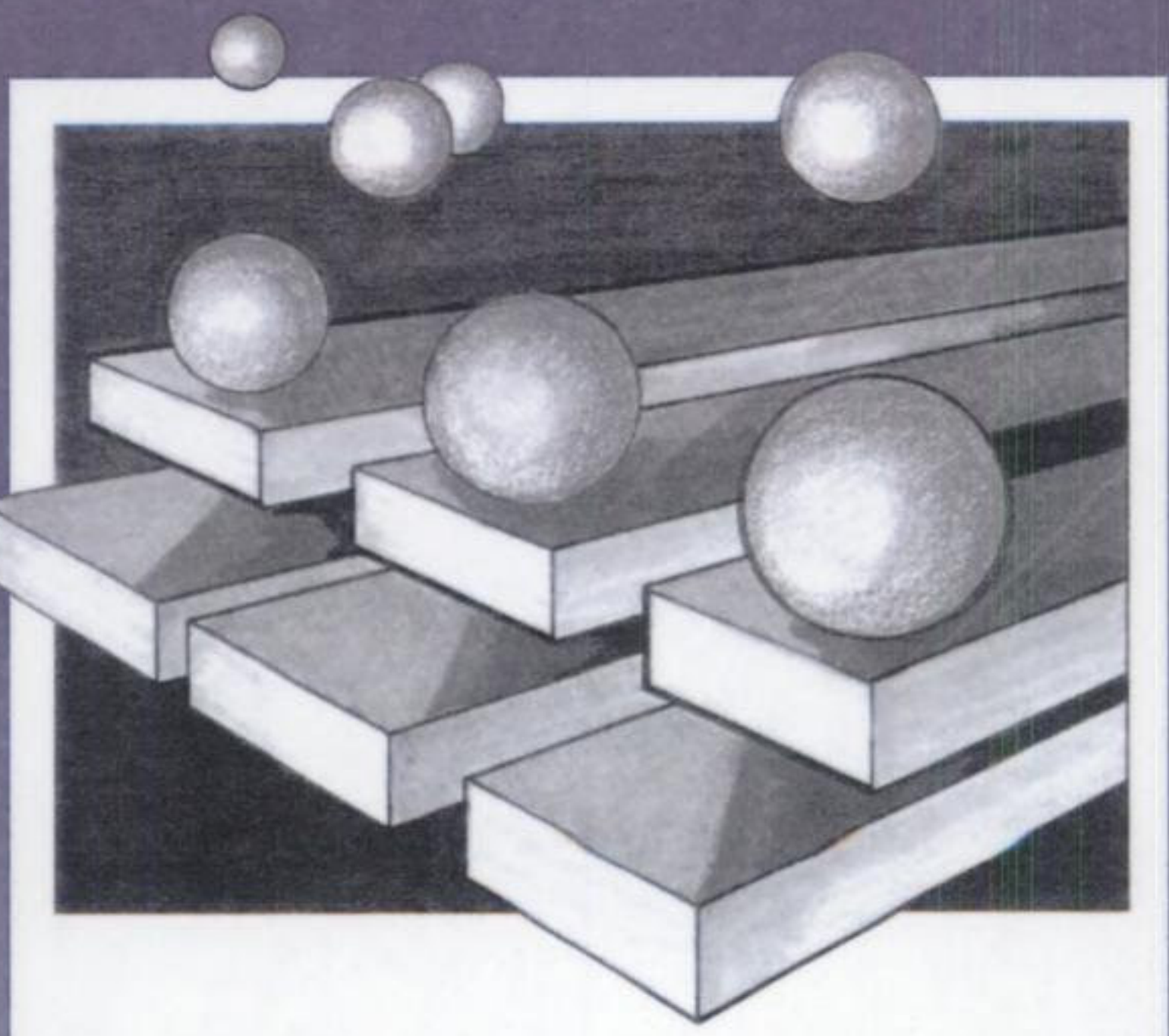

WISDOM

ITS NATURE, ORIGINS, AND DEVELOPMENT

Edited by
Robert J. Sternberg

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1 Understanding wisdom

Robert J. Sternberg

To understand wisdom fully and correctly probably requires more wisdom than any of us have. Thus, we cannot quite comprehend the nature of wisdom because of our own lack of it. But if scientists were to demand total understanding, they would quickly be out of their jobs, because total understanding is something we can fancy we are approaching, but it is almost certainly not something we can ever achieve. And if we are to believe the authors of the chapters in this book, the recognition that total understanding will always elude us is itself a sign of wisdom.

The chapter authors take a number of different approaches to understanding wisdom. Any attempt to classify these approaches is bound to be an oversimplification, and a rather gross one at that. Yet, in order to give readers at least a rough lay of the land, I have sought to divide the book into five parts, the middle three of which represent three distinctive, although overlapping, approaches to understanding wisdom and the first and last of which respectively serve to introduce and to integrate the three approaches. The three approaches draw on philosophical, folk, and psychodevelopmental views of wisdom, respectively.

Part I, Approaches to the Study of Wisdom, comprises just the present chapter, chapter 1, which sets the stage for "understanding wisdom." This chapter describes the three main approaches used by authors of this book in understanding wisdom and briefly summarizes the main contents of each chapter.

Part II of the book describes work drawing primarily on philosophical conceptions of wisdom. This part comprises three chapters.

Chapter 2, "Wisdom through the Ages," by Daniel N. Robinson, is the only chapter in the book where an author was given an explicit "assignment," in this case, to provide a brief history of philosophical views on wisdom. Robinson begins with Socrates in the 5th century B.C. and ends with the interpreters of Kant in the 19th century A.D. Robinson notes that the Platonic *Dialogues* provide the first comprehensive analysis of wisdom. Wisdom is here viewed as taking three forms: as a special gift of the philosopher and those who pursue truth; as the practical gift of statesmen and lawgivers; and as the

gift of those who pursue scientific knowledge of the nature of things. These three aspects of wisdom continue to be seen in present-day accounts of the nature of the construct.

Chapter 3, by Mihaly Csikszentmihalyi and Kevin Rathunde, also views wisdom in terms of three aspects, although the three aspects do not directly correspond to Plato's. In "The Psychology of Wisdom: An Evolutionary Interpretation," the authors suggest an approach to the study of wisdom that they refer to as "evolutionary hermeneutics." This approach is based on the idea that historically used concepts relating to the evaluation of human behavior, including wisdom, are likely to have adaptive value for humankind. The goal of the authors, then, is to understand how wisdom has been understood through the ages, particularly in the philosophical literature but also in psychology and elsewhere. First, wisdom can be understood as a cognitive process used in attempts to understand the world in a disinterested way, seeking the ultimate causes and consequences of events while preserving the integration of knowledge. Wisdom can also be understood as a virtue providing a compelling guide to action. Through wisdom, it becomes possible to improve our lives by understanding how better to order our actions so as to achieve closer harmony with the laws of the physical universe. Third, wisdom can be understood as a personal good, that is, as an intrinsically rewarding experience that provides high enjoyment and happiness when a person reflects on the connection between events in a disinterested way. Through these three aspects, wisdom provides a major mechanism of cultural evolution and an alternative to extrinsic rewards based on pleasure and materialism.

In chapter 4, "Wisdom as Integrated Thought: Historical and Developmental Perspectives," Gisela Labouvie-Vief draws heavily on two modes of thought suggested by the ancient Greeks: *mythos* and *logos*. In the former mode, *mythos,* experience is holistic and based on a bond of close identification between the self and the object of thought. Thought and the thinker, knower and the known, merge into a single, indivisible unit. The meaning of experience derives from this integration. Thus, integration plays an important role in Labouvie-Vief's conception of wisdom, as it does in Csikszentmihalyi and Rathunde's. In the latter mode, *logos,* meaning is disembedded from a reality of flux and change and is related instead to stable systems of categorization. It is embedded in that part of knowledge that is arguable and that can be demonstrated and defined with precision and agreement. In *logos,* knowledge can be rendered in a way that is mechanistic and computable. Labouvie-Vief suggests that wisdom is grounded in *mythos,* whereas much of our society is grounded in *logos,* the mode of thought that has come to be associated with scientific thinking. Labouvie-Vief believes her notion of wisdom to be closely related to Plato's in asserting the essential compatibility of the abstract with the concrete and the theoretical with the practical. We cannot

find wisdom in a disembedded theory of abstract or hypotheticodeductive thought.

Part IV of the book contains four chapters drawing heavily upon folk conceptions of wisdom. None of these chapters rely exclusively upon such conceptions. Rather, they use these conceptions in the way they should be used: to serve as a basis for the formulation of explicit psychological theories. Folk conceptions are thus a springboard for theory rather than the final theory in and of themselves.

Chapter 5, by Paul B. Baltes and Jacqui Smith, draws upon the large program of theory and research instigated some years back by Baltes to understand intellectual functioning and its development. In their chapter, "Toward a Psychology of Wisdom and Its Ontogenesis," Baltes and Smith draw upon Baltes's dual process framework of intelligence, according to which intelligence is understood in terms of basic mechanics of information processing and in terms of knowledge-rich pragmatics. The former is largely content free, universal and biological, and susceptible to genetic differences. The latter is largely content rich, culture dependent, and experience based. They view the latter, pragmatic aspect of intelligence as most relevant to wisdom, which they define as expertise in the domain of fundamental life pragmatics, such as life planning, management, and review. Wise persons are viewed as having exceptional insight into human development and life matters and as having exceptionally good judgment, advice, and commentary about difficult life problems. Five criteria for assessing wisdom are rich factual knowledge about matters of life, rich procedural knowledge about life problems, knowledge about the contexts of life and their relationships, knowledge about differences in values and priorities, and knowledge about the relative indeterminacy and unpredictability of life. They describe a series of studies supporting their view, particularly studies of people's folk conceptions of wisdom done in their laboratory and others'. They pool the data from various folk studies in support of their view. Two of the supporting folk-conceptual data sets are those of Chandler and Holliday and of Sternberg, whose contributions form the next two chapters.

