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Why Schools Should Teach for Wisdom: The Balance Theory of Wisdom in Educational Settings

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This article describes a balance theory of wisdom and applies the theory to the context of schooling. First, the article discusses why intelligence-related skills are an important, but not a sufficient, basis for education. Second, the article briefly reviews alternative theories of wisdom. Third, the article presents a balance theory of wisdom, according to which wisdom is defined as the application of tacit as well as explicit knowledge as mediated by values toward the achievement of a common good through a balance among (a) intrapersonal, (b) interpersonal, and (c) extrapersonal interests over the (a) short term and (b) long term to achieve a balance among (a) adaptation to existing environments, (b) shaping of existing environments, and (c) selection of new environments. Fourth, the article discusses the measurement of tacit knowledge, in general, and of wisdom, in particular. Fifth, the article discusses how wisdom might be nurtured in schools. Sixth, the article describes a concrete project currently under way that involves the development of wisdom in middle-school children. Finally, the article concludes that it might be worthwhile for schools to emphasize the development of wisdom.

Many societies today are preoccupied with the development of cognitive skills in schoolchildren. In U.S. society, cognitive skills have become practically equated with intellectual skills—the mental bases of intelligence.[1] This equation is a mistake.

Flynn (1987, 1998) has pointed out that in the United States and in more than a dozen other countries for which records have been available, IQs have been rising roughly at a rate of 9 points per generation (30 years). This increase has been going on for at least several generations (see also Neisser, 1998). Given that IQs have been rising, what does our world have to show for it? Judging by the amount and seriousness and sheer scale of global conflict, perhaps not much. Certainly there is no reason to believe that increasing IQs have improved people's or nations' relations with each other.

The memory and analytical skills that are so central to intelligence are certainly important for school and life success, but perhaps they are not sufficient. Arguably, wisdom-related skills are at least as important or even more important.

Wisdom can be defined as the "power of judging rightly and following the soundest course of action, based on knowledge, experience, understanding, etc." (*Webster's New World College Dictionary*, 1997, p. 1533). Such a power would seem to be of vast importance in a world that at times seems bent on destroying itself.

There are several reasons why it is important to develop wisdom in the setting of the school. First, a goal of schooling should be not just to impart knowledge, but to help students develop wise use of such knowledge. Knowledge can be used to better or worse ends, and schools should help students use their knowledge for good rather than ill. Second, the teaching of wise thinking has always been implicit in school curricula in any case. For example, one learns history in part so as to learn the lessons of the past and not repeat its mistakes. One learns literature in part so as to learn how to apply to one's life the lessons literary characters have learned. So it seems a reasonable proposal to make explicit what has previously been implicit. Third, if adults do not make wise decisions, schools

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[1]By *intellectual skills*, I refer to those skills that are relevant to a given theory of intelligence. For example, Spearman (1927) included among such skills apprehension of experience (encoding), eduction of relations (inference), and eduction of correlates (application). Binet and Simon (1916) included judgment skills; Galton (1883), psychophysical skills. Such skills are a subset of cognitive skills, which include skills that both are and are not relevant to intelligence within a given theoretical framework. Which cognitive skills would count as intellectual skills will vary with the theory of intelligence.

perhaps deserve a share of the blame if they have never conscientiously prepared these adults to make such decisions.

MAJOR APPROACHES TO UNDERSTANDING WISDOM

A number of psychologists have attempted to understand wisdom in different ways. The approaches underlying some of these attempts are summarized in Sternberg (1990b). A more detailed review of some of the major approaches to wisdom can be found in Baltes and Staudinger (2000) or in Sternberg (1990b, 1998a, 2000).

The main approaches might be classified as philosophical, implicit-theoretical, and explicit-theoretical. The explicit-theoretical approaches often have a developmental character, specifying how wisdom develops (or fails to develop) over time.

Philosophical Approaches

Philosophical approaches have been reviewed by Robinson (1990; see also Robinson [1989], with regard to the Aristotelian approach in particular, and Labouvie-Vief [1990], for a further review). Robinson notes that the study of wisdom has a history that long antedates psychological study, with the Platonic dialogues offering the first intensive analysis of the concept of wisdom. Robinson points out that, in these dialogues, there are three different senses of wisdom: wisdom as (a) *sophia*, which is found in those who seek a contemplative life in search of truth; (b) *phronesis*, which is the kind of practical wisdom shown by statesmen and legislators; and (c) *episteme*, which is found in those who understand things from a scientific point of view.

Implicit-Theoretical Approaches

Implicit-theoretical approaches to wisdom have in common the search for an understanding of people's folk conceptions of what wisdom is. Thus, the goal is not to provide a "psychologically true" account of wisdom, but rather an account that is true with respect to people's beliefs, whether these beliefs are right or wrong. Some of the earliest work of this kind was done by Clayton (1975, 1976, 1982; Clayton & Birren, 1980), who multidimensionally scaled ratings of pairs of words potentially related to wisdom for three samples of adults differing in age (younger, middle-aged, older). In her earliest study (Clayton, 1975), the terms that were scaled were ones such as *experienced, pragmatic, understanding,* and *knowledgeable.*

Holliday and Chandler (1986) also used an implicit-theoretical approach to understanding wisdom. Approximately 500 participants were studied across a series of experiments. The investigators were interested in determining whether the concept of wisdom could be understood as a prototype (Rosch, 1975), or central concept. Principal-components analysis of one of their studies revealed five underlying factors: exceptional understanding, judgment and communication skills, general competence, interpersonal skills, and social unobtrusiveness.

Sternberg (1985b, 1990a) reported a series of studies investigating implicit theories of wisdom. In one study, 200 professors each of art, business, philosophy, and physics (800 in all) were asked to rate the characteristicness of each of the behaviors obtained in a prestudy from the corresponding population with respect to the professors' ideal conception of each of an ideally wise, intelligent, or creative individual in their occupation. Laypersons were also asked to provide these ratings but for a hypothetical ideal individual without regard to occupation. Correlations were computed across the three ratings. In each group except philosophy, the highest correlation was between wisdom and intelligence; in philosophy, the highest correlation was between intelligence and creativity. The correlations between wisdom and intelligence ratings ranged from .42 to .78 with a median of .68. For all groups, the lowest correlation was between wisdom and creativity (which ranged from –.24 to .48, with a median of .27).

In a second study, 40 college students were asked to sort three sets of 40 behaviors each into as many or as few piles as they wished. The 40 behaviors in each set were the top-rated wisdom, intelligence, and creativity behaviors from the previous study. The sortings then each were subjected to nonmetric multidimensional scaling. For wisdom, six components emerged: *reasoning ability, sagacity, learning from ideas and environment, judgment, expeditious use of information,* and *perspicacity.* These components can be compared with those that emerged from a similar scaling of people's implicit theories of intelligence, which were *practical problem-solving ability, verbal ability, intellectual balance and integration, goal orientation and attainment, contextual intelligence,* and *fluid thought.* In both cases, cognitive abilities and their use are important. In wisdom, however, some kind of balance appears to emerge as important that does not emerge as important in intelligence, in general.

In a third study, 50 adults were asked to rate descriptions of hypothetical individuals for wisdom, intelligence, and creativity. Correlations were computed between pairs of ratings of the hypothetical individuals' levels of the three traits. Correlations between the ratings were .94 for wisdom and intelligence, .62 for wisdom and creativity, and .69 for intelligence and creativity, again suggesting that wisdom and intelligence are highly correlated in people's implicit theories, at least in the United States.

Explicit-Theoretical Approaches

Explicit-theoretical approaches have in common a formal theory of wisdom that is proposed to account for wisdom. The

most extensive program of research has been that conducted by Baltes and his colleagues. This program of research is related to Baltes's longstanding program of research on intellectual abilities and aging. For example, Baltes and Smith (1987, 1990) gave adult participants life-management problems such as "A fourteen-year-old girl is pregnant. What should she, what should one, consider and do?" and "A fifteen-year-old girl wants to marry soon. What should she, what should one, consider and do?" This same problem might be used to measure the pragmatics of intelligence, about which Baltes has written at length. Baltes and Smith tested a five-component model of wisdom on participants' protocols in answering these and other questions, based on a notion of wisdom as expert knowledge about fundamental life matters (Smith & Baltes, 1990) or of wisdom as good judgment and advice in important but uncertain matters of life (Baltes & Staudinger, 1993).

