CHAPTER 1

A Précis of Psychopathological History

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Before we and our contributors undertake a systematic analysis of current trends in psychopathology in this text, it may be useful to introduce the subjects with reference to its historical origins and evolution. Efforts to understand and resolve the problems that researchers studying mental disorders continue to face can be traced through many centuries in which solutions have taken unanticipated turns and have become enmeshed in obscure beliefs and entangled alliances, most of which have unfolded without the care and watchful eye of modern scientific thoughts and methods. Psychopathology remains today a relatively young science. We find that many techniques and theories of our time have long histories that connect current thinking to preexisting beliefs and systems of thought, many of which are intertwined in chance associations, primitive customs, and quasi-tribal quests. The path to the present is anything but a simple and straight line; it has come to its current state through an involvement in values and customs of which we may be only partly aware. Many are the product of historical accidents and erroneous beliefs that occurred centuries ago, when mysticism and charlatanism flourished.

The traditions of psychopathology today are not themselves tight systems of thought in the strict sense of scientific theories; they certainly are neither closed nor completed constructions of ideas that have been worked out in their final details. Rather, they are products of obscure lines of historical development—movements often subject to the confusions and misunderstandings of our remote past, when a disaffection with complexities typified life. Nevertheless, interest in ourselves, in our foibles as well as our achievements, has always been central to our human curiosity. The origins of interest in the workings of psychopathology were connected in their earliest form to studies of astronomy and spiritual unknowns. Even before any record of human thought had been drafted in written form, we humans were asking fundamental questions, such as why we behave, think, act, and feel as we do. Although primitive in their ideas, ancient people were always open to the tragic sources in their lives. Earliest answers, however, were invariably associated with metaphysical spirits and magical spells. Only slowly were more sophisticated and scientific ideas formulated.

It was not until the 6th century B.C. that the actions, thoughts, and feelings of humans

were attributed to natural forces—that is, to sources found within ourselves. Philosophers and scientists began to speculate intelligently about a wide range of psychological processes; many of their ideas turned out to be remarkably farsighted. Unfortunately, much of this early imaginative and empirical work was forgotten through the centuries. Time and again, it was then slowly stumbled upon and rediscovered by careful or serendipitous efforts. For example, John Locke in the 17th century described a clinical procedure for overcoming unusual fears; the procedure he described is not very different from the systematic desensitization method developed this past century by Joseph Wolpe. Similarly, Gustav Fechner, founder of psychophysics in the mid-19th century, recognized that the human brain is divided into two parallel hemispheres that are linked by a thin band of connecting fibers (what we now term the corpus callosum). According to Fechner's speculations, if the brain was subdivided, it would create two independent realms of consciousness—a speculation confirmed and elaborated in the latter part of this past century by Roger Sperry, in what has been referred to as "split-brain research."

Every historical period was dominated by certain beliefs that ultimately won out over previously existing conceptions, while retaining elements of the old. As the study of mental science progressed, different and frequently insular traditions evolved to answer questions posed by earlier philosophers, physicians, and psychologists. Separate disciplines with specialized training procedures developed. Today divergent professional groups are involved in the study of the mind (e.g., the neuroscientifically oriented psychiatrists, with a clear-eyed focus on biological and physiological processes; the psychoanalytic psychiatrists, with an austere yet sensitive attention to unconscious or intrapsychic processes; the personological psychologists, with the tools and techniques for appraising, measuring, and integrating the mind; and the academic psychologists, with a penchant for empirically investigating the basic processes of behavior and cognition). Each group has studied the complex questions generated by mental disorders with a different focus and emphasis. Yet the central issues remain the same. By tracing the history of each of these and other conceptual traditions, we will learn how different modes of thought today have their roots in chance events, cultural ideologies, and accidental discoveries, as well as in brilliant and creative innovations.

From today's perspective, it seems likely that future developments in the field will reflect recent efforts to encompass and integrate biological, psychological, and sociocultural approaches. No longer will any single and restricted point of view be prominent; each approach will enrich all others as one component of a synergistic whole. Integrating the disparate parts of a clinical science—theory, nosology, diagnosis, and treatment—is the latest phase in the great chain of history that exhibits an evolution in mental science professions from ancient times to the new millennium. Intervening developments (both those that have been successful and those that have not) were genuine efforts to understand more fully who we are and why we behave the way we do. The challenge to know who we are is unending, owing to the complexity of human functioning. New concepts come to the fore each decade, and questions regarding established principles are constantly raised. Perhaps in this new century we will bridge the varied aspects of our poignant yet scientific understanding of psychopathology, as well as bring the diverse traditions of the past together to form a single, overarching synthesis.

