

Abu Nasr al-Farabi

Al-Farabi (872-950 AD) was born in Wasij, in the province of Farab in Turkestan, of a noble family. To understand the universe and humankind he undertook the meticulous study of ancient philosophy (particularly Plato and Aristotle) which he integrated into his own Islamic-Arabic civilization whose chief source was the Qur'an. Al-Farabi used a number of terms to describe education: discipline (*ta'dib*), training (*tahdhib*), guidance (*tasdid*), instruction (*ta'lim*), exercise or learning (*irtiyad*) and upbringing (*tarbiya*) (quoted in Ammar al-Talbi, 1993). He believed that the first aim of knowledge was knowledge of God and His attributes. He emphasised the need for unity of society and the State to be achieved by unity of thought, wisdom and religion.

Al-Farabi on Education

- According to him the whole activity of education is the acquisition of values, knowledge and practical skills leading to perfection and the attainment of happiness. The perfect human being (*al insan al kamil*) is one who has acquired
 - theoretical virtue (intellectual knowledge) and
 - practical moral virtues (moral behaviour).
- Virtue is the state of mind in which the human being carries out good and kind deeds such as wisdom, common sense, inventiveness, cleverness, temperance, courage, generosity and justice (*Al-Farabi, Talkhis*, cited in Ammar al-Talbi, 1993).
- Theoretical and practical virtue can only be obtained within society, for it is society that nurtures the individual and prepares him or her to be free. Thus, one of the goals of education is the creation of the ideal community, 'the one whose cities all work together in order to attain happiness' (*Al-Farabi, Mabadi ahl al-madina al-fadila*, cited in Ammar al-Talbi, 1993).
- Another aim of education is to educate political leaders, because ignorance among them is more harmful than it is in the common person.
- He considered the method of dialogue or debate as important in instruction. The method of argument and the method of discourse which can be used orally or in writing. For the common people, the methods used must be closely related to what they can grasp and understand.
- He also emphasised on the need for scientific discourse; that by which the knowledge of something is obtained either through asking questions about the thing, or from the replies obtained, or by resolving a scientific problem (*Al-Farabi, Kitab al-huraf*, cited in Ammar al-Talbi, 1993).
- In this book *Al-Alfaz*, Farabi argues that there are two types of learning: learning through *speech* and learning by *imitation* (observing other people's actions with the intention of imitating or applying them).

- The method of instruction must be appropriate to the level of learners. For example, the method of imagination is encouraged for teaching the hard to grasp concepts to common people. The educator resorts to metaphors and illustrations in teaching especially for people who are reluctant to learn (*Al-Farabi, Tahsil*, cited in Ammar al-Talbi, 1993).
- According to Al-Farabi, understanding is better than memorization because the former deals mainly with details which could go on forever and hardly useful. But the action of understanding concerns meanings, universals and laws which are valid for all.

Al-Farabi on Curriculum

- Al-Farabi classified the sciences and learning not just for the sake of listing them, but with an educational objective in mind.
- Content to be taught as suggested by Al-Farabi
 - Language and its structure (to express oneself and understand others)
 - Logic (*mantiq*) which includes verbal expression and intellectual procedures
 - Mathematics (he divided into 7 parts)
 - arithmetic (begin with numbers and proceeding to measures)
 - geometry (use of geometric shapes to stimulate imagination)
 - the science of optics
 - astronomy (study of instruments and observation skills)
 - music (making and listening to musical instruments)
 - dynamics (eg. momentum)
 - science of machines
 - Natural sciences
 - Religion and scholastic theology (*kalam*)
 - Political science/civics
 - Jurisprudence (*fiqh*) and law (*qanun*)
- Mathematics called ‘the teachings’ (*ta’alim*) was given importance because it trains students toward the path of precision and clarity. The student is to begin with studying arithmetic (numbers) followed by geometry, optics, astronomy, music, dynamics and last of all mechanics. The student moves in stages from the immaterial and the immeasurable to what needs some matter. (*Al-Farabi, Ihsa’ al-‘ulum*, cited in Ammar al-Talbi, 1993).
- On evaluation, Al-Farabi emphasised that the aim of an examination is to find out a learner’s level in the field being studied. He believed that the questions students ask could have either an *educational* or an *experimental* character. Educational is when students demonstrate that they have mastered something. Experimental is when students test themselves using instruments (such as compass, abacus, ruler, tables) to determine whether they know the rules.
- Al-Farabi drew attention to the purpose of educational games and the role of play in human activity. He recommended games that stimulate creativity. Play should be used appropriately to restore the learner’s strength to undertake more serious activity.

Aristotle

We will look at Aristotle in much the way we looked at Plato and Socrates; that is, we will attempt neither a serious historical account nor full consideration of the body of Aristotle's work. Instead, we will look at an important legacy of Aristotle's thought that triggers rich debate even today.

Aristotle, in contrast to Plato, did not try to create an ideal state. His thought proceeded from things as they actually are to their critical analysis. Thus, in writing about moral life and ethics, Aristotle sought out and described those people and behaviors representing the best in Athenian society. Of course, he had to have some criteria to separate the genuinely good from the only apparently so, but even these--the criteria--he sought in actual life.