Chapter 6, by Michael J. Chandler with Stephen Holliday, reviews a number of conceptions of wisdom, including Baltes's. Chandler and Holliday do not interpret their data in the same way as do Baltes and Smith, and indeed, the former authors are critical of the conception of Baltes and Smith, believing it too much to emphasize expertise, which they believe can narrow rather than broaden people's visions of what is wise, and too much to emphasize an abstract good that may not work in real-life contexts. Drawing on their own data on folk conceptions of wisdom, Chandler and Holliday suggest as key elements of wisdom exceptional understanding, judgment and communication skills, and general competence.

Chapter 7, by Robert J. Sternberg, also draws upon a study of folk conceptions of wisdom. The chapter, "Wisdom and Its Relations to Intelligence and Creativity," describes a study rather different from other studies in that it compares conceptions of wisdom with those of intelligence and creativity and also draws upon subjects not only from the lay population but also from a population of professors of art, business, philosophy, and physics. Multidimensional scaling of the lay data revealed six basic elements in folk conceptions of wisdom: reasoning ability, sagacity, learning from ideas and environment, judgment, expeditious use of information, and perspicacity. Wisdom was most distinguished from intelligence in the dimension of sagacity. These data form the backdrop for a theory of wisdom that involves multiple elements, including aspects of knowledge, information processing, intellectual style, personality, motivation, and environmental context. It is argued that these elements can be used to distinguish behavior that is prototypically wise from behavior that is prototypically intelligent or prototypically creative.

Chapter 8, by Lucinda Orwoll and Marion Perlmutter, deals with wisdom and the study of wise persons. These authors suggest that wisdom is relatively rare because it entails exceptional personality development as well as exceptional cognitive functioning. Thus, for these authors, advanced cognitive development is necessary but not sufficient for wisdom to be displayed. The wise individual is not only smart, but also has a personality structure that enables him or her to transcend personal needs, thoughts, and feelings. These investigators propose an empirical approach to studying wisdom that involves an intensive study of adults who are considered wise. Such adults are selected on the basis of nominations, which in turn depend upon folk conceptions of wisdom and who is nominated on the basis of these conceptions. The authors also compare results of three studies of folk conceptions of wisdom – those of Clayton and Birren, Sternberg, and Holliday and Chandler, which they view as supporting their dual cognitive–personality conception of wisdom.

Part IV of the book contains chapters that emphasize psychodevelopmental approaches to understanding wisdom. The five chapters in this part draw upon a diversity of developmental theories.

Chapter 9, by John A. Meacham, is an outlier by any standard. In his chapter, "The Loss of Wisdom," Meacham suggests that wisdom may decrease, rather than increase, with age – a position taken, at least explicitly, by none of the other contributors to the book. Meacham views wisdom in terms of one's knowledge that one doesn't know. The wise person is one who appreciates the fallibility of knowledge. He or she balances knowledge, on the one hand, with doubting, on the other, thereby avoiding the extremes of too-confident knowing and of too-cautious doubting. Wisdom lies not in what a person knows, but rather in how the person uses the knowledge he or she has. It is an attitude toward knowledge as well as toward beliefs, values, and skills. Meacham believes that in addition to this attitude, wisdom involves

varying degrees of profundity. One can be wise in a relatively simple domain, but such wisdom is ultimately less impressive than wisdom in a more profound domain.

Chapter 10, by Karen Strohm Kitchener and Helene G. Brenner, draws upon Kitchener's Reflective Judgment model, a model of adult cognitive development. The chapter, "Wisdom and Reflective Judgment: Knowing in the Face of Uncertainty," views wisdom as an advanced stage of intellectual development. Wisdom, according to the proposed model, comprises four aspects:

1. a recognition of the presence of unavoidably difficult and inherently thorny problems that confront all adults;
2. a comprehensive grasp of knowledge that is characterized by both breadth and depth of understanding;
3. a recognition that knowledge is uncertain and that it is not possible for truth to be absolutely knowable at any given time; and
4. a willingness and exceptional ability to formulate sound, executable judgments in the face of life's uncertainties.

All of these aspects are present in other models, but the present model is a unique integration of the four particular aspects. Kitchener's work is unusual in that it involves a measurement scale – the Reflective Judgment Interview – that can measure levels of thought and particularly the highest level, which Kitchener and Brenner see as prerequisite for wisdom.

Chapter 11, by Patricia Kennedy Arlin, is similar to chapter 10 in its drawing upon a stage model of the development of thought. But whereas Kitchener has postulated reflective judgment as the final stage, Arlin has postulated problem finding as the final stage in her model. Arlin suggests that wisdom is a function not of the answers one reaches but of the questions one poses. In "Wisdom: The Art of Problem Finding," Arlin suggests that wisdom and problem finding, although not identical, are highly related. Shared between them are

1. preoccupation with questions rather than answers,
2. the search for complementarity among points of view,
3. the detection of asymmetry in the face of evidence implying symmetry and equilibrium,
4. openness to change, pushing of the limits and possible redefinition of those limits,
5. a sense of taste for problems that are of fundamental importance, and
6. preference for certain conceptual directions.

In chapter 12, "An Essay on Wisdom: Toward Organismic Processes that Make It Possible," Juan Pascual-Leone takes what he refers to as a dialectical-constructivist perspective on wisdom, in particular, and on cognitive development, in general. He views wisdom as a complex state category of a domain he calls vital reasoning. Wisdom is the state reached by an individual when the interrelations and dialectical integrations (i.e., resolutions of contradictions) across all and any of the vital domains of that person's life have attained

Part II

Approaches informed by philosophical conceptions of wisdom

2 Wisdom through the ages

Daniel N. Robinson

In this brief historical review of the topic of wisdom, selectivity is not only unavoidable but also unavoidably arbitrary. The subject forms perhaps the major chapter in the history of philosophy where it is often inextricably joined to political, moral, and jural matters. It is also both the aim and the target of various literary genres, of scripture, meditation, and the saintly ways of life. Most of this falls beyond the editor's expectations, not to mention the author's gifts. A manageable alternative, and the one adopted here, calls for a summary of the teachings of the major philosophers and their disciples or schools and the extent to which these teachings have found or might have found a place within that "mental science" of the 19th century that has now matured into "cognitive science."

Socrates (469?–399 B.C.)

Long before the advent of genuinely philosophical modes of analysis and inquiry there was a prosperous folk philosophy contained in the epic poems attributed to Homer, epics that imposed a discernible pattern on the thoughts and perspectives of the more influential teachers in Hellenic and Hellenistic Greece. I have dealt with this at greater length elsewhere (Robinson, 1989), but the main points should be noted.

It is a feature of epic literature to teach lessons and to explain the causes of things through the medium of a story. Homer's *Odyssey* and *Iliad* are, of course, not merely tales of adventure. They are punctuated with folk theories of motivation, personality, the role and the limits of reason, and the power of the gods and of the fates in relation to human affairs. The early Greeks, like even the most primitive communities, had a conception of soul or spirit. Unlike most primitive communities – unlike even the advanced civilizations that preceded them – these same Greeks externalized their conceptions and made them topics first of epic poems, then of dramatic literature, and finally of philosophical analysis.

In the matter of wisdom, Homeric psychology is at once dualistic and exclusionary. Animals are endowed with souls but not with *noos* (later to be

nous), that special type of mental prowess at the foundation of plans and strategies. As Jan Bremmer notes, in Homer, "the *noos* is always located in the chest . . . but is never conceived of as something material" (Bremmer, 1987, p. 57). Similarly, *menos* is the nonmaterial source of significant and coordinated but impulsive conduct typically performed in combat or under conditions of great duress. Beset by *lyssa,* the "wolf's rage," the warrior will even defy the gods as he visits punishment on those who have caused him grief or dishonor. It is, however, *noos* that is unique to human psychology, and thus as early as the Homeric epics, Greek teaching took rationality as humanity's defining mark.

The Platonic dialogues[1] offer the earliest record of a sustained analysis of the concept of wisdom. The analysis proceeds from the recognition that the term itself is not univocal but customarily refers to quite different aspects of intellectual, moral, and ordinary life. There is wisdom as *sophia,* the special gift of the philosopher and of those in general who have devoted themselves to a contemplative life in pursuit of truth. There is wisdom as *phronesis,* the "practical wisdom" of the statesman and lawgiver, the wisdom that locates the prudent course of action and resists the urgings of the passions and the deceptions of the senses. And there is wisdom as *episteme,* a form of scientific knowledge developed in those who know the nature of things and the principles governing their behavior.

Wisdom for the Socratics, either in the broader sense of *sophia* or in the prudential sense of *phronesis,* is one of the cardinal virtues and thus transcends the realm of the merely cognitive. Indeed, it is the first among the virtues *(Laws,* 688) and the only one that is innate *(Republic,* 518). But a corrupted form of wisdom is also the source of what is hurtful because wisdom

> . . . more than anything else contains a divine element. . . . Did you never observe the narrow intelligence flashing from the keen eye of a clever rogue? *(Republic,* 518)

As is made clear by the Athenian in Plato's *Laws,* wisdom must be the source of all political rule, its dictates imposed on what is often a reluctant and very unwise population. The citizen who resists the counsel of wisdom

> . . . ought never to have any kind of authority entrusted to him: he must be stigmatized as ignorant, even though he be versed in calculation, and skilled in all sorts of accomplishments, and feats of mental dexterity; and the opposite are to be called wise, even although, in the words of the proverb, they know neither how to read nor how to swim. *(Laws,* 689)

Here, then, a clear dichotomy is introduced between specific mental abilities or skills and *wisdom,* which includes not only rationality but the will to conform one's life to its dictates. Wise men *(daimones)* may be illiterate, and the utterly unwise may be adept and accomplished. The two classes are separated by a difference in character, by a principle of self-control, by their ability to subordinate passion and desire to the authority of reason. To be

wise is not, therefore, to possess a high IQ or to be a chess master or a theoretical physicist. It is to be a certain kind of person, temperamentally and morally won over to a love of harmony, beauty, and truth. This conception of wisdom is at the foundation of the well-known Socratic notion of evil as ignorance. As no one would intentionally do that which is injurious to oneself and incompatible with one's own flourishing, evil actions must proceed from that most devastating form of ignorance, the kind that rebels against the mandates of reason itself.