Three kinds of factors—general person factors, expertise-specific factors, and facilitative experiential contexts—were proposed to facilitate wise judgments. These factors are used in life planning, life management, and life review. Wisdom is in turn then reflected in five components: (a) rich factual knowledge (general and specific knowledge about the conditions of life and its variations), (b) rich procedural knowledge (general and specific knowledge about strategies of judgment and advice concerning matters of life), (c) life-span contextualism (knowledge about the contexts of life and their temporal [developmental] relationships), (d) relativism (knowledge about differences in values, goals, and priorities), and (e) uncertainty (knowledge about the relative indeterminacy and unpredictability of life and ways to manage). An expert answer should reflect more of these components, whereas a novice answer should reflect fewer of them. The data collected to date generally have been supportive of the model. These factors seem to reflect the pragmatic aspect of intelligence but to go beyond it, for example, in the inclusion of factors of relativism and uncertainty.

Over time, Baltes and his colleagues (e.g., Baltes, Smith, & Staudinger, 1992; Baltes & Staudinger, 1993) have collected a wide range of data showing the empirical utility of the proposed theoretical and measurement approaches to wisdom. For example, Staudinger, Lopez, and Baltes (1997) found that measures of intelligence (as well as personality) overlap with but are nonidentical to measures of wisdom in terms of constructs measured, and Staudinger, Smith, and Baltes (1992) showed that human-services professionals outperformed a control group on wisdom-related tasks. They also showed that older adults performed as well on such tasks as did younger adults, and that older adults did better on such tasks if there was a match between their age and the age of the fictitious characters about whom they made judgments. Baltes, Staudinger, Maercker, and Smith (1995) found that older individuals nominated for their wisdom performed as well as did clinical psychologists on wisdom-related tasks. They also showed that up to the age of 80, older adults performed as well on such tasks as did younger adults. In a further set of studies, Staudinger and Baltes (1996) found that performance settings that were ecologically relevant to the lives of their participants and that provided for actual or "virtual" interaction of minds increased wisdom-related performance substantially.

Some theorists have viewed wisdom in terms of postformal-operational thinking, thereby viewing wisdom as extending beyond the Piagetian stages of intelligence (Piaget, 1972). Wisdom thus might be a stage of thought beyond Piagetian formal operations. For example, some authors have argued that wise individuals are those who can think reflectively or dialectically, in the latter case with the individuals' realizing that truth is not always absolute but rather evolves in an historical context of theses, antitheses, and syntheses (e.g., Basseches, 1984; Kitchener, 1983, 1986; Kitchener & Brenner, 1990; Kitchener & Kitchener, 1981; Labouvie-Vief, 1980, 1982, 1990; Pascual-Leone, 1990; Riegel, 1973). Other theorists have viewed wisdom in terms of finding important problems to solve (Arlin, 1990).

Although most developmental approaches to wisdom are ontogenetic, Csikszentmihalyi and Rathunde (1990) have taken a philogenetic or evolutionary approach, arguing that constructs such as wisdom must have been selected for over time, at least in a cultural sense. They have defined wisdom as having three basic dimensions of meaning: (a) that of a cognitive process, or a particular way of obtaining and processing information; (b) that of a virtue, or socially valued pattern of behavior; and (c) that of a good, or a personally desirable state or condition.

Several of the theories described earlier emphasize the importance of various kinds of integrations or balances in wisdom. At least three major kinds of balances have been proposed: among various kinds of thinking (e.g., Labouvie-Vief, 1990); among various self-systems such as the cognitive, conative, and affective (e.g., Kramer, 1990); and among various points of view (e.g., Kitchener & Brenner, 1990). Baltes has also argued for the importance of balance (Baltes, 1993; Baltes & Staudinger, 2000; Staudinger, Lopez, & Baltes, 1997). The view presented here expands on, but also differs from, these kinds of notions in also providing for particular kinds of balance in wisdom.

THE BALANCE THEORY OF WISDOM

The Basis of Wisdom in Tacit (Implicit) Knowledge

Many judgments in life require explicit knowledge, or the knowledge one learns directly in school and in life, such as about theories and findings in biology, psychology, history, or other subject-matter areas. For example, to counsel someone about a career in biology, it helps to know something about biology. To resolve a dispute between two govern-

ments, one needs to understand the nature of those governments. But to make wise judgments, one often has to complement one's explicit knowledge with implicit knowledge.

A helpful distinction in this regard is that made by Csikszentmihalyi and Rathunde (1990) between a *domain* and a *field.* A domain is the formal body of knowledge one learns, such as of biology or history. A field is the social organization for the discovery and transmission of knowledge, for example, the social organization of how biologists or historians organize how knowledge flows. Both are relevant to wisdom. But it is perhaps knowledge of the field—which is often tacit (informal) and thus not explicitly taught—that is crucial.

For example, to counsel someone about a career in biology, it is helpful to have knowledge about the domain of biology. But one also needs to know what kinds of jobs are available, where the jobs are, how one gets the jobs, how one keeps the jobs, and so on. This informal knowledge is more likely to be picked up through life experience than through formal classroom teaching, although it certainly can be transmitted in a classroom setting. Similarly, to resolve a dispute between two governments, one needs not only to understand the governments in an academic way, but also to understand how they really function on a day-to-day basis, something one most likely learns from experience. Two countries, for example, may both formally have elections, but these elections may work in practice in very different ways (e.g., the United States and Yugoslavia, both of which held elections in the year 2000). The balance theory of wisdom emphasizes the role of tacit knowledge (TK) not because explicit knowledge is unimportant, but because it is believed that TK is more likely to be a source of individual differences than is formal knowledge. For example, if one were to take the biologists or historians in a university department, the view here is that they are more likely to differ in their wisdom as a result of TK of their field than as a result of formal knowledge of their domain.

The view of wisdom proposed here thus has at its core the notion of TK (Polanyi, 1976), which we have defined as action-oriented knowledge, often but certainly not always acquired without direct help from others, that allows individuals to achieve goals they personally value (Sternberg, Wagner, Williams, & Horvath, 1995). TK has three main features: (a) it is procedural, (b) it is relevant to the attainment of goals people value, and (c) it often is acquired without direct help from others. However, it may be acquired with indirect help, as described later.

TK is a form of "knowing how" rather than of "knowing that" (Ryle, 1949). In our work, we view condition-action sequences (production systems) as a useful formalism for understanding the mental representation of TK (Sternberg et al., 2000). For example, a teacher must know under what circumstances to teach one way, and under what circumstances to teach another. There is no one "right" way of teaching material: How the teacher teaches depends on the students, the material, and the context of teaching.

TK also is practically useful. It is instrumental to the attainment of goals people value. Thus, people use this knowledge to achieve success in life, however they may define success. Academic knowledge alone does not constitute the basis for wisdom but is used in conjunction with TK in the formation of wise judgments and decisions. For example, one might have learned how Gandhi used nonviolence to end Great Britain's occupation of India, and then use TK to figure out how to apply Gandhi's techniques to a problem of one's own. In effect, TK helps provide the basis for the transfer of academic knowledge from a situation about which one may have learned formally to a situation in which one finds oneself.

Finally, TK often is acquired without direct help from others. However, others can guide one to acquire this knowledge. Thus, constructivist agendas that emphasize the importance of scaffolding in the development of intellectual competence are very relevant to the acquisition of wisdom (e.g., Palincsar & Brown, 1984, 1988).

Scaffolding refers to providing the foundation for learning to occur. For example, one can teach a future business executive or doctor cases that may be relevant to future problems he or she may have to solve. But one cannot anticipate every possible case that may arise. The cases provide a scaffolding for how to deal with future cases. When one has to decide whether to continue life support for a patient, however, there is no unique set of academic or other rules that will enable one automatically to make the decision.

Sometimes, environmental support for the acquisition of TK is minimal, and sometimes organizations actually suppress the acquisition of TK. For example, a school system might not want its teachers to know how high-level decisions are really made, as opposed to how they are supposed to be made. From a developmental standpoint, this view suggests that wisdom is not directly taught so much as indirectly acquired. One can provide the scaffolding for the development of wisdom and case studies to help students develop wisdom, but one cannot teach particular courses of action that would be considered wise, regardless of circumstances. Indeed, TK is wedded to contexts, so that the TK that would apply in one context would not necessarily apply in another context. To help someone develop TK, one would provide mediated learning experiences rather than direct instruction as to what to do, when. In other words, you cannot tell someone the wise course of action that will apply under every circumstance. You can provide learning experiences that will help that person make his or her own wise decisions.

Wisdom As Knowledge Balancing Interests

The definition of wisdom proposed here draws both on the notion of TK, as described earlier, and on the notion of balance (Sternberg, 1998a). Wisdom is thus viewed as a kind of practical intelligence, but not the kind that is applied simply to benefit oneself or some individual one cares about, for

whatever reason. In particular, wisdom is defined as the application of tacit as well as explicit knowledge as mediated by values toward the achievement of a common good through a balance among (a) intrapersonal, (b) interpersonal, and (c) extrapersonal interests, over the (a) short and (b) long terms, to achieve a balance among (a) adaptation to existing environments, (b) shaping of existing environments, and (c) selection of new environments, as shown in Figure 1.