Aristotle believed, as Plato did, that people should be educated or trained for their appropriate place in life. As they perform their tasks and fill their particular functions, they develop (or fail to develop) excellences peculiar to these tasks and functions. The best leaders, artisans, wives, and slaves all possess excellences or virtues, but these virtues differ. Those of a ruler differ from those of a slave; those of a husband are not the same as those of a wife.

Contemporary communitarians often refer admiringly to Aristotle. They, too, believe that the community can and properly should make demands on its members and that universal individual rights can be carried too far--so far in fact that a society loses sight of its traditions and may suppose that any act of altruism requires ethical heroism from the agent and an explanation from philosophers. In contrast, Aristotle and today's communitarians insist that moral life grows out of the practices in our communities and the demands these practices make on us. A community's needs and welfare can, and *should*, from this perspective, sometimes override individual rights, and a good citizen expects to contribute to the state, not simply demand its protection of individual rights.

As we will see later, many philosophers argue that there have been only two serious challenges to Aristotle's model of moral life--the apparent nihilism of Nietzsche and the logical individualism of Kant. Whether we agree with this assessment or not, it is clear that the Aristotelian approach to moral thought is once again highly influential today.

Educators may take a special interest in Aristotle's moral thought because it established a model of moral education still widely popular. Aristotle recommended that children should be trained in morally appropriate modes of conduct. His model of moral education is largely compatible with one we find in much biblical writing: "Train up a child in the way he should go, and when he is old, he will not depart from it." Aristotle believed that the community should inculcate values in children and immerse them in supervised activities designed to develop relevant virtues. He was not concerned with teaching them to reason about moral matters. Indeed, he believed that young people were not ready for such reasoning until sometime in their twenties. By then, he argued, they would be good (virtuous) people and could be trusted

to analyze moral issues. Before that time, they should learn to respond ethically out of the habits of good character. In turn, this good character would furnish the ground upon which future reasoning might be safely conducted.

Many models of religious education have followed, and still follow, Aristotle in espousing character education. They, too, hold that children should first learn right conduct and later be allowed to question, analyze, and criticize. Many of you were no doubt brought up this way yourselves and may wonder on reading this: Is there another way? There are in fact several other ways, and we will explore them in the chapter on ethics and moral education. For the past four or five decades, other models of moral education have edged out the character education model, and in the past two decades, the cognitive-developmental model of Lawrence Kohlberg has been very influential.

In the nineteenth century, however, and in the early part of the twentieth century, the character education model was widely accepted. An organization called the Character Development League issued *Character Lessons* for use in both schools and homes. The mode of presentation, if not the very virtues, would have been pleasing to Aristotle. The lessons were organized by "traits of character": obedience, honesty, unselfishness, consecration to duty, industry, courage, justice, patriotism, and many others. Further, they were organized in a linear hierarchy; each one was supposed to function as a foundation for the next. Obedience came first, and the list of thirty-one traits, according to *Character Lessons*, "leads to right living, and establishes character." For Aristotle, of course, simply reading about the virtues and their enactment in the lives of others would be insufficient. One learns to be honest by practicing honesty; one learns to be obedient by obeying. The organization was aware of the need for practice, and *Character Lessons* suggests practical activities for children in addition to the readings and discussion.

Many philosophers of education worry about the indoctrination that seems inevitable in the character education approach, and this is another topic we will discuss in a later chapter. But there are contemporary philosophers of education who defend character education, and several thinkers today recommend a combination of cognitive and character approaches. Alarmed by what seems to be a growing tendency in youth toward socially unacceptable or harmful practices, educators are taking a new, more appreciative look at Aristotle.

Another facet of Aristotle's thought is highly relevant for today's educators. Aristotle did not believe that people could, even with heroic effort, guarantee their own consistently moral behavior. Circumstances affect us. People of great virtue can withstand correspondingly great temptation and can be relied on to do the right thing in many extreme situations, but even heroes can be overwhelmed by conditions beyond their control. In this belief, Aristotle was closer to the Homeric Greeks than to later moral philosophers. He saw the awful dilemmas that lead otherwise good people into tragedy. This is a popular theme in contemporary philosophy, and it has been welcomed by many who feel that moral philosophy had become too cerebral and disconnected from everyday life. It is especially interesting to educators because it encourages us to use biography and literature in an integral way in moral education. Of this development, too, Aristotle would no doubt approve.

Confucius

Confucius (551-479 BC), born in Quyi in the principality of Lu, is one of China's most famous philosophers. He spent a lifetime learning as well as teaching. He stated that education plays a fundamental role in the development of society and of individuals alike. Education should seek to produce virtuous individuals which will alter human nature. By raising individual moral standard, society will become more virtuous and the country will be well-governed and its citizens law-abiding. He rejected feudalism in which the status of an individual was passed from one generation to the next based on birth which was prevalent during his time. His recommendations are in the *Analects* (Lun Yu) which is a record of his speeches and his disciples, as well as the discussions they had. It literally means "discussions over words". Confucian thought was not confined to China. It spread to Japan, Vietnam, North and South Korea, and parts of Southeast Asia.