Ancient History

Primitive humans and ancient civilizations alike viewed the unusual and strange within a magical and mythological frame of reference. Behavior that could not be understood was thought to be controlled by animistic spirits. Although both good and evil spirits were conjectured, the bizarre and often frightening behavior of persons with mental disorders led to a prevailing belief that demon spirits must inhabit them. The possession of evil spirits was viewed as a punishment for failing to obey the teachings of the gods and priests. Fears that demons might spread to afflict others often led to cruel and barbaric tortures. These primitive "therapies" of shock, starvation, and surgery have parallels in recent history, although the ancients based them on the more grossly naive conception of demonology.

What has been called the sacred approach in primitive times may be differentiated into three phases, according to Roccatagliata (1973): "animistic," "mythological," and "demonological." These divergent paradigms shared one point of view: that psychopathology was the expression of transcendent magical action brought about by external forces. The animistic model was based on pre-logical and emotional reasoning derived from the deep connection between primitive beings and the mysterious forces of nature. From this viewpoint, events happened because the world was peopled by animated entities driven by obscure and ineffable forces that acted upon human minds and souls. The second phase, that characterized by mythological beliefs, transformed the animistic conception so that indistinct and indefinable forces were materialized into myths. Every fact of life was imbued with the powers of a particular entity; every symptom of disorder was thought to be caused by a deity who could, if appropriately implored, benevolently cure it. In the third, or demonological phase, the transcendent mythological deities were placed into a formal theological system such as the Judeo-Christian. In line with this latter phase, two competing forces struggled for superiority: one creative and positive, represented by a good father or God; the other destructive and negative, represented by the willful negation of good in the form of demonic forces of evil. These three conceptions followed each other historically, but they did overlap, with elements of one appearing in the others at times.

Many aspects of prehistoric life could not be understood; magic and supernatural concepts helped early humans make sense out of the unfathomable and unpredictable. Weighted with life's painful realities and burdensome responsibilities, these beliefs gave an order and a pseudo-logic to fears of the unknown—a repository of unfalsifiable assumptions in which the supernatural filled in answers for that which could not be understood. Ultimately, supernaturalism became the dominant world view in which the perplexing experiences of life could be objectified and comprehended. Priests and wizards became powerful, capitalizing on the fears and peculiarities of the populace to undo spells, "heal" those with physical illnesses, and "purify" those with mental distress. Within this worldview, eccentric or irrational individuals were assuredly touched by spirits who possessed superhuman powers to induce psychic pathology. Almost all groups permitted healing to fall into the hands of priests and magicians—a situation that still exists today in some societies. Living in a world populated with imaginary beings, these spiritual forces could often calm the worst human anxieties and expunge the ever-present terrors of life. Despite extensive archeological analyses, however, our knowledge of primitive times is no more than fragmentary. Nevertheless, we may assume that primitive humans saw a world populated with spirits that were essentially illusions created by their own state of anguish and perplexity.

India, Babylonia, and China

Many contributions of the early Hindus are associated with the name of ***Susruta***, who lived 100 years before Hippocrates. His works followed the traditional beliefs of his day regarding possible demonic possession. However, Susruta suggested that the passions and strong emotions of those mental disorders might also bring about certain physical ailments calling for psychological help (Bhugra, 1992). Anticipating the significance of temperament or innate dispositions, Hindu medicine proposed that three such inclinations existed: wise and enlightened goodness, with its seat in the brain; impetuous passions, the sources of the pleasure and pain qualities, with their seat in the chest; and the blind crudity of ignorance, the basis of more animalistic instincts, its seat located in the abdomen.