The Socratic conception of wisdom is also at the foundation of Socrates' well-known distrust of perceptual forms of knowledge and empirical modes of inquiry. The wisdom-loving person – the *philos-sophia* – is one who searches for the timeless and unchanging truths, never content with the shifting phenomena of the material world. The senses, equipped as they are to record only events in the realm of ceaseless fluxes, cannot be the light of truth. Like the emotions and other bodily distractions, the senses distort and deceive and otherwise hinge one's attention to the ephemeral and inconsequential. Thus are those hidden truths the *psyche* innately possesses rendered utterly inaccessible. Thus, also, is the *psyche* prevented from exercising and refining itself and becoming more fit for its subsequent incarnations. The play on the words *soma* (body) and *sema* (a grave) illustrates Socrates' conviction that the soul is entombed in the physical body, the latter being no more than a prison *(desmoterion)* that prevents the free flight of spirit toward wisdom. As he explains to Cebes in the *Phaedo*, the soul, after abandoning the spinning world of the senses and returning into herself,

> . . . passes into the other world, the region of purity, and eternity, and immortality, and unchangeableness, which are her kindred, and with them she ever lives, when she is by herself and is not let or hindered; then she ceases from her erring ways, and being in communion with the unchanging is unchanging. And this state of the soul is called wisdom. *(Phaedo,* 79)

Aristotle (384–322 B.C.)

Aristotle, whose anthropological studies ranged far beyond anything attempted by his celebrated teachers in the Academy, came to provide history's first integrated and systematic psychology. His treatises include detailed comparisons of numerous species as regards psychological attributes; careful delineations of the salient types of virtuous and vicious personalities; full discussions of the genetic, biological, cultural, and contextual factors influencing the formation of the human character from childhood to old age; and a taxonomy of the sensory, cognitive, and emotional dispositions and faculties and the various interactions occurring between and among them. Examined on the whole, his works yield a psychology that is naturalistic in spirit, empiricistic in method, and commonsensical in its theoretical biases. In the matter

of perception, emotion, motivation, and learning and memory, most of Aristotle's psychology identifies processes and principles common to nearly all animals, man included. It is only when he confronts both the fact of human rationality and its creations that his psychology becomes unequivocally dualistic. At this point, the naturalistic perspective is modified to accommodate the special powers of *human* nature. It is at this same point that his psychology becomes most vividly indebted to Socratic teaching.

Unlike Plato, Aristotle neither distrusts nor depreciates the material side of life and the material side of human psychology. A great biologist and ethologist, Aristotle appreciated the part taken by perception and emotion in the affairs of animal life. Survival depends on these conditions of the body, and senses that routinely deceive must finally make survival impossible. Thus, in his ethological and psychobiological treatises, Aristotle tends toward a commonsense realism, a nearly Jamesian pragmatism. He rejects older views that would attempt to separate souls from bodies, insisting instead that "... each art must use its tools, each soul its body" *(On the Soul,* 407[b] 19–26).[2]

But as the very founder of comparative psychology, Aristotle was as cognizant of differences as of similarities. There are some attributes (e.g., sensation) that all animals have in common. There is at least one attribute (rationality; *epistemonikon)* that distinguishes human from nonhuman forms of animal life. Moreover, the identifying attributes of a creature signal the very particular task or mission – the *idion ergon* – that attaches to the life of that creature.

For man, the *idion ergon* is a life lived in conformity to the dictates of right reason *(orthos logos),* a life that thereby embodies *eudaimonia,* that condition of flourishing and completeness that constitutes true and enduring joy. To attain *eudaimonia,* one must, alas, possess wisdom and be ruled by it, for *eudaimonia* is not merely a set of pleasures or creature comforts or Epicurean delights. It is life lived in a certain way, where life here refers to life-on-the-whole, not some number of moments strung together. Progress toward this end calls for the recognition that the better course of action is not the one that invariably satisfies a current desire or even an abiding desire:

> ... [T]here is no necessity that because it is better it should also be more desirable: at least to be a philosopher is better than to make money, but it is not more desirable for the man who lacks the necessities of life. *(Topics,* 118[a] 8–15)

The mark of wisdom for Aristotle is the very character of the person as this character is revealed in that person's deliberated choices *(prohaireseis)* and dispositions *(hexeis).* The emotion of anger may be used illustratively. Anger is an entirely natural feeling, one expressed by all of the developed species and one on which survival often depends. The character of a person is assessed, then, not by determining *if* there is anger, but by noting that

its own sake. Included in this commitment is an interest in the natural and social and political worlds and a lifelong attempt to understand the principles on which they rest.

Stoic and Epicurean conceptions

There are points of agreement and disagreement in Stoic and Epicurean philosophy, the disagreements becoming more pronounced during the later histories of the two schools (Robinson, 1981, pp. 97–104). Epicurus (341–270 B.C.) advanced a materialistic psychology that emphasized the hedonistic and survivalistic impulses to action. In Fragment XXXVII he teaches that "Nature is weak towards evil, not towards good; because it is saved by pleasures, but destroyed by pains" (Oates, 1940, p. 42). The wise man comes to grips with his mortality and recognizes that the prudent life is one that will spare him such pain as might reasonably be avoided. What is to be sought is a secure serenity. By removing oneself from the arenas of competition and envy and by disciplining one's wants and needs, it is possible to minimize suffering. Wisdom is knowing how to achieve this end. The serenity *(apatheia)* is not one of indifference but one yielded by self-control and prudence: "Let nothing be done in your life, which will cause you fear if it becomes known to your neighbor" (Fragment, LXX).

In these and other fragments, as well as in the extraordinary *De Rerum Natura* of Lucretius (99–55 B.C.), which provides a poetic summary of the Epicurean system, there are obvious debts to portions of the older Greek philosophies of Plato and Aristotle. Epicurus accepts the biological and naturalistic psychology of Aristotle and then goes beyond Aristotle in reducing *psyche* – including the human *psyche* – to atomic elements. In the circumstance, the most that can be hoped for is to preserve the integrity of body and soul as long as possible and with as little pain and grief. The inevitable is, alas, inevitable. As Lucretius says in Book III (822–71), "Death therefore to us is nothing, concerns us not a jot, since the nature of the mind is proved to be mortal" (Oates, 1940, p. 131).

After Zeno of Citium (336–265 B.C.) founded Stoicism, the major figures in the school would retreat from Zeno's own generally materialistic orientation. Gradually, the naturalistic and biological features of the system were absorbed into a broader *physicalistic* system that then evolved into a fatalistic cosmology. "How do events happen?" asks Epictetus in his *Discourses:* "They happen as the Disposer of events has ordained them" (Book I, Ch. XIII; Oates, 1940, p. 248). Wisdom on the Stoic account is coming to grips with and fully reconciling oneself to the law-governed events of the world and the cosmos. "That which rules within," says Marcus Aurelius, "when it is according to nature, is so affected with respect to the events which happen, that it always easily adapts itself to that which is possible" *(Meditations,* IV;

Jesus Christ to Thomistic conceptions that are often scarcely distinguishable from Aristotle's.

There is, however, a constant even amid these variations. As with the Socratics, Christian teachers have agreed that the truth is absolute and universal and that next to truth all else pales. To be wise is to be touched by the divine wisdom that conveys timeless and boundless verities. As Thomas Aquinas observes in the *Summa Theologica,*

> For God the whole fullness of intellectual knowledge is contained in one object, namely the divine essence, in which he knows all things. Rational creatures achieve a lower and less simple completeness. What he knows in single simplicity they know in many forms. How a less exalted mind needs more ideas is partly illustrated by the fact that people of lower intelligence need to have things explained to them point by point in detail, while those of stronger mind can grasp more from a few hints. (Ia lv.3; Gilby, 1967)

This passage is revealing in several respects. First, it shows the general tendency of the Scholastics to examine the psychological dimensions of human cognition as a way of illustrating – in however so diminished a form – the mind of the divine. Second, it records the judgment that wisdom traffics in universals, not in details. Finally, it transmits the conviction that simplicity is at the foundation of all wisdom. There can be, then, a profound wisdom in a "simple faith" that recognizes the goodness of God to be the cause of all things. Whereas scientific understandings vary with the topics under consideration, " . . . wisdom is single" *(Summa Theologica,* Ia–2ae, lvii.2). Moreover,

> Wisdom differs from mere science in looking at things from a greater height. The same holds true in practical matters. Sometimes a decision has to be taken that cannot follow the common rules of procedure. . . . Consequently a higher judging virtue is called for, that kind of prudence called *gnome,* or the ability of seeing through things. *(Summa Theologica,* 2a–2ae li.4)

It is worth noting that even at the dawn of the modern scientific age the essence of wisdom was still regarded as a "seeing through things," a discovery of the simple principle that explains the myriad. This view is implicit in the works of any number of savants and is explicit in the most technical of Isaac Newton's treatises. Galileo would successfully challenge several important features of Aristotle's physics but in the process would record allegiance to that larger Aristotelian perspective that equates both *episteme* and the mission of science itself with the discovery of general laws.