Thus, wisdom is a kind of practical intelligence in that it draws on TK, but it is not just any kind of practical intelligence. Wisdom is not simply about maximizing one's own or someone else's self-interest, but about balancing of various self-interests (intrapersonal) with the interests of others (interpersonal) and of other aspects of the context in which one lives (extrapersonal), such as one's city or country or environment or even God.

An implication of this view is that when one applies practical intelligence, one may seek deliberately outcomes that are good for oneself and bad for others. In wisdom, one certainly may seek good ends for oneself, but one also seeks common good outcomes for others. If one's motivations are to maximize certain people's interests and minimize other people's, wisdom is not involved. In wisdom, one seeks a common good, realizing that this common good may be better for some than for others. An evil genius may be academically intelligent; he may be practically intelligent; he cannot be wise.

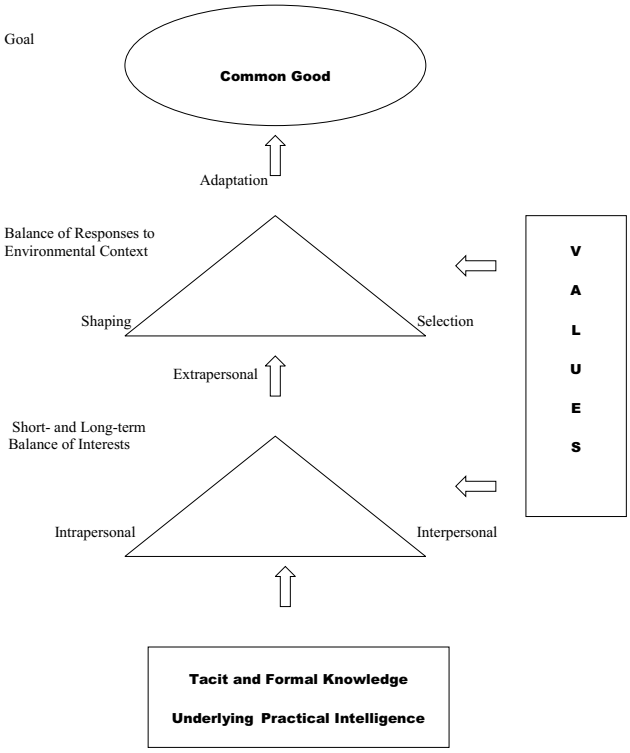

FIGURE 1 Wisdom as value-mediated TK balancing goals, responses, and interests. The individual applies tacit and formal knowledge to seek a common good. Such application involves balancing of intrapersonal, interpersonal, and extrapersonal interests over the short and long terms to adapt to, shape, and select environments. Judgments regarding how to achieve a common good inevitably involve the infusion of values.

Problems requiring wisdom always involve at least some element of each of intrapersonal, interpersonal, and extrapersonal interests. For example, one might decide that it is wise to take a particular teaching position, a decision that seemingly involves only one person. But many people are typically affected by an individual's decision to take a job—significant others, children, perhaps parents and friends. And the decision always has to be made in the context of what the whole range of available options is.

What kinds of considerations might be included under each of the three kinds of interests? Intrapersonal interests might include the desire to enhance one's popularity or prestige, to make more money, to learn more, to increase one's spiritual well-being, to increase one's power, and so forth. Interpersonal interests might be quite similar, except as they apply to other people rather than oneself. Extrapersonal interests might include contributing to the welfare of one's school, helping one's community, contributing to the well-being of one's country, serving God, and so forth. Different people balance these interests in different ways. At one extreme, a malevolent dictator might emphasize his or her own personal power and wealth; at the other extreme, a saint might emphasize only serving others and God.

As is true with all forms of practical intelligence (Sternberg, 1985a, 1997b, 1999b), wisdom involves a balancing not only of the three kinds of interests, but also of three possible courses of action in response to this balancing: adaptation of oneself or others to existing environments, shaping of environments to render them more compatible with oneself or others, and selection of new environments. In adaptation, the individual tries to find ways to conform to the existing environment that forms his or her context. Sometimes adaptation is the best course of action under a given set of circumstances. But typically one seeks a balance between adaptation and shaping, realizing that fit to an environment requires not only changing oneself, but changing the environment as well. When an individual finds it impossible or at least implausible to attain such a fit, he or she may decide to select a new environment altogether, leaving, for example, a job, a community, a marriage, or whatever.

What constitutes appropriate balancing of interests, an appropriate response to the environment, and even the common good, all hinge on values. Values, therefore, are an integral part of wise thinking. The question arises as to "whose values?" Although different major religions and other widely accepted systems of values may differ in details, they seem to have in common certain universal values, such as respect for human life, honesty, sincerity, fairness, and enabling people to fulfill their potential. Of course, not every government or society has subscribed to such values. Hitler's Germany and Stalin's Russia blatantly did not, and most societies today subscribe to them in only some degree but not fully.

The question of "whose values," though, can become a red herring. When world leaders such as Stalin or Hitler or Milosevic act in ways that directly contradict these values, only the most cynical individual could believe they are doing so in the service of the common good. Most often, they are doing so for what they perceive as the good of themselves, their families, or, at best, a restricted rather than common group of individuals (e.g., alleged "Aryans" versus others). Similarly, leaders who have mercilessly robbed their countries of wealth (e.g., Mobutu in Zaire, Marcos in the Philippines, Suharto in Indonesia), typically have done so for the good of themselves and their families, not for anything approaching a common good. As the reactions of the societies after their reigns have shown, the people of the countries, in general, were aware of what was going on and of the ill effects it had on them.

I do not claim to have solved the conundrum of how to specify a unique universal set of values. If philosophers and theologians for centuries have failed to do so, I most certainly will not do so either. At the same time, I believe it a mistake to state that, because we cannot definitively offer a set of universal values, therefore, the whole project of understanding wisdom must and should collapse of its own lack of specificity. A problem in psychology, perhaps, has been that many psychologists have chosen to study things that, in some respects, are easier to study (e.g., intelligence) because they appear to be value-free. In fact, when one chooses to measure certain things as intelligence (or memory, or perception) rather than others, one immediately injects one's values, and what one places on the tests, for example, of intelligence, can affect substantially how the scores come out (see Gardner, 1983; Sternberg, 1997b). Thus, I believe that we need to study and even measure wisdom, despite the challenges involved. In measuring wisdom, we need to focus on the processes of thinking—the extent to which they take into account the common good, balancing of responses to the environment, balancing of long- and short-term interests of self, others, and institutions—to assess whether wisdom has been displayed. What are the processes used to render wise (or unwise) judgments?

Wisdom manifests itself as a series of processes that are typically cyclical and can occur in a variety of orders. These processes are related to what I have referred to as "metacomponents" of thought (Sternberg, 1985a, 1997b, 1999b), including (a) recognizing the existence of a problem, (b) defining the nature of the problem, (c) representing information about the problem, (d) formulating a strategy for solving the problem, (e) allocating resources to the solution of a problem, (f) monitoring one's solution of the problem, and (g) evaluating feedback regarding that solution. In deciding about a teaching job, for example, one first has to see both taking the position and not taking it as viable options (problem recognition), then figure out exactly what taking or not taking the position would mean for oneself (defining the problem), then consider the costs and benefits to oneself and others of taking the position (representing information about the problem), and so forth.

Wisdom is typically acquired by what I have referred to elsewhere as knowledge-acquisition components (Sternberg, 1985a). Its acquisition depends on (a) selectively encoding new information that is relevant for one's purposes in learning about that context, (b) selectively comparing this information to old information to see how the new fits with the old, and (c) selectively combining pieces of information to make them fit together into an orderly whole (Sternberg, Forsythe, et al., 2000; Sternberg, Wagner, & Okagaki, 1993).

This treatment of wisdom should not be interpreted to mean that formal knowledge is not or cannot be relevant to wise judgments and decision making. Quite the contrary: Obviously formal knowledge can be and often is extremely relevant to wise judgments and decision making. For example, the story of Solomon's judgment regarding two women claiming to be the mothers of the same infant and, indeed, many stories of wise leadership, often are learned in formal settings. But these aspects of knowledge, although relevant to wise judgments, need to be connected to such judgments via TK. For example, one might learn about the decision of Nelson Mandela to unify his country in school. But when to apply this knowledge, where to apply it, how to apply it, to whom to apply it, even why to apply it—these are the stuff of TK. They are not and cannot be directly taught in school lessons. They are the lessons learned from experience. They can be learned in school, but they are not directly taught out of textbooks or lectures. Thus, formal knowledge complements TK in wise thinking.