Confucius and Education

- According to Confucius, education is to produce capable individuals (*ziancai*) whom he called shi (gentlemen) or junzi (men of quality) who combined competence with virtue. They would serve the government and bring about an ideal managed by men of virtue. The cultivation of virtue was to be through observation, study and reflective thought.
- Among the virtues given priority are: filial piety (*xiao*), respect for the elderly (*ti*), loyalty (*zhong*), respectfulness (*gong*), magnanimity (*kuan*); fidelity (*xin*), diligence (*min*), altruism (*hui*), kindness (*liang*), frugality (*jian*), tolerance (*rang*), wisdom (*zhi*) and courage (*yong*).
- Education was to be made available to all, regardless of socioeconomic status or social standing. He denounced favouritism and the passing of office from one generation of nobles to the next (Yang Huanyin, 1993).
- According to Confucius, 'Study without thought is labour lost; thought without study is dangerous'. He saw learning as a process of observation of some type of subject matter, whether it be books, objects or people, followed by reflection.
- He saw learning as a highly personal and individual activity but when awakened by real learning would be repeated by the student. Teachers should be committed to their work and have good mastery of the knowledge to be imparted.
- A good teacher must love his students, know them well, understand their psychological uniqueness, give thought to ways and means of facilitating their access to knowledge (Yang Huanyin, 1993).
- A mistake is acting on premature knowledge based on insufficient observation and insufficient processing. A lie is having full knowledge and deliberately misrepresenting that knowledge.

Confucius on Curriculum

- Confucius stipulated that the main emphasis of the curriculum should be moral instruction and the imparting of knowledge. Moral education was thus for Confucius the means whereby his ideas concerning virtue might be realised.
- Content to be taught as proposed by Confucius
 - His six books; the *Book of Odes*, the *Book of History*, the *Book of Rites*, the *Book of Music*, the *Book of Changes* and the *Spring and Autumn Annals* – which dealt with subjects such as philosophy, politics, economics, culture and musicianship.
 - Music,
 - The Code and Manner of Proper Conduct (Li),
 - Poetry,
 - Literature
 - History.
- His emphasis on political and moral principles led to ignoring the natural sciences, trade and agriculture.
- His curriculum served as the curriculum for 2000 years in feudal China and the following pedagogical strategies were proposed:
 - to match learning with the aptitudes of students (consider the age of learners)
 - to inspire and guide learners by stages
 - to instruct oneself while teaching others
 - to explain the present in the light of the past
 - to combine theory with practice
 - to encourage independent thought
 - to set a good example
 - to correct one's errors and improve oneself
 - to welcome criticism
 - to curb evil and exalt the good.

Pestalozzi, Herbart, and Froebel

Rousseau has had great influence on philosophy of education. Among those deeply affected by his views were Johann Heinrich Pestalozzi (1746-1827), Johann Friedrich Herbart (1776-1841), and Friedrich Froebel (1782-1852). Many philosophers of education today entirely ignore the work of the three men we will consider briefly here, but there are several reasons for including them in our discussion. First, educators and even educational theorists too often neglect the history of education, and they fail to realize that many purportedly new ideas have been suggested earlier; other ideas have interesting antecedents, and it sometimes pays off to trace their development. Second, since we have discussed Rousseau's work, it makes sense to consider Rousseau's influence on work that followed. Finally, a brief discussion of this work will provide a bridge to our study of John Dewey's philosophy of education.

Pestalozzi followed Rousseau in recommending that children be educated through the senses. He refined Rousseau's ideas and, following John Locke, created an approach called the "object lesson."¹⁸ An object lesson begins with the exhibition of an object and an invitation to students to describe it, tell how it works, and so on. For example, today we might present a table lamp (complete with cord, shade, and bulb) to a class of sixth graders and explore a host of questions with them. Is the cord safe? If not, how can we make it safe? How do electric lightbulbs work? Is this one bright enough for reading? In what room would you use such a lamp? Is it attractive? What material is used for shades? How is a lamp wired? After this last question, we might take the lamp apart and rewire it.

Pestalozzi's object lessons usually ended with a moral. He was much concerned with moral education and believed that all lessons should have a moral point as well as a cognitive one. Interestingly, most of us today associate an "object lesson" with only the moral part of a lesson; for example, we often comment on someone's failure at an ill-conceived or ill-intentioned task by saying, "I guess that was an object lesson for him." Many have never heard of the scientific-cognitive aspect of such lessons.

Besides his interesting work in refining and inventing specific implementations of Rousseau's ideas, Pestalozzi is also remembered for his devoted work with poor children. In his own school, he demonstrated that poor children, well cared for and skillfully taught, could learn as much as wealthier children. Two hundred years later, many people in our society still doubt that this is true, and today's reformers who agree with Pestalozzi decry the horrible inequalities found in poor schools.²¹ Like Pestalozzi, many of these reformers are thought to be cranks and visionaries, and their work is often brushed aside for "more important goals."