A concern with mental health has long been a part of Indian cultures, which evolved various ways of attempting to understand and negotiate mental disorder and psychological problems. Indians have long been involved in constructing explanatory techniques. In the first formal system of medicine in India, *Ayurveda* (*The Book of Life*), physical and mental illnesses were not clearly demarcated. *Caraka Samhita* dealt with medical diagnoses and management possibly dating from 600 B.C. and was the foremost text of the ancient Indian medical system. *Caraka* defined *ayu* (life) as a state consisting of *shareera* (body), *indriya* (sens-

es), *satva* (psyche), and *atma* (soul). Soul could not be destroyed, and it underwent reincarnation. The mind was responsible for cognition, and it directed the senses, controlled the self, reasoned, and deliberated. The equilibrium between the self and mind was viewed as paramount to good health. *Caraka* used the general term *doshas* for the body fluids or humors, *vata*, *pitta*, and *kapha*. The theory of *doshas* may have developed independently of the Greek humoral theory, or possibly the Hindu system may have traveled to Greece. Types of food were thought to influence the mind, personality characteristics, and the interactions among the three *doshas*. Different personality types were described in detail as leading to mental illness, through either unwholesome diet or moral transgressions. In the Hindu system, mental disorders were seen as largely metaphysical, but different appearances of mental disorders (like *unmada*, insanity) were described as resulting from heredity, imbalanced *doshas*, temperament, inappropriate diet, and metapsychological factors. *Caraka* also contained many descriptions of possession states regarded as arising from supernatural agents—a belief that is still apparent in many parts of highly religious Indian society. Religious connotations and references to spiritual enlightenments were only challenged in the early 19th century by the emerging Western-science-based medicine introduced by British rulers. In India, colonial medical institutions became brick-and-mortar symbols of Western intellectual and moral power, with European doctors even being taken as the sole excuse for empire. Indian magical practices and religious customs have been marginalized to some extent, but a variety of shamans—whose therapeutic efforts combine classical Indian alchemy, medicine, magic, and astrology with beliefs and practices from folk and popular traditions—are still present.

In the Middle East was the ancient civilization of Babylonia; it was not only a vast geographical expanse, but the foundation of philosophical thought for most nations in the Mediterranean region. In fact, many of the traditions discussed among the Greeks and Romans can be traced to ideas generated initially in the Babylonian empire. Babylonians were oriented toward astronomical events; superstitions regarding the stars produced many gods, a result largely of their intellectual leaders' fertile imaginations. Help from the gods was often sought through magical rites, incantations, prayers, and the special powers of those who were physicians or priests. The Babylonians assigned a demon to each disease; insanity, for example was caused by the demon Idta. Each was to be exorcised through special medicines (primarily herbs and plants), confessions, and other methods to help restore a balance between conflicting supernatural forces. As the Babylonians saw it, invariable tensions existed among the different gods—but, more importantly, between a more or less rational, as opposed to a superstitious, explanation of psychic ailments.

The first medical book in China, *Neijing* (*The Canon of Internal Medicine*), was compiled between 300 B.C. and 100 B.C. Organic syndromes, like epileptic seizures (*dian*) and delirium-like states, were also described, but with no clear distinction from the concepts of insanity and psychosis (*kuang*). The primary causes of psychiatric illness were suggested to be vicious air, abnormal weather, and emotional stress. The famous doctor ***Zang Zhongjing***, the Hippocrates of China, introduced other concepts and syndromes, such as febrile delirium, globus hystericus, and puerperal psychosis, in his *Jinkuiyaolue* (*A Sketchbook in a Golden Box*). Chinese medicine has tended to explain pathology change by means of philosophical concepts, and this framework has undergone little change. It includes the notions of the complementary *yin* and *yang*; the five elements, gold, wood, water, fire, and earth; and the principle of *Tao* (i.e., the way), which has been considered as the ultimate regulator of the universe and the most desirable state of well-being and longevity achieved by integrating the individual self into the realm of nature. These ontological principles were described in *The Yellow Emperor's Classic of Internal Medicine* some 20 centuries ago (Liu, 1981). Different personality types were portrayed as resulting from combinations of the five elements (e.g., the fiery type, the earthy type, the golden type, and the watery type). Phenomena occurring inside human beings were understood in terms of phenomena occurring outside in nature. Chinese medicine later became organ-oriented; that is, every visceral organ was believed to have charge of