SOURCES OF DEVELOPMENTAL AND INDIVIDUAL DIFFERENCES IN WISDOM

The balance theory suggests a number of sources of developmental and individual differences in wisdom. In particular, there are two kinds of sources, those directly affecting the balance processes and those that are antecedent.

Individual and Developmental Differences Directly Affecting the Balance Processes

There are seven sources of differences directly affecting the balance processes. Consider, as an example, a teacher who has been instructed by a principal to spend almost all of his time teaching in a way so as to maximize students' scores on a statewide assessment test, but believes that the principal is essentially forcing him to abandon truly educating his students.

Goals. People may differ in terms of the extent to which they seek a common good, and thus in the extent to which they aim for the essential goal of wisdom. They also may differ in terms of what they view as the common good. The teacher may believe that it is not in the children's best in-

terest to engage in what he views as mindless drills for a test. The principal, however, may have a different view. The teacher is thus left with the responsibility of deciding what is in the best interests of all concerned.

Balancing of responses to environmental contexts. People may differ in their balance of responses to environmental contexts. Responses always reflect in the interaction of the individual making the judgment and the environment, and people can interact with contexts in myriad ways. The teacher may adapt to the environment and do exactly what the principal has told him to do, or shape the environment and do exactly what he believes he should do, or try to find some balance between adaptation and shaping that largely meets the principal's goals but also largely meets his own. Or the teacher may decide that the environment of the school is sufficiently aversive to his philosophy of teaching that he would prefer to teach at another school.

Balancing of interests. People may balance interests in different ways. The teacher must decide how to balance his own interests in good teaching and also in staying on good terms with the principal, the children's interests in learning but also in doing well on the statewide tests, the parents' interests in having well-educated children, and so on.

Balancing of short and long terms. People may differ in their emphases. The teacher may believe that, in the long run, a proper education involves much more than preparing for statewide tests, but at the same time realize that, in the short run, the children's scores on the tests will affect their present as well as future and possibly that of principal and school.

Acquisition of TK. People differ in the extent to which they acquire TK. The teacher may bring a relatively sophisticated set of TK to solving this problem of how to teach the children, or may bring virtually no TK and may have no clear option other than to do what the principal says.

Utilization of TK. People differ in how well and how fully they utilize the TK they have acquired. The teacher may decide to teach in a way that represents a compromise between his own views and those of the principal, but the way in which this decision is implemented will depend on his knowledge of how to balance the various interests involved in the decision.

Values. People have different values mediating their utilization of TK in the balancing of interests and responses. Values may vary somewhat across space and time, as well as among individuals within a given cultural context. The teacher's values may require him to diverge at least somewhat from the instructions of the principal. Another teacher's values might lead him to do what the principal says, regardless of how he personally feels.

These sources of differences produce variation in how wise people are and in how well they can apply their wisdom in different kinds of situations. To the extent that wisdom is typically associated with greater intellectual and even physical maturity, it is presumably because the development of TK and of values is seen as something that unfolds over the course of the life span, and not just in childhood or even in the early years of adulthood.

The aforementioned sources of individual differences pertain to the balancing processes. Other sources are antecedent to these processes.

Relation of Wisdom to Other Skills

Wisdom is related to other psychological constructs but not identical to any of them. In particular, it is related to knowledge; to analytical, creative, and practical aspects of intelligence; and to other aspects of intelligence.

First, wisdom requires knowledge, but the heart of wisdom is tacit, informal knowledge of the kind learned in the school of life, not the kind of explicit formal knowledge taught directly in schools. One could be a "walking encyclopedia" and show little or no wisdom because the knowledge one needs to be wise is not to be found in encyclopedias or even, generally, in much of the teaching found in many schools.

Second, wisdom requires analytical thinking, but it is not the kind of analytical thinking typically emphasized in schools or measured on tests of academic abilities and achievements (discussed in Sternberg, 1980). Rather it is the analysis of real-world dilemmas where clean and neat abstractions often give way to messy and disorderly concrete interests. The kind of abstract analytical thinking that may lead to outstanding performance on a test such as the Raven Matrices, which presents figural reasoning items, will be of some but not much use in complex real-world dilemmas such as how to defuse the conflict between India and Pakistan.

An important part of analytical thinking is metacognition. Wisdom seems related to metacognition, and it is, because the metacomponents involved in wisdom are similar or identical to those that follow from other accounts of metacognition (e.g., Campione, Brown, & Ferrara, 1982; Nelson, 1999). Thus, in wisdom, as in other types of thinking, one needs to define problems, formulate strategies to solve problems, allocate resources to the solution of these problems, and so forth. These processes are used in wisdom, as they are in other types of thinking, but in wisdom they are used to balance different types of interests to seek a common good.

Third, wise solutions are often creative ones, as King Solomon demonstrated in cleverly determining which of two women was truly the mother of a child. But the kind of crowd-defying, buy-low, sell-high attitude that leads to creative contributions does not in itself lead to wisdom. Creative people often tend toward extremes, although their later contributions may be more integrative (Gardner, 1993). Creative thinking is often brash whereas wise thinking is balanced. This is not to say that the same people cannot be both creative and wise. It is to say, however, that the kinds of thinking required to be creative and wise are different and thus will not necessarily be found in the same person. Moreover, teaching people to think creatively (see, e.g., Sternberg & Williams, 1996) will not teach them to think wisely.

Wisdom also is related to creatively insightful thinking. According to Sternberg and Davidson (1982), the three knowledge-acquisition components correspond to three kinds of insights, and these three components of knowledge acquisition also are used in the acquisition of wisdom and other kinds of thinking. Selective comparison insights, for example, are used in analogical problem solving when one solves a current problem by applying information obtained in the past in solving a related kind of problem. For example, deciding whether a military campaign will prove to be another "Vietnam" involves selective comparison: Is the new campaign going to be enough like the Vietnam campaign to lead to a similar disaster?

It is important to note that although wise thinking must be, to some extent, creative, creative thinking (as discussed earlier) need not be wise. Wise thinking must be creative to some extent because it generates a novel and problem-relevant high-quality solution involving balancing of interests, and novelty and appropriate quality are the two hallmarks of creativity (see essays in Sternberg, 1999a). But a solution can be creative—such as in solving a mathematical proof—but have no particular characteristics of wisdom. The proof involves no balancing of interests and no search for a common good. It is simply an intellectual problem involving creative thinking.

Fourth, practical thinking is closer to wisdom than are analytical and creative thinking, but again, it is not the same. Wisdom is a particular kind of practical thinking. It is practical thinking that (a) balances competing intrapersonal, interpersonal, and extrapersonal interests, over the short and (b) long terms, (c) balances adaptation to, shaping of, and selection of environments, in (d) the service of a common good. Thus, people can be good practical thinkers without being wise, but they cannot be wise without being good practical thinkers. Good practical thinking is necessary but not sufficient for the manifestation of wisdom.

Fifth, wisdom also seems to bear at least some relation to constructs such as social intelligence (Cantor & Kihlstrom, 1987; Kihlstrom & Cantor, 2000; Sternberg & Smith, 1985), emotional intelligence (Goleman, 1995; Mayer & Salovey, 1993; Salovey & Mayer, 1990), and interpersonal and intrapersonal intelligences (Gardner, 1983, 1999). There are also differences, however. Social intelligence can be applied to understanding and getting along with others, to any ends, for any purposes. Wisdom seeks out a good through a balancing of interests. Thus, a salesperson who figures out how to sell a worthless product to a customer might do so through using social intelligence to understand the customer's wants, but has not applied wisdom in the process. Emotional intelligence involves understanding, judging, and regulating emotions. These skills are an important part of wisdom. But making wise judgments requires going beyond the understanding, regulation, or judgment of emotions. It requires processing the information to achieve a balance of interests and formulating a judgment that makes effective use of the information to achieve a common good. Moreover, wisdom may require a balance of interpersonal and intrapersonal intelligences, but it also requires an understanding of extrapersonal factors, and a balance of these three factors to attain a common good. Thus wisdom seems to go somewhat beyond these two theoretically distinct kinds of intelligences as well. Perhaps the most salient difference among constructs is that wisdom is applied toward the achievement of ends that are perceived as yielding a common good, whereas the various kinds of intelligences may be applied deliberately toward achieving either good ends or bad ones, at least for some of the parties involved. Interestingly, the conception of wisdom proposed here is substantially closer to Chinese conceptions of intelligence than to American conceptions of intelligence (Yang & Sternberg, 1997a, 1997b). Indeed, one of the words used in Chinese to characterize intelligence is the same as the word used to characterize wisdom.