As a final comment on Pestalozzi's pedagogical methods, we might mention an especially interesting case. It is said that Albert Einstein had a very difficult time in regular schools and finally became both happy and successful when he was enrolled in a Swiss Pestalozzi-like school. There he encountered methods that appealed to his visual learning style—maps, tools, sophisticated equipment, and objects of all sorts.²² As thoughtful educators, we may wonder how many budding Einsteins experience failure in today's schools because the prevailing methods do not meet their needs.

Herbart, too, built on Rousseau's ideas about the senses and their critical function in education. He described the mind's function in terms of presentations and something called an "apperceptive mass." The latter, Herbart thought, was a collection of previous experiences that could be called into play to understand a new percept or idea. As described by Herbart, the apperceptive mass is a forerunner of sorts for Piaget's "cognitive structure." A major difference between the two

concepts is that Piaget's cognitive structures are operational mechanisms, whereas Herbart's apperceptive mass contains the actual content of experience. However, both function to assimilate new material.

An early advocate of scientific methods in education, Herbart believed that teaching methods should be designed to match the way minds work. Teachers must prepare students for new material by bringing to consciousness relevant experiences students have stored in the apperceptive mass. Then teachers and students can go on to shape the new material so that it is deposited accurately and is accessible for future use. His method is highly cognitive and emphasizes the activity of the teacher more than that of the student.

Herbart, like Pestalozzi, tried to make his pedagogical method quite specific, and it was tailored, of course, to his philosophical thought on the mind and how it functions. Following his beliefs on how our minds work, Herbart suggested a four-step lesson that his followers made into five steps: preparation, presentation, comparison and abstraction, generalization, and application. You may notice with some surprise that these five steps have elements in common with today's "five-step lesson." It is doubtful however, that Herbart intended the narrow and rigid implementation that many of his followers insisted upon.

John Dewey gave Herbart great credit for bringing "the work of teaching out of the region of routine and accident." ²³ Herbart posed many questions that are still vital in the philosophy and science of teaching. But Dewey thought Herbart had made several mistakes. The greatest flaw in his theory, Dewey believed, was his neglect of the living organism and its purposes. Teaching, Dewey insisted, could not be described in so many steps for all students and all subjects. Teachers must begin with the purposes of their students, steer them into potentially rich experiences, and watch carefully for signs of growth. Dewey was vigorous in his criticism of Herbart:

The philosophy is eloquent about the duty of the teacher in instructing pupils; it is a host silent regarding his privilege of learning. It emphasizes the influence of intellectual environment upon the mind; it slurs over the fact that the environment involves a personal sharing in common experiences. It exaggerates beyond reason the possibilities of consciously formulated and used methods, and underestimates the role of vital, unconscious attitudes. . . . It takes, in brief, everything educational into account save its essence,--vital energy seeking opportunity for effective exercise.

From our current position, we might use Dewey's ideas to analyze and criticize contemporary attempts to make pedagogy uniform and scientific. Is the five-step lesson useful today? Is everything learned (or best learned) through direct instruction? Are Dewey's criticisms of Herbart thus applicable to today's pedagogical methods?

Froebel, a third thinker influenced by Rousseau, is best known today as the father of the kindergarten. In Froebel's metaphorical system, the kindergarten was a garden in which children, like flowers, unfold and grow. Rousseau's notion of the child's inherent goodness is reflected in Froebel's emphasis on nurturance and growth. From this perspective, the child is not wicked and in need of constant correction but is whole and beautiful. The kindergarten should preserve and nurture this goodness.

Froebel also wanted children to handle objects and observe shapes as part of their mathematical education, but he was not content simply to present shapes--circles, triangles, and the like--and have children learn their names and attributes. He attached a mystical symbolic meaning to each shape to give it importance in the spiritual and moral realm. John Dewey expressed considerable admiration for Froebel's loving attention to children and for many of his methods, but he thought the notion of unfolding was a mistake because it echoed Rousseau's contention that children are born with an essential goodness, and he ridiculed the idea that mathematical symbols must have a religious or moral connotation: "A single example may indicate [Froebel's] method. Everyone familiar with the kindergarten is acquainted with the circle in which the

children gather. It is not enough [for Froebel] that the circle is a convenient way of grouping the children. It must be used 'because it is a symbol of the collective life of mankind' in general."

This comment of Dewey's reveals something of the flavor of criticism philosophers of education sometimes direct at one another's work. We have seen that Dewey expressed admiration for something in the work of Rousseau, Pestalozzi, Herbart, and Froebel, but he also found difficulties-recommendations not fully grounded, inconsistencies, and ideas incompatible with Dewey's own underlying beliefs concerning the nature of the child, the meaning of education, the role of teaching, and the nature of lessons.

Rousseau

If we were studying the history of education, it would be strange to skip over the early Christian era and all of the Middle Ages. But we are looking for questions and ideas that arose in philosophical thought and still intrigue or beset us today. Some of the educational ideas of Jean-Jacques Rousseau (1712-1778) certainly fall into this category.