Of course, not everyone is able to "see through things." The Socratics, with such "convenient fictions" as men of gold, silver, brass, and iron, looked to eugenics as a way of increasing the stock of wise and prudent men *(Republic,* III, 415; V, 459–60). Aristotle, though fully aware of the importance of early discipline and lifelong exposure to the civilizing force of law, still produced a psychology that includes "slaves by nature" and that explains genius as a

divine gift. From remote antiquity until the dawn of what is taken to be modern philosophy, wisdom, like genius, was explicated in terms of providential gods, muses, astrological forces, a sixth sense, genetic bounty, or accidents of nature. This long-standing attitude received its first sustained challenge in the 17th and 18th centuries when the nature of truth itself was exposed to such relentless scrutiny.

The authority of experience

The secularization of knowledge and of scholarship began in the Renaissance and was nurtured by the evolution of urban centers of commerce and of patronage. Note that it was the Medici family and not the Church that established the new "Academy" in quattrocento Florence. The leaders of thought in this period looked not to revelation but to the Athens and Rome of classical times for inspiration (Robinson, 1981, Ch. 6). Their overall perspective is perhaps most directly expressed by the greatest genius of the period, Leonardo da Vinci (1452–1519), in his *Book on Painting:*

> Many will think they may reasonably blame me by alleging that my proofs are opposed to the authority of certain men held in the highest reverence . . . not considering that my works are the issue of pure and simple experience, who is the one true mistress. (Richter, 1970)

This is a perspective that continuously gained in authority over the next two centuries. It is instructive to place in apposition to Leonardo's statement one made in 1776 by Sir Joshua Reynolds addressing students of the Royal Academy of Art:

> We will allow a poet to express his meaning, when his meaning is not well known to himself, with a certain degree of obscurity. . . . But when, in plain prose, we gravely talk of courting the Muse in shady bowers; waiting the call and inspiration of Genius, finding out where he inhabits, and where he is to be invoked with the greatest success; of attending to the times and seasons when the imagination shoots with the greatest vigour, whether at the summer solstice or the vernal equinox . . . when we talk such language, or entertain such sentiments as these, we generally rest contented with mere words, or at best entertain notions not only groundless but pernicious. (Gay, 1973, p. 432)

The philosophical writings of Francis Bacon (1561–1626), John Locke (1632–1704), and David Hume (1711–76) had made empiricism the more or less official epistemology of the English-speaking world. On the Continent, René Descartes (1596–1650) had helped to usher in the New Age with his critical philosophy, his "method of doubt," his willingness to challenge all received scientific claims and to test them in the court of perception, reason, and common sense.

The success of empiricism in the epistemological domain carried any number of social and political implications. If, indeed, there is nothing in the

intellect – no "furniture" of the mind – save that which arrives by way of the senses, then the ultimate *knowable* reality is *observable* reality. Each person, therefore, has the same access to the facts as any other, at least in principle; and those who claim to possess some special "wisdom" must verify the claim in that court of public experience that is the ultimate source of all epistemic authority (Robinson, 1981, Ch. 7). The integration of this perspective into a more general social and political philosophy was achieved in the 19th century by John Stuart Mill (1806–73), who would deny intuitive modes of knowledge even in mathematics (Robinson, 1982, Ch. 2).

The concept of wisdom is perforce dependent upon a prior metaphysical commitment, taking metaphysics to be composed of ontological and epistemological elements. To regard one as *wise,* after all, is to ascribe a deeper understanding of reality, but this assumes that a more or less settled (ontological) position has been reached on the question of what is *real.* And this very position can be reached only after taking a stand (epistemologically) on the question of *how one can know anything.* Thus, to regard one as "wise" for knowing an absolute, universal, and nonempirical ("transcendent") truth is at once to accept that there is such a truth and that it *can* be known through, for example, contemplation, revelation, logic, intuition, or genius. If, instead, the official ontology leaves room only for the reality of physical things, then "wisdom" can be nothing but a scientific understanding of the laws governing matter in motion. The greater the inclination toward a materialistic ontology, therefore, the greater will be the degree of synonymy among *sophia, phronesis,* and *episteme.* In the end, "wisdom" would then refer to no more than a technical knowledge of how things work, its claims exhausted by purely pragmatic modes of evaluation.

Scientism and Romanticism

The lines of conflict were clearly drawn in the 19th century when the leaders of scientific thought found it impossible to accept the metaphysical claims of the traditional philosopher-scientist. The immensely influential *Critique of Pure Reason* by Immanuel Kant (1724–1804) had erected what seemed to be a permanent barrier between the *phenomenal* world accessible to the senses (and, therefore, to experimental science) and that *noumenal* world of things *as in themselves they really are.* The disciples and interpreters of Kant and those who would "complete his system" – Herbart, Fichte, Schelling, Hegel – all dealt with the *phenomenal–noumenal* conflict differently. In time, however, and chiefly through the influence of Hegelian philosophy, a position was taken against empirical science. It was dismissed as limited, one-sided, grounded in (mere) *phaenomena,* incapable of liberating itself from the Kantian forms of perception and knowledge (Robinson, 1982; Ch. 2, 3).

The alternative to conventional science would come to have several names: romantic idealism, romanticism, transcendentalism, intuitionism. It migrated from the literary and intellectual centers of Weimar Germany to the England of the Lake Poets and then to the aesthetes and ethicists of Oxford. It took root in America, William James fighting it at Harvard with only marginal success. At the heart of the matter was the issue of reality. There is surely more to it than meets the eye, but science is confined to the sorts of things that meet the eye. Hadn't John Stuart Mill declared matter itself to be no more than "the permanent possibilities of sensation"?

If experience is limited to *phenomena,* then the great sages and geniuses of history must have had a more effective source of wisdom; a nonempirical source that *transcends* the domain of perception and reaches that of universal truth. Hegel had argued that this is the domain reached only through philosophy, religion, and art, these disciplines having the power to instantiate what is universal in the form of particulars. In dialectical fashion, the *particular* painting is the emblem of the *universal,* beauty; the tortured and dead Jesus is the *particular* man resurrected as the deathless and timeless Christ. Thus does the logic of negations yield noumenal reality.

Under the influence of such teaching, it was chiefly the aesthetes and artists of the 19th century who preserved the prescientific conception of wisdom: a divine gift, discovered through an introspective process and manifested in words or works of transcendent truth and beauty. Such a conception not only resisted scientific methods of analysis but stridently denied their validity. Accordingly, as psychology searched for scientific standing in the 19th century, its founders and leaders recognized that any number of ageless issues would have to be ignored, lest the new "science" be corrupted by the older "metaphysics." *Wisdom* was but one of these issues, though time has come to question the wisdom of this decision.

Notes

1 All references to Plato's *Dialogues* are from Jowett (1942).
2 Aristotle passages are from the edition by Barnes (1984).

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3 The psychology of wisdom: an evolutionary interpretation

Mihaly Csikszentmihalyi and Kevin Rathunde

In the attempt to illuminate what wisdom is about, we shall adopt a method that, for lack of a better term, we might call "evolutionary hermeneutics." This method is based on the assumption that concepts relating to the evaluation of human behavior – such as virtue, courage, freedom, or wisdom – and that have been used for many centuries under very different social and historical conditions are likely to have adaptive value for humankind. The method is based on the further assumption that to understand the significance of such concepts, it is advantageous to compare their meanings across time, in order to identify invariant components as well as possible variations in response to differing conditions in the surrounding cultural environment.

To find out what we mean by wisdom at the end of the 20th century is important, but it is not sufficient. No matter how advanced we think we are in terms of understanding the human psyche compared to former times, we still only have access to a limited cross section of the growing branch of knowledge. To ignore the hard-won insights of the past about issues that are vital for survival is like blinding ourselves on purpose out of false pride.

A simple example may help illustrate this point. Up to a few generations ago, children in our culture were warned against promiscuous sexuality, especially of a homosexual kind. Such behavior was labeled wrong, sinful, or immoral. In the last half-century, scientific knowledge discredited many of the assumptions and explanations on which these prohibitions were based. This led to the conclusion that sexual restraint was backed only by obsolete superstitions, and hence everyone should feel free to satisfy his or her sexual urges ad libitum. The medical and biological sciences, partly because they lacked hard "data," partly because they did not want to appear reactionary and spoil the fun, tacitly endorsed this position. What followed is history: a rampant increase in all forms of venereal diseases and the AIDS (acquired immune deficiency syndrome) epidemic.

Evolutionary hermeneutics is a corrective against the naïve assumption that present knowledge is in all respects superior to that of the past and that it is safe to ignore the cultural adaptations that were positively selected over time. It suggests, for instance, that the ancient and universal warnings against pro-

bered. They may or may not pass on more of their genes to posterity, but they will pass on their memes – that is, the memory of their thoughts, actions, and works. In Burhoe's terms, genetic and cultural traits evolve together in a coadaptive symbiosis; and commonly shared values provide the bonds that keep people working together who otherwise might compete to maximize their genetic progeny at each others' expense (Burhoe, 1976).