a specific function. The heart was thought to house the mind, the liver to control the spiritual soul, the lung the animal soul, the spleen ideas and intelligence, and the kidney vitality and will. No attention was paid to the brain! For a long time psychiatric symptoms were interspersed with those of physical disease. The mind–body dichotomy was not a central theme. Mood disturbances and psychiatric symptoms attributed to menstrual irregularities tended to be expressed in somatic terms. In ***Chin-Yue's*** *Medical Book*, the Chinese word for "depression" literally meant "stagnation," implying obstruction of vital air circulation in the body. Case vignettes of patients with "deceiving sickness" (i.e., hysterical neurosis) were presented in the same book explaining symptom formation in people trapped in very difficult situations. In a similar way, sexual impotence was explained by excessive worry. In summary, psychiatric concepts of mental illness in China have undergone basically the same sequence as in the West: supernatural, natural, somatic, and psychological stages. However, Chinese medicine has been relatively less influenced by religious thoughts compared than early European medicine was; patients in Europe in the Middle Ages were declared by priests to be bewitched and were punished. Acupuncture, traditional Chinese medicine, folk herbs, and psychotherapy have been the most commonly used treatment approaches in China.

Egypt, Greece, and Rome

In Egypt, as in other early civilizations, there is evidence that the heart was thought to be the center of mental activity. Egyptians also had difficulty in separating prevailing supernatural beliefs from beliefs about things that could be observed and modified in nature. Astronomical phenomena were the primary objects of worship. "Natural" qualities were usually turned aside in favor of the mystical powers of the gods. Over the course of a century or two, Egyptian philosophers and physicians began studying the brain, ultimately recognizing it as the primary source of mental activity. Egyptians recognized that emotional disorders could be described in line with ideas proposed by the Greeks. Thus the set of disturbances the Greeks termed "hysteria" (using their word for "uterus") was caused, as the Egyptians saw it, by a wandering uterus that had drifted from its normal resting location; the task of the physician was to bring the uterus back to its normal setting. This explanation for hysteria continued until the late Middle Ages.

In the earliest periods of Greek civilization, insanity was considered a divine punishment, a sign of guilt for minor or major transgressions. Therapy sought to combat madness by various expiatory rites that removed impurities, the causes of psychic disorders. Priests mediated an ill person's prayers to the gods so as to assure his or her cure. Thus, with divine help, the person's heart could be purified of its evil. Albeit slowly, Greek scholars realized that little of a rational nature characterized their way of thinking about mental pathology. To them, external but unseen agents could no longer serve as a logical basis for a genuine understanding of mentally troublesome phenomena. A fundamental shift began to take place, not merely in the manner in which different types of mental disorders might be described, but in the basis for thinking about ways to alter these aberrant behaviors. In order to "treat" mental disorders, the Greeks began to recognize the necessity of understanding how and why mental disorders were expressed in the natural world; only then could they successfully deal therapeutically with the tangible symptoms of everyday mental life. Instead of leaving the treatment of mental disorders to the supernatural and mystical, they began to develop a more concretely oriented perspective. This transition was led by a number of imaginative thinkers in the 5th and 6th centuries B.C.

A central intellectual effort of Greek philosophers was the desire to reduce the vastness of the universe to its fundamental elements. Most proposed that complexities could be degraded to one element—be it water, air, or fire. Their task was to identify the unit of which all aspects of the universe were composed. Among the first philosopher-scientists to tackle this task was ***Thales*** (652–588 B.C.). What little we know of Thales comes largely from the writings of later Greek philosophers, notably Aristotle, Plato, and the historian Herodotus. This nimble-witted Greek proposed that the fundamental unit of the universe was a tangible and identifiable substance, water.

Though Thales was not the prime forerunner of a modern understanding of mental processes, he was a radical thinker who redirected attention away from mysticism, recognizing that psychic disorders were natural events that should be approached from a scientific perspective. As a pivotal figure in his time, he ushered in an alternative to earlier supernatural beliefs. Equally significant was Thales's view that efforts should be made to uncover underlying principles on which overt phenomena were based. Oriented toward finding these principles in physical studies and "geometric proportions," he turned to "magnetic" phenomena, convinced that the essential element of all life was its animating properties. To Thales, action and movement, based on balanced or disarrayed magnetic forces, was what distinguished human frailty. In this belief, he further derogated the view that external supernatural forces intruded on the psyche; rather, the source of pathology was inherent within persons themselves.