Rousseau is often referred to as the philosopher of freedom because he seemed to extol the natural (or primitive) state of human beings over the civilized one, and in nature, human beings--like animals--are free of the pressures and corruptions of the political state. Indeed, Rousseau's views of nature and the natural played a central role in his philosophy. He believed that "man" was born free and good and could remain that way in some ideal state of nature. Having to live with other people and accommodate to their needs begins a process of corruption in man that reaches its peak in the society characteristic of Rousseau's time. In social philosophy, Rousseau is credited with fundamental and impressive work on "social contract theory." On the negative side, he and all contractarians are criticized for promoting the myth of the presocial individual. Critics (e.g., contemporary communitarians, followers of Aristotle, Deweyans) say that it is ridiculous to suppose that genuine persons--individuals with the rational capacity for contract making--could exist before communities and a considerable core of culture.

However, Rousseau acknowledged that the search for an ideal state of nature could be little more than a thought experiment. He recognized that human beings cannot achieve their highest potentials as wild animals. He sought a civilized condition that would optimize self-reliance, compassion, civic duty, love of nature, and connection to God. His was an attempt to balance the needs of conjoint living with those of self-actualization.

With such a philosophical project in mind, Rousseau had to think about education. How should people be educated so as to preserve their natural goodness and also induce a positive sense of civic responsibility? As we consider Rousseau's program of education, we must stop using the gender-neutral language of "human being" and "people," for Rousseau recommended very different educations for boys and girls. Most of what we think of today as Rousseau's contributions to progressive education was directed at the education of boys. It is not too harsh to say that the "philosopher of freedom" believed in freedom for males but not for females. In fairness, however, we should note that he believed both attitudes--freedom for males and sheltered coercion for females--were justified because both were "natural." Both attitudes, Rousseau thought, were compatible with the essential nature of the beings under discussion, and it is this dependence on a concept of the natural that saves his philosophy of education from inconsistency.

Rousseau described the education of free men in his *Émile*. Because he believed that children are naturally good, Rousseau wanted Émile to be raised and educated with the least possible restraint. Émile did not have to be subjected to a rigid moral education; he was already good, and the task of his teachers would be to preserve that goodness while facilitating growth of the various competencies required for adult life. A rural setting was thought to be better than an urban one because the corruption of other people could be kept to a minimum. Émile was not to

be pressured into abstract thought or early book learning. He was to learn according to his own interests and through hands-on experience. Senses and feeling were primary; thought and abstraction were to be at their service. Émile's education required exquisite sensitivity on the part of his teacher. The teacher was not to impose his own objectives for learning on Émile but rather was to facilitate Émile's inquiries. This meant that the teacher had to anticipate where Émile's interests might lead and be prepared to guide him in a healthy direction. We will see echoes of this view in the work of John Dewey.

If you have been a student of education for even a short time, these ideas may sound familiar to you. In the 1960s and 1970s, there was an educational movement called "open education." It, too, recommended building education on the interests of children and giving them lots of hands-on experience. It emphasized doing, feeling, and observing, and it deemphasized formal lessons. Open education is still of enormous interest to educators, especially to educational philosophers and historians. Historians investigate the rise and fall of educational movements and "reforms." Why do certain ideas, such as Rousseau's, keep recurring? Do educational reforms occur in cycles? Must they occur in cycles, or is there a way to avoid ideological swings of the pendulum? Philosophers examine the underlying concepts, looking for similarities and differences between old and new manifestations of lasting ideas. As philosophers, we are interested in how educators and philosophers justify their ideas, and we are keen to locate logical flaws in their arguments.

Some of Rousseau's ideas are echoed in the writing of a twentieth-century psychologist and educator, A. S. Neill. Neill, too, insisted that children are naturally good and that pressures to make them grow up too fast ruin them. In particular, Neill condemned formal lessons (unless children ask for them) and religious and moral education. In his school, Summerhill, children were free to play until they wanted to attend classes, and they had a say in how the school was to be run. Except in matters of safety, Neill himself had only one vote--just as his students did. Even if you differ with Neill on many matters (and I confess that I do), you may admire his commandment to teachers: Thou shalt be on the child's side!

When we study the work of John Dewey, we will see a few similarities between his educational ideas and Rousseau's, but we will also see some major differences. For example, Dewey did not believe that children are born good. Nor did he believe, as many religious educators do, that children are born sinful and in need of salvation. Rather, he believed that children are born with the potential for both good and evil and that transactions with an educational or miseducational environment would direct them toward one or the other. The main similarity between Rousseau's recommendations and Dewey's is their common emphasis on the child's own motivation and direct action. Periodically, educators renew the arguments of Rousseau and Dewey for hands-on activities, and when this happens, there is a flurry of interest in "manipulatives" in the classroom. One other feature of Rousseau's educational thought should be mentioned before we turn to his treatment of girls and women. Rousseau believed that timing in education is crucial. Children are ready at certain times to learn certain things, and teachers need to observe their pupils carefully so that appropriate opportunities are made available. The ideas of readiness and timing are still important today. If you have studied developmental psychology, you know how important these ideas are to developmentalists. Some prominent advocates of open education were developmentalists. As followers of Jean Piaget, they felt that learning should serve development. Therefore, teachers should know what their students are ready to learn

and provide activities that will trigger development. Piagetians in particular believe that cognitive development proceeds in stages and that each stage is characterized by a distinctive cognitive structure. This fundamental structure acts as a mechanism to assimilate knowledge and build substructures. It is induced to change-to undergo accommodation--as the child (at an appropriate age) encounters problematic situations that will not yield to its direction. We will consider Piaget's work again in later chapters.