The folk conception of knowledge assumes a "progress" very similar to that which underlies evolutionary epistemology. However, everyday attitudes to what is known are usually influenced by a misperception that is not inherent in the theoretical model. We usually tend to assume that if a method for getting at knowledge comes after another, the latter is more credible, and it must displace the former. Because scientific knowledge is more recent than philosophy and religion, for instance, it is thought to be a more reliable symbolic system for representing reality, one that makes all previous ones obsolete. There are two problems with this assumption. In the first place, most variations in the evolutionary record are not advantageous and do not survive. Thus just because an organ of knowledge is more recent, it does not mean it is better; in fact, the presumption is that it will be worse. Second, even if the new organ is more sensitive or more powerful in some respects, it does not mean that it must displace earlier ones. Just as sight and smell present different pictures of the world, myth, religion, philosophy, and science provide complementary yet discrete windows on experience. Science may be a more evolved eye, but it does not compensate for being blind. It does not make sense to say that science, as a more evolved organ for providing information, is a substitute for the ability to see. For the same reason science may not be a substitute for earlier epistemologies such as religion or wisdom.

Evolutionary hermeneutics is simply the name we have given to the attempt at reconciling what has been said in the past about certain important concepts with what is being said about them now within the framework of current psychological knowledge informed by evolutionary theory. The aim is to integrate the experience of previous generations with our own, trying to understand the adaptive value of former responses, thereby providing a deeper and richer context for present understanding. In practice, the method consists in reviewing what has been said about a concept by previous writers as distant from us in time and cultural background as possible. The next step consists in identifying whether there are common meanings attributed to the concept and whether these change over time. Then the following questions are put to the data: What is the adaptive significance of this concept? For instance, what did the ancient Israelites mean when they wrote: "Wisdom is the principal thing; therefore get wisdom" (Proverbs, 4:7)?[1] What purposes did this idea serve? If the concept has changed over time, was this in response to relevant changes in the social and cultural environment? What is likely to be its present value?

It is, of course, impossible to apply this method with anything resembling its ideal intent. There is just too much potentially relevant information to assimilate, and our knowledge of past conditions is necessarily incomplete. Any application will have to be woefully approximate, especially in this first attempt. Yet we believe that the goal to be striven for is worth pursuing even if the means at this point are inadequate. In the present case, we shall explore only three aspects of the concept of wisdom, and we shall limit ourselves to reviewing a narrow selection from mainly the Western classical literature, in the hope of demonstrating the usefulness of evolutionary hermeneutics as well as contributing to the substantive understanding of wisdom as a human trait.

What is wisdom?

There is widespread agreement among past thinkers that the concept has three major dimensions of meaning. It can be seen as a *cognitive process*, or a peculiar way of obtaining and processing information; as a *virtue*, or socially valued pattern of behavior; and as a *good*, or personally desirable state or condition. All three dimensions of the concept are relevant for its understanding.

Wisdom as a cognitive process

The most obvious meaning of the term *wisdom* refers to a way of knowing. But how does it differ from other cognitive processes, such as intelligence or creativity? The various uses of the term in the past point at several distinguishing characteristics. In contrast to other forms of knowledge, it has been claimed that wisdom:

a. does not deal with the appearance of fleeting phenomena but with enduring universal truths;
b. is not specialized but is an attempt to apprehend how the various aspects of reality are related to each other;
c. is not a value-free way of knowing but implies a hierarchical ordering of truths and actions directed at those truths.

Considering the first of these three characteristics that usually define the cognitive dimension of wisdom, we immediately run into a problem. There is not now, and there has never been, universal agreement about what it is that lies hidden behind the veil of appearances. What is to be counted as "universal truth" varies depending on the particular cosmology of the times. For Plato, the visible world was made up of objects and of their images, to which corresponded an intelligible world of universal ideas *(Republic,* VI, 510, 533–534; *Republic,* VII, 514–24).[2] True knowledge consisted in discovering their nature. Wisdom was the state of the soul when she reflects on

eternity and immortality instead of the world of appearances *(Philebus,* 30; *Phaedo,* 79). Although Plato and Aristotle's approaches were quite different on many counts, the latter also viewed wisdom as the chief of sciences because its role was to prove the principles on which all the other sciences rested *(Ethics,* VI, 7).

Christian thinkers like Augustine and Aquinas agreed in several important respects with the viewpoint of the classical philosophers. They also held that wisdom consisted in seeking the invariant and ultimate causes behind the variability of superficial phenomena. They differed, however, in believing that universal truth could only be found with the help of God: "He who considers absolutely the highest cause of the whole universe, namely God, is most of all called wise" (Aquinas, *Summa, 1,* 6). Human reason could reach up to a point, but to behold the real order of things, one needed in addition faith in divine inspiration (Aquinas, *Summa, 2,* 12 passim; *32,* 1). Immanuel Kant also saw wisdom as the discovery of the relation of all cognitions to the ultimate and essential aims of human reason, which were contained in God *(Critique of Pure Reason,* 2nd Div., 2, 3); but he derived the necessary existence of God from the existence of reason rather than the other way around.

What all the ancient thinkers seemed to realize is that without wisdom, ways of knowing are constrained by a tragic paradox: The clearer the view they provide, the more limited the slice of reality they reveal. The integrated thought of "primitive" men and women, who did not distinguish between religion, art, science, habits, and instincts, slowly gave way to more and more specialized "domains" of knowledge. Nowadays knowledge is divided into innumerable branches that appear to be unrelated to each other or to the world as we experience it. Specialization enables us to exert a powerful control on specific, limited aspects of reality. But it does not help us to know what to do with the control thus achieved.

In line with these classical conceptions, much of the impetus for the contemporary study of wisdom is a reaction to the overspecialization of modern culture. For instance, Holliday and Chandler (1986) claim that the present technological zeitgeist has influenced psychology's exclusive concern with behavioral explanations, its concentration on the young, and its devaluation of "essences." They, as well as Meacham (1983), see research on wisdom as attempting to balance scientific/analytic "accumulation" models of truth with integrative hermeneutic inquiries that emphasize critical, historical, and practical dimensions (Habermas, 1972).

Others concerned with higher stages of cognitive development in adulthood (Kramer, 1983; Labouvie-Vief, 1982; Riegel, 1973) echo the same concerns. They try to articulate a stage beyond "formal operations" (abstract, logical, hypothetical, and problem-solving thought; see Inhelder & Piaget, 1958) as the preferred mode of information processing. Kramer (1983) notes the sim-

ilarity between formal operations and "mechanistic" or "analytic" worldviews (Pepper, 1942; Reese & Overton, 1970), both of which are conducive to an atomistic conception of reality and supposedly less desirable than their mirror opposites, "organismic" and "synthetic" worldviews.

However, in contemporary discussions on wisdom, as in contemporary discussions on almost any human way of knowing, one would seldom come across such integrative notions as "universal truth" or "God." Thus it is legitimate to ask whether or not an essential component of the ancient conception of wisdom has been fundamentally lost or altered. One might take this to be the import of Nietzsche's familiar phrase, "God is dead." But even Nietzsche's epitaph was intended to signal the passing of one conception of teleology so that another integrative aim could be put in its place (Kaufmann, 1966). Thus while it is certainly true that modern variations on the concept of wisdom have taken place (and most likely with an accelerated search for new "Truths" in modern culture), it is unlikely that wisdom – conceived as a relatively holistic cognitive process – has completely disappeared from contemporary thought.

This, in fact, seems to be the case. Consistent with ancient distinctions between a holistic wisdom and other specialized ways of knowing are the results of current empirical studies of the category "wise person" in everyday language. Holliday and Chandler (1986) found a consistent multidimensional picture of the wise person as having:

a. a general competence (a dimension that overlaps with logical intelligence or technical ability);
b. an experience-based pragmatic knowledge; and
c. reflective or evaluative metaanalytic skills.

They fit these three components into a Habermasian framework that recognizes three complementary "types" of knowledge, or knowledge-constitutive interests: technical interests concerned with instrumental action, practical interests concerned with social consensus and understanding, and emancipatory interests concerned with self-critical reflection and autonomy (Habermas, 1972). Clayton and Birren (1980) found a similar multilevel picture of the wise individual as possessing the *integration* of intellectual, affective, and reflective skills for the processing of information. Finally, Sternberg's (1985) analysis of implicit theories of wisdom has uncovered dimensions that overlap with the preceding views. The wise individual is seen as having reasoning ability and superior intellectual functioning but, in addition, good pragmatic judgment and skills of reflection that allow him or her to profit from past mistakes.

A similar portrait of the wise individual is implied by those who postulate a "postformal" operations stage of optimal adult development. Postformal thought supposedly has the following characteristics:

a. One recognizes the relativity of various formal systems through *life experience* and is able to assume contradictory points of view.

intellectual knowledge is divided. The highest wisdom is one. The highest wisdom has but one science – the science of all, the science explaining all creation and man's place in it" (Tolstoy, 1968, p. 429).

This view points at what the "universal truth" of our time may turn out to be. Not immutable Platonic ideas, nor the eternal, all-embracing will of God, but a systemic ecological consciousness in which the consequences of events and actions are understood to be causally related and to have long-term effects for the survival of human life and for the environment that sustains it.

The need for understanding the requirements of the total system of nature is foreshadowed by many thinkers of the past. Plato in the *Statesman* writes about the golden age in which men and animals could communicate; Montaigne discourses at length on the human folly of ignoring the natural context of which we are a part *(Essays,* 11, 12); Kant urges us to develop a morality based on an understanding of the "world as an ordered whole of interconnected goals, as a system of final causes." Wisdom consists in paying attention to the ends of nature and inquiring after the stupendous art that lies hidden behind its forms *(Critique of Teleological Judgement,* 86). Just as in the earliest times of recorded human thought, but with an even greater urgency, we are becoming increasingly aware of the fact that the separate branches of knowledge are not designed to reveal ultimate truths. For this we need wisdom, or the systematic pursuit of the connection between the branches – a "science of the whole."

Wisdom as virtue

The sense in which wisdom is a virtue follows from its characteristics as a cognitive process. If it is a mode of knowledge that tries to understand the ultimate consequences of events in a holistic, systemic way, then wisdom becomes the best guide for what is the *summum bonum,* or "supreme good." The knowledge of how causes and effects are connected shows the way for action and is the basis of morality.