WHAT QUESTIONS DOES THE BALANCE THEORY ADDRESS AND NOT ADDRESS?

Theories of constructs answer some questions about those constructs but not others. For example, the theory of general intelligence (Jensen, 1998; Spearman, 1927) specifies that there is a general factor of intelligence that pervades intellectual tasks and speculates what the source of this general factor might be (mental energy, speed of neuronal conduction, etc.). The theory does not specify, however, the origins of *g*—whether this general factor is hereditary, environmental, or both in origin. It also does not specify what constitutes an intelligent as opposed to an unintelligent way of thinking, and does not specify whether *g* applies to organisms such as dogs and goats as well as humans. No theory addresses all questions. What questions does the balance theory address and what questions does it not address?

The balance theory (a) defines wisdom, (b) specifies processes used in wise thinking, (c) specifies processes used in the acquisition of wisdom, (d) proposes a role for values in wisdom, (e) suggests relations between wisdom and other constructs such as intelligence, (f) suggests

sources of developmental and individual differences in wisdom, and (g) contains suggestions for how wise thinking might be developed in schools. The theory does *not* specify, however, (a) what the correct values are, (b) what constitutes the content of wise thinking or of the common good in particular situations, or (c) how someone should act wisely in a particular situation. In this respect, it is similar to many theories of intelligence (e.g., those of Gardner [1983, 1999], Spearman [1927], Sternberg [1985a, 1997b], and Thurstone [1938]), which do not specify what constitutes intelligent thinking or how someone should act intelligently in particular situations.

One therefore can use the balance theory to evaluate the wisdom of thinking in terms of whether it meets the stipulations of the theory: Does the individual attempt to balance interpersonal as well as extrapersonal interests in addition to considering his or her own interests? Does the person think both for the long and short terms? Does the person seek a common good? Does the person consider the effect his or her values has on the decision made? The theory does not evaluate whether a particular decision is wise, any more than most theories of intelligence specify what constitutes the intelligent answer to a particular test problem.

A reviewer of this article was disappointed that the theory could not answer questions such as " Is it wise to vote Democratic versus Republican? Is it wise to have an abortion to prevent an unwanted child in the world?" and so forth. It is perhaps exigent to expect of a psychological theory that it furnish definitive answers to questions that have no definitive answers. Questions that no human has been able to answer since the beginning of time (such as what is the "correct" political system or the "correct" view on abortion) are unlikely to be answered by any new theory of wisdom or of anything else in the foreseeable future. In any case, the balance theory makes no pretense of being able to answer these questions. Wisdom is not about "right" answers, but about reflective responses that balance considerations in search of a common good. It would perhaps be unwise for a theory of wisdom to claim to provide "right" solutions to problems that have no such solutions. Indeed, one might argue that many of history's greatest disasters have emerged when one group, certain of its answers, has tried to impose those answers on other groups.

Theories of intelligence have an advantage of theories of wisdom because, although they do not generate "correct" answers, they typically generate tests that have so-called objectively correct and incorrect answers. (I say "so-called" because inductive problems never have unique answers, only consensually preferred ones. For example, a number series problem of the kind found on an intelligence test, such as 2, 4, 6, 8, ?, has an infinite number of mathematically permissible answers, but one of these answers, 10, is likely to be more widely accepted psychologically than are other answers.) Problems measuring wisdom do not have the same kind of so-called objective answers. Yet, perhaps the field of education has too long concentrated on things that are easy to measure, and needs also to concentrate on things that, however difficult they may be to measure, are especially important to measure. So how does one measure wisdom?

MEASUREMENT OF TK IN WISDOM

Can wisdom be measured? We believe so. Consider problems we have used in the past to measure the TK underlying practical intelligence, for which we have collected extensive data, and then consider problems we are using in our current research to measure wisdom.

Measurement of TK

In a series of studies on practical intelligence with both adults and children (Sternberg, Wagner, & Okagaki, 1993; Sternberg, Wagner, Williams, & Horvath, 1995; Sternberg, Forsythe, et al., 2000; Wagner & Sternberg, 1985), we have sought to develop assessments of TK in real-world pursuits. The methodology for constructing assessments is rather complex (Horvath et al., 1996), but involves interviewing individuals for how they have handled critical situations on their jobs or, for children, in their schooling. We then extract the TK implicit in these interviews. Assessments then are constructed that ask people to solve the kinds of problems they find in managing themselves, others, and tasks on the job. Each of the problems in the assessment typically presents a scenario about a job-related problem along with possible options for dealing with that problem. For example, an academic psychologist might be asked to solve a problem in which a psychology professor has too much to do in the time available to do it. The participant (academic psychologist) would be given statements suggesting how the hypothetical professor might allocate his or her time, and would be asked to rate the goodness of each of the options on a Likert scale ranging from 1 (*low*) to 9 (*high*). The response profile for all problems then is typically scored against the averaged profile of a nominated expert group. As another example a student might be asked how to solve a problem in which he or she believes that a mark a teacher has given him or her on a paper is unfair.

We have argued that TK is a key aspect of practical intelligence (Sternberg, 1985b, 1997a; Sternberg & Grigorenko, 1997; Sternberg & Wagner, 1993; Sternberg, Wagner, & Okagaki, 1993; Sternberg, Wagner, Williams, & Horvath, 1995), or the ability to apply various kinds of information-processing components of intelligence to experience for the purposes of adaptation to, shaping of, and selection of environments. Practical intelligence requires adaptation, shaping, and selection, in that different kinds of environments and environmental situations require different kinds of responses. It has been distinguished conceptually and statistically in research from analytical and creative as-

pects of intelligence (Sternberg, 1985a; Sternberg, Ferrari, Clinkenbeard, & Grigorenko, 1996; Sternberg, Grigorenko, Ferrari, & Clinkenbeard, 1999).

In a series of studies (see reviews in Sternberg, Wagner, & Okagaki, 1993; Sternberg, Wagner, Williams, & Horvath., 1995; Sternberg, Forsythe, et al., 2000), we have learned a substantial amount about TK. These studies have been conducted on individuals from roughly 50 occupations, with the most work having gone into studies of business managers, academic psychologists, salespeople, principals, elementary-school teachers, middle-school students, high-school students, and college students.

1. TK can be reliably measured, with reliability coefficients typically in the .6–.9 range.
2. TK tends to increase with experience in an environment, but it is what one learns from the experience rather than the experience itself that seems to matter.
3. Measures of TK tend to be correlated with each other, both within and across measures for different occupations. For example, Wagner (1987) found a correlation at the .6 level between scores on TK measures for academic psychology and management with undergraduates as participants.
4. Our measures of TK also predict actual performance in jobs such as sales, management, and college teaching. This prediction is statistically significant and fairly substantial in magnitude (with correlations typically at about the .3 level).
5. This prediction is largely independent of the prediction provided by conventional tests of academic intelligence. Correlations with tests of fluid and crystallized abilities typically hover about 0.
6. This prediction is even largely independent of the prediction provided by multiple-ability tests such as the Armed Services Vocational Aptitude Battery (ASVAB). A study by Eddy (1988) at the Brooks Air Force Base with Air Force Basic Training recruits showed trivial correlations with ASVAB subtests.
7. TK scores are largely independent of scores on tests of personality, styles, and interpersonal orientation (see Sternberg, Wagner, & Okagaki, 1993).
8. TK scores predict managerial performance significantly even after entering in other variables. In a study at the Center for Creative Leadership (described in Sternberg, Wagner, & Okagaki, 1993), we found that TK for management was the best single predictor of performance on two managerial simulations. This relation held even after entering (conventional) cognitive abilities, personality-scale measures, styles, and interpersonal orientation into a hierarchical regression equation predicting performance on the simulations. TK still contributed significantly and substantially to prediction of performance on the simulations.
9. TK predicts school performance about as well as, and sometimes better than, do academic-ability indicators (Sternberg, Grigorenko, Jarvin, & Lockery, 2000; Sternberg, Wagner, & Okagaki, 1993).
10. In some cultures, TK may actually be negatively correlated with academic-intelligence measures, such as cultures where schooling is not highly valued by much of the population and is seen as a distraction from everyday activities (see Sternberg & Grigorenko, 1997).
11. TK is relevant to shaping of as well as adaptation to environments. In particular, superiors' ratings of military leadership (at the platoon, company, and battalion levels) were better predicted by a measure of TK for military leadership than of crystallized intelligence or of TK for management, and the incremental validity of the TK measure for military leadership was significant.
12. TK can be developed, at least to some extent (Gardner, Krechevsky, Sternberg, & Okagaki, 1994; Sternberg, Forsythe, et al., 2000; Sternberg, Okagaki, & Jackson, 1990).