Contemporary followers of L. S. Vygotsky emphasize social interaction rather than the subject-object interaction so prominent in Piaget's work, but the concepts of timing and readiness are still crucial. Vygotsky said that every function in children's cultural development appears first at the social level; that is, children can perform certain tasks in social settings with the help of others. Later the same functions appear at the psychological level and can be activated by the individual children. Mathematics educators, particularly those who take the perspective of social constructivism (Chapter 6), are especially interested in the work of Vygotsky.

Another educational thinker took Rousseau's interest in timing even further. Maria Montessori taught that children go through "critical periods" in which certain capacities can and must be developed or lost. Montessori was a physician and well versed in physiology. It is likely that her ideas on critical periods came from her studies of animal physiology; kittens, for example, will not develop sight if they are deprived of light during the critical period for ocular development. Building on this physiological example, Montessori suggested that children might lose the capacity for order if parents and teachers did not nurture it when its first signs appeared. Her insistence on the proper placement and use of all objects in the classroom arises from this belief. Today most educators either discount Montessori's view on critical periods or modify it considerably but many do share Rousseau's, Montessori's, Piaget's, and Vygotsky's belief that timing is important in teaching and learning.

In summary, Rousseau's child starts out good. If he (and we must now use the masculine gender) is educated properly, he will grow into a free, loving, and responsible adult. He must, in an important sense, be allowed to guide his own education. His teacher should facilitate--provide appropriate objects and potential experiences, anticipate his needs and direction of growth, and abstain from the sort of coercion that spoils almost all children. Rousseau's is, in many ways, a lovely view of education.

How should *Émile's* female counterpart, Sophie, be educated? I am not going to reveal the whole story here; we will discuss it more fully in the chapter on feminism and education. But you should be aware--lest you leave this chapter with an uncritical glow of enthusiasm for Rousseau--that his recommendations for Sophie differed drastically from those for *Émile*. Whereas *Émile* was taught to think for himself, Sophie was taught to guard her reputation and do what convention prescribed. Whereas *Émile* was prepared for responsible, public life, Sophie was confined to the home. In the fifth book of *Émile*, Rousseau discussed the education of Sophie:

The entire education of women must be relative to men. To please them, to be useful to them, to be loved and honored by them, to rear them when they are young, to care for them when they are grown up, to counsel and console, to make their lives pleasant and charming, these are the duties of women at all times, and they should be taught them in

their childhood. To the extent that we refuse to go back to this principle, we will stray from our goal, and all the precepts women are given will not result in their happiness or our own.

Some argue that Rousseau must be excused for his misogyny. After all, he--as is everyone--was a product of a particular time and place. But in answer to this, we may note that Rousseau was familiar with Plato and also with contemporary writing that considered women equal to men. Further, there is evidence that Rousseau himself was far more generous in his thinking about women in his younger days than when he wrote *Émile*. As students of education, you may be even more astonished and disconcerted to find that most older philosophy of education texts that treat Rousseau do not even mention book five of *Émile*. The education of Sophie has been almost entirely ignored until recently.

Socrates and Plato

What we know of Socrates (4 69)- 399 B.C.) comes to us entirely from the writing of his disciples--chief among them Plato. Socrates himself taught by engaging others in dialogue, not by writing, and most students of education immediately associate his name with the "Socratic method." This method of teaching, popular especially in law schools, begins with the teacher posing a deceptively simple question such as, What is truth? or, What does it mean to be just? When a student answers, the teacher responds with another question that prompts him or her to think more deeply and offer a new answer. The process--also called destructive cross-examination (elenchus)--continues until either teacher or student or both feel that the analysis has gone as far as they can take it at the moment.

In the following bit of dialogue taken from *Republic*, book I, Socrates convinces Polemarchus that his previous position on justice--that we ought to do good to the just and harm to the unjust--is faulty. Socrates starts the argument:

And instead of saying simply as we did at first, that it is just to do good to our friends and harm to our enemies, we should further say: It is just to do good to our friends when they are good and harm to our enemies when they are evil?

Yes, that appears to me to be the truth.

But ought the just to injure anyone at all?

Undoubtedly he ought to injure those who are both wicked and his enemies.

When horses are injured, are they improved or deteriorated?

The latter.

Deteriorated, that is to say, in the good qualities of horses, not of dogs?

Yes, of horses.

And dogs are deteriorated in the good qualities of dogs, and not of horses?

Of course.

And will not men who are injured be deteriorated in that which is the proper virtue of man?

Certainly.

And that human virtue is justice?

To be sure.

Then the men who are injured are of necessity made unjust?

That is the result.

But can the musician by his art make men unmusical?

Certainly not.

Or the horseman by his art make them bad horsemen?

Impossible.

And can the just by justice make men unjust, or, speaking generally, can the good by virtue make them bad?

Assuredly not.

Any more than heat can produce cold?

It cannot.

Or drought moisture?

Clearly not.

Nor can the good harm anyone?

Impossible.

And the just is the good?

Certainly.