This will be true both at the individual and at the social levels. At the individual level, wisdom helps the person decide what is the optimal course of action for his or her own self, by mediating between the local and often conflicting knowledge provided by instincts, habits, and reason (cf. Plato, *Republic,* IV, 442). "All . . . things hang upon the soul," Socrates says in *Meno* (88), "and all things of the soul herself hang upon wisdom." Time after time Plato, as well as many other thinkers of the past, point out that without wisdom other advantages like wealth, health, power, honor, and even good fortune are useless because the person will not know how to get benefit from them (e.g., *Meno,* 87; *Protagoras,* 349, 352, 358). Therefore, "wisdom is the only good, ignorance the only evil" *(Euthydemus,* 281). Inasmuch as he re-

(1972) has offered an incisive treatment of this very issue, tracing the original connection between ethical formation as "mimesis" in classical thought, through its contemporary rejection, and finally offering his formulation of how philosophy (love of wisdom) can remain "true to its classical tradition" (see pp. 301–317). Since Holliday and Chandler (1986) have suggested how a Habermasian framework helps to make sense of the empirical data on wisdom, a summary of Habermas's conclusions on this point, as well as a few others, may be relevant.

Habermas claims: "Philosophy remains true to its classical tradition by renouncing it" (p. 317). By this he apparently means that the Greek conception of ethical formation through mimesis (contemplation of the Divine Order), which offered the Greeks a sound basis of morality free from contingent and inconstant human interests, was itself based on a *concealment of its actual interest*. This concealed interest in the case of the early philosophers might have involved seeking a new stage of emancipation and individuation beyond the archaic communal powers of the ancient mystery cults. He comments, "The repression of interest appertained to this interest itself" (p. 307). Contemporary scientific and philosophical perspectives have become aware of some, but not all, aspects of this repressed interest. According to Habermas, philosophy can remain true to its classical tradition (i.e., finding a connection between wisdom and virtue) only by first rejecting the ancient ontological formulation, especially its concealed "objectivism." This allows, in turn, a new foundation for the connection of practical efficacy and human knowledge to be built.

Habermas's reformulation is not a radical proposal; ultimately it amounts to the sound methodological advice that informs all epistemology: To free ourselves from narrow interests (in traditional terms, to achieve "disinterest"), we must continually uncover implicit human interests. He focuses on three – technical, practical, and emancipatory – that he claims are part of the "interest structure of the human species" with their basis in the "natural history (both biological and cultural) of the human species." It is the "metalogical necessity of interests . . . with which we must instead *come to terms*" (p. 312, emphasis in original). These statements reflect the extent to which wisdom still *compels* to virtue rather than offers a relative choice.

The essential point of these observations for our purposes here is that as with Nietzsche's rejection of universals, Habermas's rejection of the ancient link between wisdom and virtue (ethical order from divine order) is a preliminary step to the reintroduction of a formulation that *serves a similar function*. Thus, although the concept of wisdom has changed over time, essential attributes of the wisdom-equals-virtue equation have, in this case, been renewed.

The evolutionary perspective suggests that the ancient equation of wisdom and virtue is still viable and, in fact, that it is more relevant now than it ever

has been. It can be argued that the various limits on objective perception and reasoning the social sciences have revealed – repressions, defenses, bad faith, false consciousness, ethnocentricism, conditioned responses, suggestibility, and so on – are precisely the concrete "particulars" of experience that Plato argued the philosopher must overcome in order to see the underlying truth, and thus get closer to wisdom. They are also the parochial "interests" with which Habermas claims we must come to terms. So the accumulating knowledge about our imperfections need not paralyze us into helplessness; on the contrary, it should help us make the right decisions with a clearer idea of where the obstacles are.

Wisdom is needed to help make these decisions. As the current empirical studies have shown (Clayton & Birren, 1980; Holliday & Chandler, 1986; Sternberg, 1985), awareness of this important decision-making function of wisdom has not disappeared from everyday language. For instance, the behavioral descriptor with the highest positive loading in the Sternberg study suggests others view the wise individual as possessing "the unique ability to look at a problem or situation and solve it." This emphasis is particularly strong in the work of Baltes, Smith, Staudinger, and Sowarka (in press), who define wisdom as an "expertise (involving good judgement and advice) in the domain, fundamental pragmatics of life" (p. 8). Thus their research agenda focuses on such things as life planning and management, and their methods include asking a subject to "think aloud" when presented with fictitious life problems and dilemmas.

Current research on wisdom may also soon be able to shed light on the actual steps that lead to virtuous decisions. From work thus far one might tentatively suggest the following: The great "width" (empathy), "height" (intelligence), and "depth" (reflectivity) of the wise person allows him or her to form a more complex or *concrete and abstract* perspective on some problem and thus attain the possibility of seeing the wisest course of action. The wise person gains rich life experience through spontaneous and affective involvement with the world and brings clarity and form to this experience by finding an intellectual distance. He or she learns responsibility and self-direction by reflecting on these processes and fitting their unique contributions together in a complete, well-rounded story. In Holliday and Chandler's (1986) framework, the wise individual would have a balance of practical, technical, and emancipatory interests. Since interest would bring sustained attention to all these areas, the wise individual is one who pays attention to interpersonal meanings, instrumental action, and issues of autonomy and responsibility (excluding none of them). A wise decision could not be made until a particular problem has been informed by all three dimensions of analysis. For instance, the wise priest offering advise to a devout young couple caught in the dilemma of an unwanted pregnancy might consider the intricate meaning of the current situation based on his empathy for the couple's perspective and the contem-

porary milieu, his knowledge of traditional actions based on church doctrine, and his own deep reflections on the situation before offering advice that weaves all these needed sources of information together.

With the important challenges that face modern society, one-dimensional technological thinking will not suffice for finding our location with respect to many critical survival problems. There is no question that now more than ever we need a holistic, long-range understanding of actions and events – let us call it wisdom – so as to avoid the unforeseen consequences of narrowly specialized interests and ways of knowing. It took marvelous ingenuity to invent aerosol sprays based on chlorofluorocarbons – the knowledge that went into this artifact puts all the philosophers of ancient Greece to shame. But how wise will this invention turn out to be if it destroys part of the ozone layer surrounding the planet, causing the harmful ultraviolet components of sunrays to kill much of the life inside the sea and to kill us through skin cancer? Measured against such effects, clean windows and odorless underarms do not seem like such a bargain. If wisdom is a process by which people try to evaluate the ultimate consequences of events in terms of each other, it is more necessary now than Plato could ever have anticipated it to be over two millennia ago.

Unfortunately wisdom is no more a priority now than it was at the time Socrates was invited to drink his hemlock. While specialized knowledge shows immediate effects, the benefits of wisdom are by definition slower to appear and less obvious. Knowledge is expressed in declarative certitudes, whereas wisdom must compare, raise questions, and suggest restraints. Hence wisdom rarely gets much respect and is seldom popular. Yet an evolutionary analysis suggests that unless we cultivate an interdisciplinary knowledge of our systemic needs, we shall not be able to understand what is happening, and we shall not be able to see what is good or bad for us in the long run.

Wisdom as a personal good

There is a great unanimity among thinkers of the past about the fact that wisdom not only gets us closer to the truth, and it not only provides a basis for making sound value judgments, but it also is good for us here and now. Two main reasons are advanced for this claim. The first is that without it none of the other "goods" will be rewarding; we need wisdom to get pleasure from health, satisfaction from fame, and good use out of wealth (cf. Plato, *Meno*, 87; *Euthydemus*, 278–279). The second is that the contemplation of universal order wisdom affords is a supreme pleasure in its own right – it is intrinsically rewarding.

In the final chorus of *Antigone*, Sophocles writes: "wisdom is the supreme part of happiness." Plato echoes the thought, " . . . wisdom and intelligence and memory . . . are better and more desirable than pleasure" *(Philebus*, 11),

and "All that the soul attempts or endures, when under the guidance of wisdom, ends in happiness" *(Meno,* 88). So does Aristotle: A large part of the *Nichomachean Ethics* (e.g., Books I and X) is devoted to the question of happiness, concluding that the contemplation of universal truth is the closest human beings can come to perfect happiness. "He who exercises his reason and cultivates it seems to be in the best state of mind and most dear to the gods. . . . And he who is that will presumably be also the happiest: so that in this way too the philosopher will more than any other be happy" *(Ethics,* X, 8, 1179a).

The scholastics, whose search for universal truth inevitably led to God, also concluded that nothing compared with the happiness one derived from the pursuit of wisdom (e.g., Aquinas, *Summa,* 1, 5; 1, 64). Augustine states: "Contemplation is promised us as being the goal of all our actions, and the everlasting perfection of our joys" *(De Trinitate,* 1, 8). And according to Spinoza: "It is therefore most profitable to us in this life, to make perfect the intellect or reason as far as possible, and in this one thing consists the highest happiness or blessedness of man; for blessedness is nothing but the peace of mind which springs from the intuitive knowledge of God." And Montaigne echoes the idea: "The most manifest sign of wisdom is continual cheerfulness" *(Essays,* 1, 25). In the same essay he tells how one day Demetrius the grammarian came across a knot of philosophers merrily chatting in the temple of Delphos. Being obviously a rather obnoxious person, he said to them: "Either I am much deceived, or by your cheerful and pleasant countenances, you are engaged in no very deep discourse." To which one of the group, Heracleon the Megarean, replied that pedantic scholars, discussing trivial little specialized problems, might knit their brows and look serious while discoursing of their science. "But as to philosophical discourses, they always divert and cheer up those that entertain them, and never deject them or make them sad."