Currently, we have devised a series of 24 problems to measure wisdom. The validity of these problems is currently being assessed. Here is an example of one (a further example being used at a lower level of schooling appears later):

> "Felicia and Alexander have been in an intimate relationship for their entire four years of college. Felicia has now been accepted for graduate school in French by a prestigious graduate program in northern California. Alexander was not admitted to the law school in this university, nor to any other law school in the northern California area. Alexander was admitted to a good although not outstanding law school in southern California, but he was also admitted to an outstanding law school in Massachusetts. Felicia has no viable opportunities for graduate study on the East Coast, at least at this time. Alexander is trying to decide whether to attend the less prestigious law school in southern California or the more prestigious one in Massachusetts. He would like to continue the relationship, as would Felicia, and both ultimately hope to get married to each other. A complicating factor is that the law school in Massachusetts has offered Alexander a half-scholarship, whereas the law school in southern California has not offered financial aid for the first year, although it has indicated that there is a possibility of financial aid in subsequent years. Alexander's parents have indicated that although they would be willing to pay his half-tuition for the more prestigious law school, they do not believe it is fair to ask them to pay full tuition for the less prestigious one. They also believe his going to the less prestigious law school will only hurt Alexander's career advancement. Felicia is torn and is leaving it to Alexander to decide what to do. What should Alexander do and why?"

How might the ability to think wisely in such problems be developed?

IMPLICATIONS FOR EDUCATION

Why Should Wisdom Be Included in the School Curriculum?

The development of wisdom is beneficial because the judgments it yields can improve our quality of life and conduct (Kekes, 1995). Knowledge can and indeed must accompany wisdom. People need knowledge to draw on in rendering judgments—knowledge of human nature, of life circumstances, and of strategies that succeed and strategies that fail. Although knowledge is necessary for wisdom, it is not sufficient for it. Merely having knowledge does not entail its use in judging rightly, soundly, or justly. Many highly knowledgeable individuals lead lives that are unhappy. Some of them make decisions that are poor or even reprehensible. This century provides many examples of such decisions.

There are several reasons why schools should seriously consider explicitly including instruction in wisdom-related skills in the school curriculum.

First, as noted earlier, knowledge is insufficient for wisdom and certainly does not guarantee satisfaction or happiness. Wisdom seems a better vehicle to the attainment of these goals.

Second, wisdom provides a mindful and considered way to enter considered and deliberative values into important judgments. One cannot be wise and at the same time impulsive or mindless (Langer, 1997) in one's judgments.

Third, wisdom represents an avenue to creating a better, more harmonious world. Dictators such as Adolph Hitler and Joseph Stalin may have been knowledgeable and may even have been good critical thinkers, at least with regard to the maintenance of their own power. Given the definition of wisdom, however, it would be hard to argue they were wise.

Fourth and finally, students, who later will become parents and leaders, are always part of a greater community and hence will benefit from learning to judge rightly, soundly, and justly on behalf of their community (Ardelt, 1997; Sternberg, 1990b, 1998a, 1999a; Varela, 1999).

If the future is plagued with conflict and turmoil, this instability does not simply reside *out there somewhere;* it resides, and has its origin, *in ourselves.* For all these reasons, we endorse teaching students not only to recall facts and to think critically (and even creatively) about the content of the subjects they learn, but to think wisely about it, too.

Some Past Orientations and Programs Relevant to the Development of Wisdom

What would education that fosters wisdom look like? Three previous programs seem particularly related to the goals of the proposed orientation of teaching for wisdom. All have been proposed by educators with a primarily philosophical orientation. The first program, *Philosophy for Children* (Lipman, 1982, 1987; Lipman, Sharp, & Oscanyan, 1980), uses a set of novels to develop analytical-thinking skills in children. Children read the novels and then learn to evaluate information in these novels and to make judgments about the characters in the novels and the kinds of choices they should make in their lives. The second program is Paul's (1984, 1987) program, which emphasizes dialogical thinking, or seeing problems from a variety of perspectives. The third program is that of Perkins (1984, 1992), which emphasizes understanding of "knowledge by design"—in other words, how knowledge is designed and used to solve problems in the world. Ennis (1985, 1987) has provided a taxonomy of critical-thinking skills, many of which are required for wise thinking, and Adams, Kasserman, Yearwood, and Perfetto (1988), Bransford and Stein (1993), Feuerstein (1980), and Halpern (1996, 1998) have all provided systematic courses that teach skills of critical thinking that are needed for wise thinking. Feuerstein's (1980) program has been the most widely used of this group. Of course, other programs also touch on aspects of the proposed instruction described here (see Reigeluth's [1999] book on instructional-design theories and models for descriptions of a variety of programs).

It is impossible to speak of wisdom outside the context of a set of values, which in combination may lead one to a moral stance, or, in Kohlberg's (1969, 1983) view, stage. The same can be said of all practical intelligence: Behavior is viewed as practically intelligent as a function of what is valued in a societal–cultural context. Values mediate how one balances interests and responses, and collectively contribute even to how one defines a common good. The intersection of wisdom with the moral domain can be seen by there being some overlap in the notion of wisdom presented here and the notion of moral reasoning as it applies in the two highest stages (4 and 5) of Kohlberg's (1969) theory. Wisdom also involves caring for others as well as oneself (Gilligan, 1982, 1994). At the same time, wisdom is broader than moral reasoning. It applies to any human problem involving a balance of intrapersonal, interpersonal, and extrapersonal interests, whether or not moral issues are at stake. Wisdom goes beyond practical intelligence, however, in the necessity in wisdom of balancing interests other than one's own.

Sixteen Principles of Teaching for Wisdom Derived from the Balance Theory of Wisdom

There are 16 principles derived from the balance theory that form the core of how wisdom can be developed in the classroom. A fundamental idea in teaching for wisdom is that one teaches children not *what* to think, but, rather, *how* to think. There is no place, when one teaches for wisdom, for teaching doctrinaire beliefs or ideologies. Many of the principles of teaching for wisdom already are being applied in classrooms

characterized by good instruction. Thus, to some extent, these ideas help systematize many things already being done, and also may add some things that currently are not yet being done in many classrooms.

1. Explore with students the notion that conventional abilities and achievements are not enough for a satisfying life. Many people become trapped in their lives and, despite feeling conventionally successful, feel that their lives lack fulfillment. Fulfillment is not an alternative to success, but rather, is an aspect of it that, for most people, goes beyond money, promotions, large houses, and so forth.
2. Demonstrate how wisdom is critical for a satisfying life. In the long run, wise decisions benefit people in ways that foolish decisions never do.
3. Teach students the usefulness of interdependence—a rising tide raises all ships; a falling tide can sink them.
4. Role-model wisdom because what you do is more important than what you say. Wisdom is action dependent and wise actions need to be demonstrated.
5. Have students read about wise judgments and decision making so that students understand that such means of judging and decision making exist.
6. Help students to learn to recognize their own interests, those of other people, and those of institutions.
7. Help students learn to balance their own interests, those of other people, and those of institutions.
8. Teach students that the "means" by which the end is obtained matters, not just the end.
9. Help students learn the roles of adaptation, shaping, and selection, and how to balance them. Wise judgments are dependent in part on selecting among these environmental responses.
10. Encourage students to form, critique, and integrate their own values in their thinking.
11. Encourage students to think dialectically, realizing that both questions and their answers evolve over time, and that the answer to an important life question can differ at different times in one's life (such as whether to go to college).
12. Show students the importance of dialogical thinking, whereby they understand interests and ideas from multiple points of view.
13. Teach students to search for and then try to reach the common good—a good where everyone wins, not only those with whom one identifies.
14. Encourage and reward wisdom.
15. Teach students to monitor events in their lives and their own thought processes about these events. One way to learn to recognize others' interests is to begin to identify your own.
16. Help students understand the importance of inoculating oneself against the pressures of unbalanced self-interest and small-group interest.

Procedures to Follow in Teaching for Wisdom

There are several procedures a teacher can follow in teaching for wisdom (and many teachers already follow at least some of these procedures). First, students would read classic works of literature and philosophy (Western or otherwise) to learn and reflect on the wisdom of the sages. The rush to dump classic works in favor of modern works would make sense only if the wisdom these modern works had to impart equaled or exceeded that of the classic works.

Second, students would be engaged in class discussions, projects, and essays that encourage them to discuss the lessons they have learned from these works, and how they can be applied to their own lives and the lives of others. A particular emphasis would be placed on the development of dialogical and dialectical thinking. Dialogical thinking (see Principle 12) involves thinkers understanding significant problems from multiple points of view and understanding how others legitimately could conceive of things in a way that is quite different from one's own. Dialectical thinking (see Principle 11) involves thinkers understanding that ideas and the paradigms under which they fall evolve and keep evolving, not only from the past to the present, but from the present to the future (Hegel, 1807/1931; see also Sternberg, 1998b).