Then to injure a friend or anyone else is not the act of a just man, but of the opposite, who is the unjust?

I think that what you say is quite true, Socrates.

This small piece of dialogue is quite characteristic of Socrates. He dominates the dialogue and leads the listener. Sometimes, as in a later part of the dialogue with Thrasymachus, he allows a partner to advance his own argument, and very rarely (as, again, with Thrasymachus), he fails to convince his partner entirely. In most of the dialogues, Socrates is a formidable teacher--leading, questioning, giving information (often in the form of a question), forcing his listeners gently and not so gently to see the errors in their thinking.

Many of you are no doubt familiar with an old television series (and a preceding film) called "The Paper Chase." In it, the brilliant and irascible Professor Kingsfield terrorized his law students with his expert use of the Socratic method. Kingsfield and Socrates had much in common: great intelligence, penetrating wit, a willingness to use occasional sarcasm, and

unfailing skill in choosing and pursuing questions of real importance. But Kingsfield had official power over his students. Their answers were evaluated, and failure to prepare for their professor's questions could lead to failure in law school and the need to consider another profession. Socrates, in contrast, met his students informally in various public places and private homes. Participants could come and go as they pleased, respond or not respond to Socrates' probing questions. Indeed, Socrates always insisted that he did not teach anyone anything, and certainly he was not a professional teacher, for he never charged his "pupils" anything.

As professional teachers--or as students about to become professional teachers--you should ask yourselves whether the Socratic method can be used in modern classrooms as Socrates used it. You might even want to consider whether Socrates himself always used it in ways you find appropriate. Did he show proper respect for the dignity of his students? Did he occasionally force opinions on them (or seem to)? Is it right (in what sense of "right"?) to cross-examine a student relentlessly in front of his peers? Can you think of ways to adapt the method so that it is acceptable to your own moral standards? Finally, if you aspire to become a Socratic teacher, what must you do to prepare yourself ?

We, like Socrates himself, might regard his method more as a method of learning or inquiry than a method of teaching. Socrates was a superlative thinker, and in Chapter 5, we will revisit his method of questioning as a method of critical thinking. It was not unusual for Socrates to start an investigation with one question and, after a brief exploration, switch to another, either because he had established that an answer to the second was necessary for analysis of the first or because the initial question was not well formulated for the investigation he hoped to complete.

Socrates did not employ his method on trivial questions. He was interested in the great questions of life: How can we find truth? What does it mean to know something? How should human beings live their lives? What is evil? What do we owe the state, and what does it owe us? What does it mean to be just? Here we should return for a moment to the content of Socrates' dialogue with Polemarchus. Notice that Socrates argues that a just person cannot, by acting justly, make others unjust and that, if we argue that harm or injury tends to "deteriorate a man" so that he becomes unjust, then a just person must not injure even those who are evil. This dialogue raises a host of questions that have been debated for centuries: Can retributive justice be defended? How should harm or injury be defined? (Is a guilty child harmed or injured by punishment?) Was Socrates right when he claimed that people cannot be made unjust by just acts?

As he explored these questions that fascinated him, Socrates was led to criticize those in both public and private life whose thinking and behavior revealed ignorance or apparently evil intentions. His message to students and politicians often ran something like this: Our analysis shows that *this* is what you are really doing or striving for. Consider well. For if you follow the analysis and understand, you will change your ways. Those who know the right, will do the right.

Socrates was permitted to engage in his criticism of the state and its prominent citizens for a long time, but eventually, in a time of great political unrest, he was charged with not believing in the state's gods and with corrupting the youth of Athens. As you all know, despite his elegant (and somewhat arrogant) defense, he was found guilty and sentenced to death.

In philosophy of education, we could profitably spend weeks on the case of Socrates and what it implies for contemporary education. If you were to follow Socrates' example, you would certainly have to explore highly sensitive questions with your students. Would you be allowed to do so? Should the school district or state forbid you to discuss certain topics? Or consider the charge against Socrates that he did not believe in the state's gods. Do we hear similar charges hurled at various public figures today? Fortunately, in the United States, we do not condemn political candidates or other public figures to death for their errant religious beliefs, nor do we put teachers to death for discussing creation, evolution, sex, or communism. But people do still lose offices and jobs and, sometimes, even their good names in a battle Socrates fought long ago—in a cause he died for.

In later chapters on epistemology (theory of knowledge) and ethics, we will consider some of Socrates' ideas on these topics. Here we will briefly review the basic educational ideas of Socrates and Plato. Most of the ideas that follow are Plato's even though he had Socrates voice them. Even today scholars are not entirely sure which of the ideas spoken by Socrates in Plato's writing are those of Socrates himself and which are Plato's own. In what follows, I will refer to Plato.

Plato not only explored sensitive and complex questions about the relations of citizens to their state and all its functions, but in doing so, he created a utopian state, the Republic, to illustrate his beliefs and principles. Much of *Republic* is concerned with problems of education. 3 Plato believed that students should be educated according to their capacities—that they should not all have exactly the same education. In this century, the great American philosopher John Dewey spoke with some admiration of Plato's astute observation that education should be tailored to the child. However, he faulted Plato for supposing that human beings necessarily fall into exactly three categories. Dewey wanted education to be fitted to each individual child. Further, Dewey rejected hierarchical categories of educational programs. Unlike Plato, he would not label one category better or higher than another.