In spite of this overwhelming agreement of past thinkers that the pursuit of wisdom brings with it the most intense joy, this aspect of wisdom is clearly the least emphasized and least understood in modern thought. Is the ancient choir of praise an example of the self-delusion to which we are so prone, a whistling in the dark, an effort to seduce prospective students by praising one's craft? Or is there a genuine foundation for the claim that the pursuit of wisdom is so enjoyable?

The current technological zeitgeist has devalued wisdom as the pursuit of universal truth leading to ethical virtue. Our evolutionary perspective has suggested this result – in part – rests on conceptual categories (universal truth, God) that no longer easily mesh with modern scientific sensibilities; yet attempts to translate these categories – to preserve their evolutionary significance – have persisted (see also Burhoe, 1976). The challenge of translation remains the same, and perhaps is even greater, in regards to the ancient

encing intrinsic rewards. For example, Habermas claims that in self-reflection "knowledge and interest are one" (i.e., interest becomes "disinterested"); the emancipatory cognitive interest in autonomy and responsibility pursues "knowledge for the sake of knowledge" or "the pursuit of reflection as such" (see pp. 313–314). Similarly, Plato observes that the wise man knows well the "lower" pleasures of the body but, in addition, has cultivated a higher pleasure in contemplation *(Republic,* IX). Thus one might claim the pursuit of wisdom is intrinsically rewarding based on the fact that the *reflective dimension of wisdom belongs to a class of autonomy or growth-oriented behaviors that do not provide a direct and immediate benefit for the individual in any technical or practical way.* Such autotelic *(auto* = self, *telos* = goal) behaviors produce an optimal state of enjoyment in consciousness and are perceived as rewarding in themselves (Csikszentmihalyi, 1975; Csikszentmihalyi & Csikszentmihalyi, 1988).

Not only does the reflective dimension of wisdom pursue autonomy, but characteristics of the task also make it intrinsically rewarding. For instance, self-reflection requires an inward focusing of attention that effectively blocks any potential distracting stimuli from the environment. This focusing centers on a well-ordered and controllable series of symbolic links in a train of thought, to the exclusion of the more "natural" meandering of the stream of consciousness. Further, inasmuch as reflection on the "big picture" that wisdom pursues poses some of the most challenging obstacles for growth and insight, it is likely that one must utilize one's full attentional capacity to be successful. These aspects of reflection closely resemble some of the *conditions* that facilitate optimal psychological experience (Csikszentmihalyi & Csikszentmihalyi, 1988): a narrowing of attention on a limited stimulus field, high concentration, clear feedback and control, and a strong sense of meaningful challenge requiring the exercise of one's full skills.

When self-reflection leads to emancipation, or the moment when an expanded awareness recognizes the limitations of one's previous perspective, the process of growth is ecstatic in the literal sense of the word – "to place outside." In other words, one is momentarily placed outside ordinary (habitual) awareness, and this experience is exhilarating and intrinsically rewarding. (In studies of optimal psychological experiences, this enjoyable dimension has been described as a loss of ego or self-consciousness.) One need not think of this process as involving a transcendence to a metaphysical realm, but a more limited self-transcendence that arrives at a new *betweenness* with the world, through perceptions (or thoughts) being experienced for the first time. The pursuit of wisdom forces the true lover of knowledge to continually overcome the narrow worldview that selfish interests illuminate in order to climb to the higher perspective that wisdom seeks. Thus it is not at all surprising that such repeated self-overcoming – through reflection or con-

relevant today in important ways. The joy historically associated with the contemplation of a Divine Order for its own sake manifests the part of our nature interested in growth, freedom from limitations, or as Habermas has suggested, emancipation. Such an interest, like a variation in a phenotype, *risks something* when reaching for a new level of organization and order. The short-term consequences of such a move are not instrumental or practical and, even with much time, may never be. In this sense, the motivation and rewards for growth-oriented behavior are intrinsic; and the use of such terms as "survival" and "adaption" to describe the evolutionary process must be complemented by the notion of "expansion." Nietzsche (1974) has emphatically stressed this point, "... the really fundamental instinct of life which aims at *the expansion of power*... frequently risks or even sacrifices self-preservation" (pp. 291–292, emphasis in original). Thus the evolutionary importance of wisdom as a personal good (a supreme joy in its own right) lies in its connection to variation, experimentation, curiosity, and other similar *expansive* processes. The process of growth – requiring the use of one's full effort or energy – provides immediate rewards and thus does not have to be justified in any other way.

Why is wisdom dangerous?

Despite the enormous credit wisdom had among thinkers of the past, there is, at the same time, a deep streak of ambivalence running through their writings, something akin to suspicion and a note of warning. Early in Genesis (3:5) the devil's first temptation consists in promising Adam and Eve that "Ye shall be as gods, knowing good and evil." There are signs of doom in many parts of the Bible; for instance, in *Ecclesiastes:* "In much wisdom is much grief; and he that increaseth knowledge increaseth sorrow." The classical authors often agreed. In the *Odyssey* (XII, 184–92), as Ulysses and his ship sail by, the Sirens sing a sweet song promising to enrich his mind with knowledge, for everything that happens on the face of the earth is known to them. But all around the green meadow where the Sirens sing lie the rotting corpses of the uncautious sailors who were lured to the rocks by their curiosity. "I know not whether it had not been better for mankind," Cicero wrote, "that ... reason had not been given to man at all; considering how pestiferous it is to many, and healthful but to few" *(De Natura Deorum*, III, 27). Trying to understand what dangers the ancients saw in wisdom may turn out to be as useful for understanding the evolutionary meaning of the concept as an examination of its advantages would be.

There seem to be three main reasons for the mistrust of wisdom. Two of these turn out to be trivial; the first because it is based on semantic confusion and hence misunderstanding, and the second because it stems from ignorance,

or partial knowledge. The third reason, however, points at what may well be a genuine danger inherent in the project of acquiring wisdom.

The confusion of wisdom and knowledge

In many texts, including the biblical passage quoted in the preceding section, wisdom fails to be differentiated from knowledge; the two terms appear to be synonymous. In such cases the warning against "too much wisdom" really amounts to warning against excessive specialized knowledge unrelated to common sense and to ultimate goals. When this is the case, warnings against wisdom actually amount to appeals for the necessity of wisdom. When Montaigne asks "Of what is the most subtle folly made, but of the most subtle wisdom?" *(Essays,* 11, 12), he seems to have in mind primarily the fanatical pedants of his time. The dangers of specialized knowledge in our time are too well known to comment on; a good example would be the physicist Robert Oppenheimer, who, when building the first nuclear bomb, exulted at the "sweet problem" he had on his hands (Wylen, 1984).

As Rabelais wrote, not for the first nor for the last time, *Magis magnos clericos non sunt magis magnos sapientes,* or, "The greatest scholars are not the wisest men" *(Gargantua,* I, 39). But the whole point of the concept of wisdom is that it is different from domain-related thought and knowledge. Hence this critique turns out to be based on a misunderstanding, and it ends up reaffirming the importance of wisdom rather than undermining it.

The knowledge-based critique of wisdom

The second and more substantial assault is the one that people who believe to already have achieved perfect knowledge bring to bear on the search for ultimate truth. The prototype is the story of the philosopher Thales, who one evening, as his eyes were wandering among the stars, almost fell into an open well. A milkmaid who saw him stumbling laughed and wondered what wisdom could there be in a man who tries to understand the heavens but knows not where he is going.

In classical Western literature, the best-known explanation of why wise persons appear foolish is given in Plato's allegory of the cave *(Republic,* VII, 514–517). In this parable of the human condition, a group of men live chained in a dark cave, and the only information they get about the world comes from the confused shadows of outside events projected on the inside walls of the cavern by a flickering fire, which they believe to be the sun. Once in a while a man frees himself from the chains and wanders out to discover to his great amazement the colorful world of real objects and events illuminated by the sun. When such a man returns to tell his companions what he saw, they laugh at him in unbelief. Back in the cave, with his eyes unaccustomed to darkness,

the man who beheld the real world is more clumsy and helpless than those who had never seen it. So he loses all credibility, and the cave dwellers go on believing that the shadows they see are all there is to reality.

In other words, the world of appearances in which milkmaids and cave dwellers live is so real to them that any attempt to get at universal truths will seem foolish. In the *Apology*, Socrates repeatedly warns his friends that a philosopher – or lover of wisdom – is bound to be hopelessly outwitted by the lawyers, politicians, and businessmen of the city. Any profession, discipline, or science focuses on a particular subset of reality, and in that artificially delimited domain it is able to provide power and control to those who learn it. Wisdom, which is about understanding underlying causes and the consequences of events in relation to each other, does not provide such power. Therefore in the law courts an attorney is going to be much more knowledgeable than a wise person, and in a chemical laboratory a chemist may laugh at the ignorance of the philosopher.

Yet without attempts to get behind the various symbolic systems that we have invented to represent the world, the ancient writers warn us, we are condemned to see reality as a confusing parade of unrelated shadows. No matter how ridiculous, the attempt to bridge between science and religion, between human greed and nature's need, between what is and what ought to be, has to go on if we are to make sense of what is happening in such a way that humanity is to survive.

The danger intrinsic to wisdom

The first two problems inherent in wisdom turned out to be illusory: the first because it is based on a confusion with knowledge, the second because it is based on a critique that upholds the superiority of the knowledge of particulars over an understanding of the whole – a position our evolutionary interpretation has attempted to discredit. But there is a third set of warnings implicit in the literature, and this one is more difficult to deal with.