Third, students would need to study not only "truth," as we know it, but values. The idea would not be to force-feed a set of values, but to encourage students reflectively to develop their own values.

Fourth, such instruction would place an increased emphasis on critical, creative, and practical thinking in the service of good ends—ends that benefit not only the individual doing the thinking but others as well. All of these types of thinking would be valued, not just critical thinking.

Fifth, students would be encouraged to think about how almost everything they study might be used for better or worse ends, and to realize that the ends to which knowledge is put *do* matter.

Finally, teachers would realize that the only way they could develop wisdom in their students would be to serve as role models of wisdom themselves. A role model of wisdom will, I believe, take a much more Socratic approach to teaching than teachers customarily do. Students often want large quantities of information spoon-fed or even force-fed to them. They then attempt to memorize this material for exams, only to forget it soon thereafter. In a wisdom-based approach to teaching, students will need to take a more active role in constructing their learning. But a wisdom-based approach is not tantamount to a constructivist approach to learning. Students have not achieved or even come close to achieving wisdom when they merely have constructed their own learning. Rather, they must be able to construct knowledge not only from their own point of view, but to construct and sometimes reconstruct it from the point of view of others. Constructionism from only a single point of view can lead to egocentric rather than balanced understanding.

Lessons taught to emphasize wisdom would have a rather different character from lessons as they are often taught today. Consider examples.

First, social studies and especially history lessons would look very different. For example, high-school American history books typically teach American history from only one point of view, that of the new Americans. Thus, Columbus is referred to as having "discovered" America, a strange notion from the standpoint of the many occupants who already lived there when it was "discovered." The conquest of the southwest and the fall of the Alamo also are presented only from the point of view of the new settlers, not from the standpoint of, say, the Mexicans who lost roughly half their territory to the invaders. This kind of ethnocentric and frankly propagandistic teaching would have no place in a curriculum that sought to develop wisdom and an appreciation of the need to balance interests.

Second, science teaching would no longer be about facts presented as though they are the final word. Science often is presented as though it represents the end of a process of evolution of thought rather than one of many midpoints (Sternberg, 1998b). Students could scarcely realize from this kind of teaching that the paradigms of today, and thus the theories and findings that emanate from them, will eventually be superseded, much as the paradigms, theories, and findings of yesterday were replaced by those of today. Students further would need to learn that, contrary to the way many textbooks are written, the classical "scientific method" is largely a fantasy rather than a reality, and that scientists are as susceptible to fads as are members of other groups.

Third, teaching of literature would need to reflect a kind of balance that right now is often absent. Literature is often taught in terms of the standards and context of the contemporary U.S. scene. Characters often are judged in terms of our contemporary standards rather than in terms of the standards of the time and place in which the events took place. From the proposed standpoint, the study of literature must, to some extent, be done in the context of the study of history. The banning of books often reflects the application of certain contemporary standards to literature, standards of which an author from the past never could have been aware.

Fourth, foreign languages always would be taught in the cultural context in which they are embedded. Perhaps American students have so much more difficulty learning foreign languages than do children in much of Europe not because they lack the ability, but because they lack the motivation. They do not see the need to learn another language whereas, say, a Flemish-speaking child in Belgium does. Americans might be better off if they made more of an attempt wisely to understand other cultures rather than just to expect people from other cultures to understand them. And learning the language of a culture is a key to understanding. Americans might be less quick to impose their cultural values on others if they understood the others' cultural values. It is also interesting to speculate on why Esperanto, a language that was to provide a common medium of communication across cultures, has been a notable failure. Perhaps it is because Esperanto is embedded in no culture at all. It is the language of no one.

Culture cannot be taught, in the context of foreign-language learning, in the way it now often is—as an aside divorced from the actual learning of the language. It should be taught as an integral part of the language—as a primary context in which the language is embedded. The vituperative fights we see about bilingual education and about use of Spanish in the United States or French in Canada are not just, or even primarily, fights about language. They are fights about culture, and they are fights in need of wise resolutions.

Finally, as implied throughout these examples, the curriculum needs to be far more integrated. Literature needs to be integrated with history, science with history and social-policy studies, foreign language with culture. Even within disciplines, far more integration is needed. Different approaches to psychology, for example, are often taught as competing when in fact they are totally compatible. Thus, biological, cognitive, developmental, social, and clinical psychology provide complementary viewpoints on human beings. They do not compete with each other as being the "right approach." The study of the brain is important, for example, but most of the insights about learning and memory that can be applied to instruction have come from behavioral and cognitive approaches, not from the biological approach. And some of the insights that have supposedly come from the biological approach—such as "left-brain" and "right-brain" learning—are based on ignorant or outdated caricatures of research in this area rather than on actual findings.

TESTING THE BALANCE THEORY IN THE CLASSROOM

Can these ideas be applied and tested in an educational setting? In collaboration with colleagues at Yale University, I am currently working on a project funded by the W. T. Grant Foundation to determine whether wisdom can be successfully taught to students at the middle-school level. It will be several years until this project is completed, and my goal here is simply to show how the theory is being tested, rather than to provide concrete results. At the same time, I hope that the paradigm described might be of interest to others who would like to apply teaching for wisdom in the classroom.

We are selecting to work with roughly three dozen middle-school teachers and roughly 600 middle-school students. This particular selection is based on several considerations.

First, students in middle school represent an age group that is ripe for the development of unbalanced thinking, with potentially devastating consequences. For example, students in middle school are close to the age when they will begin to make important life decisions involving their participation in sex, drugs, smoking tobacco, and violence. For this reason, wisdom-related skills need to be imparted and nurtured be-

fore the children start deciding their course of action on such vital life matters.

Second, students in middle school have acquired a level of cognitive development that renders them suitable to understand the different aspects of wisdom-related skills. For instance, middle-school students can think abstractly about concepts, in which myriad possibilities are explored and weighed in the path to a solution (Piaget, 1952). Thinking abstractly is central to dialectical thinking. They also have developed adequate metacognitive skills to think wisely (Sternberg, 1985a, 1988).

Third, unlike the case at higher grades, teachers in middle schools often teach all subject-matter areas and so have direct control over the manner in which the subject matter is taught. This teaching structure makes it possible to infuse a wisdom-related curriculum into an already existing curriculum across various subject matters because teachers can integrate it seamlessly into their regular teaching.

We are planning to develop an infused curriculum for teaching wisdom. We prefer an infused model of teaching rather than a separate "wisdom curriculum" for several reasons. First, most teachers seem to believe that they do not have the time in the school day to teach yet another subject. Second, infusion helps students transfer wisdom-related skills to skills they acquire in the course of their regular school learning. Third, we believe an infused program is more likely to result in knowledge that will interconnect with children's lives.

Finally, we believe that the curriculum in middle schools is in need of a richer, more penetrating program targeted not only at accumulating various academic skills, but also at nurturing the development of higher order thinking skills. Infusing a middle-school curriculum with teaching for wisdom, we believe, can add richness, depth, and orientation to the formation of the higher order thinking skills that the present curriculum sometimes appears to lack.

Wisdom-Related Curriculum

The following 12 major topics are to be covered in the wisdom-related curriculum (which is being developed), one per week, over a 12-week curriculum (roughly one semester). The curriculum will be written for teachers to teach to their students:

1. What is wisdom—Part 1 (analyzing people's implicit theories)?
2. What is wisdom—Part 2 (analyzing famous definitions)?
3. Why is wisdom important to individuals, society, and the world?
4. Some big ideas about wisdom—Part 1 (the common good)
5. Some big ideas about wisdom—Part 2 (the role of values)
6. Some big ideas about wisdom—Part 3 (the role of interests)
7. Some big ideas about wisdom—Part 4 (the role of environmental responses)
8. Integration: Famous examples of wise individuals and why they were considered wise
9. Applying wisdom across the ages—Part 1 (earlier times)
10. Applying wisdom across the ages—Part: 2 (present times)
11. Applying wisdom in students' daily life
12. Applying wisdom to create a better world

The design of the project involves three conditions: one experimental condition and two control conditions. Each condition includes 12 teachers and at least 200 students. The first, experimental, condition incorporates the teaching for wisdom curriculum; the second, control, condition incorporates a critical-thinking-skills curriculum; and the third, control, condition incorporates the regular curriculum. There are two reasons for including the critical-thinking condition.

First, in the case we find positive effects associated with the wisdom condition in relation to the regular-curriculum control, we want to know that the effects originated from the wisdom curriculum specifically and not from the implementation of a new curriculum generally.