Paralleling the views of Thales, ***Pythagoras*** (582–510 B.C.) reasserted the importance of identifying the underlying scientific principles that might account for all forms of behavior. He differed from Thales in that he retrogressively preferred to use ethics and religion as the basis for deriving his scientific principles. More progressively, however, he was the first philosopher to claim that the brain was the organ of the human intellect, as well as the source of mental disturbances. He adopted an early notion of biological humors (i.e., naturally occurring bodily liquids), as well as positing the concept of emotional temperament to aid in decoding the origins of aberrant passions and behavior. The mathematical principles of balance and ratio served to account for variations in human characterological styles (e.g., degrees of moisture or dryness, the proportion of cold or hot, etc.). Balances and imbalances among humoral fundamentals would account for whether health or disease was present. Possessing a deep regard for his "universal principles," Pythagoras applied his ideas to numerous human, ethical, and religious phenomena. Though he believed in immortality and the transmigration of souls, this did not deter him from making a serious effort to articulate the inner "equilibrium" of human anatomy and health.

Pythagoras considered mental life as reflecting a harmony between antithetical forces: good–bad, love–hate, singular–plural, limited–unlimited, and so on. Life was regulated according to his conception of opposing rhythmic movements (e.g., sleep–wakefulness, inspiring–expiring). Mental disorders reflected a disequilibrium of these basic harmonies, producing symptoms of psychic impairment. To him, the soul could rise or descend from and to the body. The more the soul was healthy, in balance, and without psychic symptoms, the more it resembled solar energy. Pythagoras spoke of the soul as composed of three parts: reason, which reflected truth; intelligence, which synthesized sensory perceptions; and impulse, which derived from bodily energies. The rational part of the soul was centered in the brain; the irrational one, in the heart. Incidentally, Pythagoras coined the term "philosophy" by putting together the words *philo*, meaning "love," and *sophia*, meaning "wisdom."

Ostensibly through his father, Apollo, ***Aesculapius*** (ca. 550 B.C.) gained his understanding of the nature of mental disorders through the divination of dreams, which he then transmitted to his sons, Machaon and Podaleirius. A series of followers, called Aesculapians, established long-enduring "medical temples" and a distinguished cult. It is unclear historically whether Aesculapius actually existed or whether his ideas should properly have been attributed to Pythagoras. As the Aesculapian cult spread throughout the Greek empire, numerous temples were erected in the main cities of the Mediterranean basin, including Rome in 300 B.C.

What may be best known about Aesculapiad temples today is the *symbol* of medical knowledge they employed: a serpent wrapped around a rod. Medicine gradually evolved into a branch of philosophy in the 6th and 7th centuries B.C. No one of that early period achieved the mythic stature of Aesculapius, however—the presumed founder of temple-based hospitals designed to execute the healing traditions in which he believed, notably a rest from life's stressors and opportunities for positive mental growth. Located in peaceful and attractive settings, these temples were established to encourage patients to believe that there were good reasons to want to recover. Included

among the temples' treatment techniques were a balanced diet, a daily massage, quiet sleep, priestly suggestions, and warm baths, all of which were thought to comfort and soothe patients.

Also of value during this early period was the work of ***Alcmaeon*** (557–491 B.C.), possibly a son or favorite student of Pythagoras, carried out in the 5th century B.C. Alcmaeon became a philosopher-physiologist who asserted that the central nervous system was the physical source of mental activity, and that cerebral metabolism was based on the stability of "the humoral fluxes"; if these fluxes were imbalanced or unstable, they would create shifts in cerebral tissue functioning, leading then to various mental disorders. Metabolic fluxes were caused by a disequilibrium between the nervous system's qualities of dry–moist and hot–cold.

Most notable were Alcmaeon's efforts to track the sensory nerves as they ascended to the brain. He articulated, as perhaps no one else before him had done, the structural anatomy of the body through methods of careful dissection. No less significant was his conviction that the brain, rather than the heart, was the organ of thought. As Aesculapius reportedly did, he also anticipated the work of Empedocles and Hippocrates, in that he believed that health called for a balance among the essential components of life—coolness versus warmth, wetness versus dryness, and so on. The notion of fundamental elements in balance became a central theme in the work of Aesculapius and Alcmaeon; it also served to guide the views of their disciples. Alcmaeon's "biological model" based on the concept of metabolic harmony, called "isonomy," took the place of Greek's early mythological theology and was an extension of the growing secular and democratic spirit of Greek's 6th-century B.C. culture.