Like so many thinkers of the past, Montaigne often refers back to the danger dramatized in the biblical story of Adam's fall: "the thirst of knowledge, and the desire to become more wise, was the first ruin of humankind, and the way by which it precipitated itself into eternal damnation." And "Presumption is our natural and original disease" *(Essays,* II, 12). These and similar warnings do not refer just to the dangers of runaway specialization but to the entire project of the human effort to achieve rationality.

This effort, especially the evolved "vicarious sense" of science or disciplined thought (Campbell, 1976), presents a risk to self-preservation, as does experimentation with any sense faculty. Nietzsche (1968) observes, "To become wise one must wish to have certain experiences and run, as it were, into their gaping jaws. This, of course, is very dangerous; many a wise guy

has been swallowed" (p. 164). It may be that the wise person pursues knowledge much like the rock climber pursues the top of a mountain: The anxious first steps into an uncertain future must be taken with faith in order to diligently pursue a course that may not necessarily lead to the desired destination. The greatest danger may even lie in making it, so to speak, to the top of the mountain where the wise person must live "continually in the thundercloud of the highest problems and responsibilities" (Nietzsche, 1974, p. 293). Of the many burdens this may place on an individual, one particularly dangerous aspect of such *remoteness* lies in the distance it places between the person and the more "natural" state of paradisiacal innocence shared by the majority of the unwise. A disorienting *grandiosity* may be nurtured in such isolation from others.

What this suggests to our contemporary way of thinking is that, even under the best of conditions, knowledge is dangerous. But then so is ignorance. The point is to understand what are the dangers peculiar to wisdom so that we can reap its benefits while avoiding as much as possible its negative effects.

Translating the worries of the ancients into current concepts, we would say that what they intuited was the need to avoid the overwhelming pride that knowledge – even when integrated into wisdom – can produce in the unwary. We can see now clearly how dangerous it is for mankind to assume that because we are so smart, we know what is good for us and for the rest of the universe. The more power we control, the more damage our partial knowledge can do. The potential consequences of this were seen already thousands of years ago, when mankind had only a thousandth of its present capacity to pollute and disfigure the world. Montaigne's answer was to keep a just mean, to observe just limits, to follow nature with humility and submission. Plato thought that wisdom, finally, consisted in not wanting more than what is due to us *(Republic,* I, 350).

Researching the development and communication of wisdom

There are many important issues related to wisdom that could stimulate fruitful research. Our evolutionary perspective suggests that one of the most important would involve the relationship between wisdom and a systematic ecological awareness that takes into account our place in the environment that sustains us. Regardless, however, of the specific issue that is envisioned as being of crucial importance, and requiring wisdom to meet its challenge, is the need to learn more about the *process* of developing and communicating wisdom. If more is learned about this, perhaps the insights could be applied not only to the threat of ecological disaster but also to the many and diverse challenges that currently face us.

Current research has identified a subtlety or *indirectness* possessed by wise individuals. For instance, they are seen as having the ability to "communicate

wisdom through the master–pupil tutelage, the master's role being the facilitation of joyful self-discovery in the pupil (Clayton & Birren, 1980; Suzuki, 1971). Jung has discussed the mythic or archetypal figure of the wise man as a storehouse of information, who in times of trouble helps others to find solutions for themselves rather than directly endorsing a course of action (Read, Fordham, Adler, & McGuire, 1979). Before the advent of writing, wisdom was transmitted by oral tradition "through stories that [were] constructed to simultaneously *entertain* and instruct" (Holliday & Chandler, 1986, p. 11, emphasis added). Chinen (1984), in the context of discussing Erikson's idea of generativity, suggests the wise mentor advises the apprentice while allowing him or her to make the decisions and mistakes that facilitate self-discovery.

Wisdom by all these accounts demonstrates a higher awareness of the motivations (interest structures) that lead us to process information in particular enjoyable ways. This metaawareness, we suggest, is what provides the wise individual with the possibility of being a subtle and effective *teacher* (developer/communicator) of wisdom. The wise individual is acutely sensitive to others' enjoyable growth experiences. He or she has gained the ability to subtly communicate through the interest structure already operating in another's consciousness by working with the "natural" focus of attention in a person, rather than against it, and guiding it toward higher states of complexity and order. Indirect communication (nonverbal, metaphorical) aids in this subtle direction of attention in the sense that one does not undermine another's enjoyment of self-discovery by a direct authoritarian assault. In addition, the use of metaphor, suggestion, quiet, wit, paradox, or any other indirect method makes the communication more challenging by introducing some uncertainty or puzzle that must be solved. The effect of this gamelike aspect on the listener is likely to be a heightening of interest or concentration and an increased chance of having a flow experience.

A wise teacher would thus have the necessary qualities – both the broad perspective and subtle communication skills – to direct the attention of others toward long-term goals, so that their energy does not become completely trapped in the immediate gratifications of more basic evolutionary interests (e.g., nutrition, reproduction). This leadership ability (whether conscious or not) – which is embodied in the good parent, teacher, or political leader – helps individuals find in their "little" interests the "big" interests that reveal higher states of order and longer range goals for the individuals, for the culture, and eventually for the entire planetary ecosystem (Csikszentmihalyi and Rochberg-Halton, 1981).

Thus, based on accounts from both Eastern and Western traditions concerning the wise individual's ability to stimulate enjoyable self-discovery in others, one might study wisdom as it operates in interpersonal interaction,

current milieu, fewer opportunities arise in which conditions are conducive for concentration on issues of the utmost importance, in the interest of "disinterested" enlightenment and intrinsic rewards.

Thus another direction for future research may lie in gathering reports from individuals concerning their encounters with others they see as wise. Potential questions:

a. How did you feel in the presence of this person?
b. What did you take away from the encounter?
c. How was wisdom communicated?

If one way that wise individuals effectively transmit their memes is in a manner like that just described, then respondents in such a study may report strong emotional effects surrounding encounters with someone wise.

Conclusions

The application of evolutionary hermeneutics to the concept of wisdom has shown a number of continuities in the meaning this term has had over a period of over 25 centuries. The assumption underlying our analysis has been that such continuities represent relatively unchanging functional prerequisites of human adaptation, survival, and growth.

In other words, by recognizing a peculiar psychological process called "wisdom," by holding it in high esteem, and by being concerned about its potential dangers, we have forged a powerful conceptual tool for managing information about the world and thus for helping us adapt to it. If we did not differentiate wisdom from other forms of knowledge, if we did not think highly of it, or if we accepted its value without question, presumably we would be less likely to fit in with our environment.

The reasons for this adaptive function are expressed by the characteristics generally attributed to wisdom. We have seen its three main dimensions: as a cognitive process, as a guide to action, and as an intrinsic reward.

As a cognitive process, wisdom refers to attempts at understanding the world in a *disinterested* way, seeking the *ultimate consequences* of events as well as ultimate causes while preserving the *integration* of knowledge. Its survival implication is as an antidote to knowledge that pursues selfish, short-term, and limited goals that often turn out to have disastrous consequences for the very persons they were intended to benefit – not to mention other people or the nonhuman environment. More specifically, wisdom is the approach of choice to such contemporary problems as the escalation of nuclear power, the concentration of energy in any form, the pollution of air and water, the creation and cessation of life, and issues of social inequality.

Wisdom is a virtue because by relating in a disinterested way the broadest spectrum of knowledge, *it provides the most compelling guide to action.* Although we no longer believe in the existence of a perfect divine order beyond

appearances on which to base a good life, we still must believe, if we are to survive, that it is possible to improve life by understanding how to order our actions better in ways that will bring us in closer harmony with the laws that constrain the physical universe. As long as we act purely in terms of present needs and desires, it is doubtful the rest of the world will be able to afford keeping us much longer. The egocentric, ethnocentric, anthropocentric impulses of mankind are bringing so much destruction into the planetary environment that the probability of the continuation of life keeps steadily diminishing. Only a truly disinterested, long-range, organic understanding of consequences can pull us back from the brink of disaster.

Finally wisdom is a personal good, an *intrinsically rewarding experience that provides some of the highest enjoyment and happiness* available. When a person *reflects* on the connection between events in a disinterested way, he or she has a chance to enter a *flow experience,* an ecstatic state common to those who concentrate consciousness on a challenging, ordered, goal-directed task. As the goal of wisdom is to understand the ultimate consequences and causes of things, it presents the greatest challenges of any mental activity and hence presumably also the most profound enjoyment. The evolutionary significance of this is twofold: First, it provides the mechanism for cultural evolution by motivating people to ever expanding efforts at understanding; second, it provides an alternative for the extrinsic rewards based on pleasure and materialism, which tend to be zero sum, expensive, and hence conducive to social and ecological conflict.

Our review has suggested that psychologists are currently starting to research the first – or cognitive – dimension of wisdom. The moral aspects have been recognized, but so far little empirical work has focused on them. The third dimension, or wisdom as a personally rewarding and meaningful experience, has barely even been noticed. Given the vital importance of it for human survival and growth and its role in the regeneration of wisdom itself, it is to be hoped that more effort will be directed in the future to understanding how it works and how it can be used.

Notes

1 Biblical references refer to the King James Version.
2 All volume and page references for classic writers and philosophers refer to the Great Books series published by the Encyclopaedia Britannica, 1987.

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Wisdom is such an elusive psychological construct that few people have considered it a viable field until recently, though many are fascinated by the topic. Well-known psychologist Robert J. Sternberg of Yale University, perceiving the growth of interest in wisdom as a field, saw a need to document the progress that has been made and to point the way for future theory and research. The resulting comprehensive and authoritative book, *Wisdom: Its Nature, Origins, and Development*, is the only complete collection of psychological views on wisdom currently available. It introduces the concept of wisdom, considers philosophical issues and developmental approaches, and covers folk conceptions of the topic. The final section provides an integration of the fascinating and comprehensive material.

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