Second, including a critical-thinking condition can inform us whether any new curriculum involving critical thinking, whether it focuses explicitly on wisdom or not, potentially can increase wisdom-related skills. We believe that critical thinking is not sufficient for wise thinking, but this remains to be shown.

Teachers in the wisdom condition are to implement the 12-week course for teaching for wisdom. We are developing a curriculum handbook for teachers to consult and use in their preparation and teaching. This curriculum handbook is being constructed along the same lines as was the handbook for helping teachers develop students' Practical Intelligence For School ("PIFS"; Williams, Blythe, White, Li, Sternberg, & Gardner, 1996). In the wisdom handbook, as in the PIFS handbook, each chapter is to be dedicated to implementing a part of the curriculum. For example, one chapter is to be dedicated to introducing the notion of wisdom and why it is important. Another set of chapters is to be dedicated to instructing teachers how to incorporate wisdom-related skills in daily lesson plans in language arts, social science, and natural science following the 16 principles (mentioned earlier). Some topics might include wisdom and foolishness in literature, analysis of historical decisions using wisdom-related skills as criteria, and the costs of pollution to the world. The handbook can also help teachers coordinate the activities required for developing wisdom-related skills, such as generating dialectical thinking, group discussions, and ideas for modeling.

In addition, teachers are to attend 20 hr of professional development in-service meetings before they start teaching the curriculum, where they will have an opportunity to orient themselves to, discuss, and use the information presented in the handbook. An additional 10 hr of in-service are to be scheduled while the curriculum is running to help teachers give feedback to and receive feedback from other teachers as well as the investigators.

Teachers in the critical-thinking condition emphasize teaching for critical thinking. We are implementing a 12-week course for teaching critical-thinking skills. As in the wisdom condition, we are developing a curriculum handbook for teachers to consult and use in their preparation and teaching. The curriculum handbook for teaching critical-thinking skills is being constructed along the same lines as the handbook used for teaching for wisdom, although focusing on critical-thinking skills instead of wisdom-related knowledge. The teaching of critical-thinking skills to middle-school students has been implemented before in past studies of Sternberg's triarchic theory of intelligence (see Sternberg, Torff, & Grigorenko, 1998). Teaching these skills involves explaining to students the uses of analytical reasoning along with the strategies that foster and actualize critical thinking. For example, teachers might have students analyze flaws in an historical figure's political strategy, in a science experiment, or in a commentary devoted to a piece of literature.

The conventional instructional condition does not involve any specific course, per se. However, we provide the same level of in-service to teachers. The in-services are on effective assessment, including both conventional and performance assessments. We are preparing a handbook comparable to those in the other conditions.

The same evaluations are to be used in all conditions. The main dependent variables in this study are measures of students' levels of wisdom-related skills. Students' wisdom-related skills are to be measured in three phases. In addition, we are evaluating how closely teachers in the two experimental conditions followed their corresponding curriculum, and teachers' as well as students' overall impressions of the curriculum.

The first evaluation will be administered prior to the beginning of the 12-week period (pretest); a second evaluation will be administered during the curriculum delivery period (intervention stage); a third evaluation will be administered at the end of the 12-week period (posttest); and a fourth evaluation will take place after an interval of 2 to 3 months following the 12-week period (durability test). The first evaluation is designed to measure students' baseline levels of wisdom-related skills by condition. The second is designed to monitor the change during the curriculum delivery. The third is conceived to measure the effectiveness of each curriculum condition on students' wisdom-related skills immediately following the 12-week curriculum. The fourth is designed to measure the durability of the effect of each curriculum condition on students' wisdom-related skills.

The materials with which we will assess students' level of wisdom-related skills will include conflict-resolution scenarios (Sternberg & Dobson, 1987; Sternberg & Soriano, 1984) and unanticipated but highly plausible dilemmas, including both dilemmas prepared by us and ones prepared by others (e.g., Staudinger, 1996; Staudinger & Baltes, 1996). This latter method of evaluating wisdom-related judgment has been successfully used in past research (e.g., Staudinger & Baltes, 1996).

Conflict-resolution scenarios involve problematic situations in which multiple interests exist and can be considered in finding a resolution to the problem. For example, one such scenario for middle-school students is presented:

> Mary is fighting with her parents over a sleep-over she wants to go to at her friend Lisa's house. Her parents have told her that they are worried about the lack of supervision at the sleep-over and are worried about whether the children's behavior will get out of hand. Mary has had a number of problems with her classmates in the past year and sees this sleep-over as an opportunity to strengthen friendships she has made or would like to make. What should Mary do?

The unanticipated but highly plausible dilemmas also require students to respond to open-ended scenarios. Students' responses will then be evaluated by trained raters according to a prespecified set of criteria derived from the balance theory of wisdom. Ultimately, each response will be associated with a set of ratings corresponding to the set of criteria as well as an overall rating. There will be at least two raters per response to be rated.

The particular ratings (on a 7-point Likert scale) will be of

1. Demonstration of attempt to reach a common good.
2. Balancing of intrapersonal, interpersonal, and extrapersonal interests.
3. Taking into account both short- and long-term factors.
4. Justification for adaptation to, shaping of, and selection of environments.
5. Mindful use of values.
6. Overall quality (wisdom) of process of solution.
7. Overall quality (wisdom) of the solution itself.

We will also collect other, more qualitative measures of students' wisdom-related skills. These other measures will include evaluations of students' assignments completed during the 12-week curriculum. For example, we will collect weekly journals, homework assignments, and reports that students will have completed in each of the conditions. These measures will be rated according to the earlier criteria from the balance theory of wisdom.

Evaluating students' wisdom-related skills is only one part of a complete evaluation of the teaching for wisdom initiative. A second part is evaluating how closely and how well the wisdom and critical-thinking curricula were observed by teachers. Evaluating how closely the curricula were followed is essential to properly evaluate the results from measures of

students' wisdom-related skills. For example, only if the wisdom curriculum is properly implemented can we expect students' wisdom-related skills to increase. In addition, only if the critical-thinking curriculum is properly implemented can we expect to compare it against the effect of the wisdom curriculum. As a result, we plan to monitor the implementation of both curricula in five ways.

First, we are providing in-service professional training for teachers and helping them instantiate the curriculum as described in the curriculum handbook. We will assess teachers' performance in the in-services. Second, we plan periodically to visit participating school classrooms and sit in on lectures and view lesson plans. Third, we intend to look at students' daily journals to check the content of the actual lesson plans they received. Fourth, we intend to survey the participating teachers for their thoughts on the curriculum as well as their feelings on how well they think it was realized. Finally, we need to survey participating children for their evaluation of the curricula.

In addition to the earlier evaluations, we will ask students to complete two related measures: The Cornell Critical Thinking Test (CCTT; Ennis, 1987) and the Sternberg Triarchic Abilities Test, Level 1 (STAT; Sternberg, 1993). The CCTT is a 71-item, paper-and-pencil measure that is used to assess a student's ability to decide whether a set of premises support a given conclusion, the reliability of information, and whether specific statements follow from others. The STAT contains 36 multiple-choice and 3 essay items measuring analytical, creative, and practical thinking in the verbal, quantitative, and figural domains. Both these measures are designed to assess quality of thinking in middle-school students. These measures are being included to assess whether effects from the wisdom and critical thinking curricula are positively or negatively related with critical thinking and related skills.

We will also ask teachers to rate student achievements of various kinds in each condition before and after the 12-week period to assess any possible transfer of the curricula to school performance.

CONCLUSION

The road to this new approach of teaching for wisdom is bound to be a rocky one. First, entrenched structures, whatever they may be, are difficult to change, and wisdom is neither taught in schools nor, in general, is it even discussed. Second, many people will not see the value of teaching something that shows no promise of raising conventional test scores. These scores, which formerly were predictors of more interesting criteria, have now become criteria, or ends in themselves. The society has lost track of why they ever mattered in the first place, and they have engendered the same kind of mindless competition we see in people who relentlessly compare their economic achievements with those of others. Third, wisdom is much more difficult to develop than is the kind of achievement that can be developed and then readily tested via multiple-choice tests. Finally, people who have gained influence and power in a society via one means are unlikely to want either to give up that power or to see a new criterion be established on which they do not rank as favorably. Thus, there is no easy path to wisdom. There never was, and there probably never will be.

Wisdom might bring us a world that would seek to better itself and the conditions of all the people in it. At some level, we as a society have a choice. What do we wish to maximize through our schooling? Is it just knowledge? Is it just intelligence? Or is it also wisdom? If it is wisdom, then we need to put our students on a much different course. We need to value not only how they use their outstanding individual abilities to maximize their attainments, but how they use their individual abilities to maximize the attainments of others as well. We need, in short, to value wisdom.

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