Plato's plan provided for the special education of workers and artisans, of guardians (soldiers), and of rulers (the upper echelon of the guardian class). The first group were to be well trained in specific occupations so that, Plato says through Socrates, our shoes will be well made and our crops well tended. The second, identified by natural physical strength and spirit, were to receive an expert level of physical and moral training. Socrates described the noble auxiliary or guardian as well trained in philosophy, spirit, swiftness, and strength. Finally, potential rulers were to be educated with meticulous care in philosophy, mathematics, literature, and history, and their education would continue well beyond the usual school years.

Plato's model of education is "functionalist"—a model designed to produce competent adults to meet the needs of the state. Plato developed his thought on education in the context of describing the ideal state, and he could have argued—as Dewey did later—that there is no *inherent* conflict between the individual and the state. That is, educators could work to produce

people who are both self-actualized and useful to the state. However, Plato had very definite ideas about the good life and what we today call "self-actualization." Only those who had the leisure to think long and deeply, to continue lifelong study, could participate in the truly good life. The contemplative life was closely identified with the good life. Because only a select few of the population were thought capable of real contemplation and because the manual work of the society had to be done, justice decreed that students be prepared for work consonant with their capacities.

Plato did not argue, as Dewey did later, that people in vastly different occupations could exemplify the truly human. That status was reserved for a few, but the few earned the right to their lofty position through their own merit. All children were to be given opportunities to show their abilities, and only gradually would they be sorted out. For Plato such an arrangement was thought to be just, and this line of thinking is still strong in today's educational policymaking. A particular way of life--one marked by high salary and prestige--is thought to be the best, and all children are to be given opportunities to learn the subjects that will prepare them for such a life. If they fail to succeed at these opportunities, their failure is not a violation of justice.

There are at least three ways to argue against Plato's conception of educational justice. One is to posit a wide range of exemplars of the good life--to deny Plato's single model or any other single ideal. Another is to insist that justice is not satisfied by equal opportunity; it must somehow produce equal outcomes. Still another, very popular today, is to deny that there are educationally significant differences among children--to insist that "all children can learn" whatever the school sets out for them to learn. We will revisit these possibilities in later chapters.

Jane Roland Martin raises another compelling argument against Plato when she accuses him of ignoring the reproductive tasks of his society. ⁴ For Martin, the "reproductive" processes are those in which women have traditionally engaged: raising children, homemaking, caring for the ill and aged, and the like. Plato says a great deal about the education of children but very little about their day-to-day care. He does say that members of the ruler class should be free of all such tasks--indeed they should not have families at all but communal marriages, which should produce fine offspring to be raised, also communally, by others. Without the attachment of family and personal property, guardians should be better able to devote their energy and wisdom to their state duties.

Martin's complaint is that although Plato (through Socrates as his spokesperson) proposed allowing females to be guardians (an astounding suggestion in his time), the women who are chosen for such roles become essentially sexless. They are to be educated in exactly the same way as males. Nothing in the education of either is derived from a consideration of home and family life; everything comes from a consideration of public life--a traditional male model. If education is to be the same for males and females, Martin argues, it should include the best and most significant features of both traditions. To develop such a model requires analysis and evaluation of both traditions and, most likely, a dramatic transformation of education. Plato deserves credit for insisting on the irrelevance of sex in choosing guardians, but his model of education assumes the superiority and desirability of male life.

The basic components of education described by Plato have remained at the heart of liberal education for more than 2,000 years. Literature, history, mathematics, and philosophy (which

in Plato's time included natural science as a less lofty component) still form the backbone of the academic curriculum. Several contemporary philosophers of education question the wisdom of using the traditional disciplines as the core of the secondary school curriculum, and we will look at some of those arguments in the next several chapters. For now, it may be enough to consider how philosophers of education might begin a critique of Plato's curriculum. First, we might challenge the appropriateness of his recommendations for current schooling. But second, we might question whether Plato's prescriptions were sound even for his own time. Much that he recommended was based on a glorification of war and warriors. If Athenians had not been so fond of war, if they had not been so parochial in their love for Athens, would their state have lasted longer? Which of his recommendations were directed specifically at the conduct of successful military campaigns and the production of warriors? Are there elements of our own curriculum designed for the same purpose? Is the aim explicit or implicit?

The purposes of this brief discussion of Plato and Socrates are several. We have seen that some questions in the philosophy of education have continued to intrigue philosophers and educators as they did Plato and Socrates. We have been reminded that fine teachers who persist in asking sensitive questions may be accused by authorities of corrupting youth. Plato and Socrates have led us to ask a host of questions about the state's role in education, the aims of education, the genderized nature of the traditional curriculum, the wisdom of the traditional curriculum for today's students, and the possibility of using (or adapting) a Socratic method. All of these questions are likely to remain with us at the end of a course in philosophy of education. Like Socrates, we will not claim to *know*, but we should be better able to identify and reject nonsense when we hear it and to make recommendations compatible with sound analysis.