Empedocles (495–435 B.C.) adopted the homeostatic model generated in the work of Pythagoras, Aesculapius, and Alcmaeon. Most significant was his proposal that the basic elements of life (fire, earth, air, and water) interacted with two other "principles" (love vs. strife). Empedocles stressed that a balance among the four elements could be complicated by the fact that they might combine in either a complementary or a counteractive way. Love and strife represented human expressions of more elementary magnetic processes such as attraction and repulsion. All of the elements/humors could be combined, but Empedocles wondered what the consequences would be if they were organized in different ways. He set out to weave the several threads of his theory and concluded that the force of attraction (love) would be likely to bring forth a harmonic unity, whereas repulsion (strife) would set the stage for a personal breakdown or social disintegration.

To Empedocles, blood was a perfect representation of an equal mix of water, earth, air, and fire. He therefore suggested that persons with problematic temperaments and mental disorders would exhibit imbalances within their blood. Among his other contributions, Empedocles posited a rudimentary model of an evolutionary theory, anticipating Darwin's by 2,000 years. As he phrased it, "creatures that survive are those whose blood elements are accidentally compounded in a suitable way," whereas a problematic compounding will produce "creatures that will perish and die." To him, nature created a wide variety of healthful and perishing blood configurations—that is, different ways in which the four elements combined.

Some philosophers disagreed with the notion that the universe was composed of a simple and permanent element. ***Heraclitus*** (530–470 B.C.), for example, proposed that all nature was made up of fire. He asserted, however, that the universe was composed of no lasting substance—nothing stable, solid, or enduring. All real and tangible things would inevitably vanish, change their form, even become their very opposites.

In a similar manner, ***Anaxagoras*** (500–428 B.C.) asserted that a reduction to the basic elements could not explain the universe. He differed from Heraclitus in that he did not believe the universe lacked an enduring substance. He asserted that an endless number of qualitatively different elements existed, and that the organization or arrangement of these diverse elements was central to the structure of the universe. Anaxagoras's belief that the character of these constituents could not be explained except through the action of human thought was novel—a view similar to one asserted many centuries later by the phenomenologists and the gestaltists, who claimed that the structure of objective matter was largely in the interpretive eye of the perceiver.

Later the philosopher ***Democritus*** (460–362 B.C.), following ***Leucippus*** (ca. 445 B.C.), proposed that the universe was made of variously shaped atoms—small particles of matter in constant motion, differing in size and form, but always moving and combining into the many complex components that comprise the universe as we know it. This innovative speculation endures to the present time. Extending the theme proposed a century earlier by Anaxagoras, Democritus stressed the view that all truths were relative and subjective. As noted, he asserted that matter was composed of numerous invisible particles called atoms. Each atom was composed of different shapes that combined and were linked in numerous ways; again, although this idea was based on pure speculation, it was highly innovative and is regarded as essentially correct to this day. The physical thesis of contemporary times known as the Heisenberg principle also has its origins in Democritus's speculation.

A contemporary of Democritus, born the same year, became the great philosopher-physician who set the groundwork for sophisticated clinical medicine for the ensuing centuries. The fertility of this wondrous period of Grecian thought cannot be overestimated, ranging from the brilliant ideas of Democritus and Aristotle to the creative foundations of scientific medicine by Hippocrates.

Hippocrates (460–367 B.C.; see Figure 1.1) was born on the island of Cos, the center of an ancient medical school. He was the son of an Aesculapian priest, from whom he acquired his first medical lessons and whose philosophy he would follow in his own future therapeutic efforts. In the work of Hippocrates—the inheritor of his father's tradition and the humoral concepts of Pythagoras and Empedocles—mental disorders progressed from the magical and mythical realm, and the demonological and superstitious therapeutic approaches of an earlier era, to one of careful clinical observation and inductive theorizing. He synthesized the practical and sympathetic elements of the Aesculapian cult with the more "biological" proposals of Pythagoras, blending these elements to elevate mental processes and disequilibria into a clinical science.

Thus in the 5th century B.C., truly radical advances were made to supplant the superstitions of temple medicine. The astuteness and prodigious work of Hippocrates highlighted the naturalistic view that the source of all disorders, mental and physical alike, should be sought within the patient and not within spiritual phenomena. For example, the introductory notes to the Hippocratic book on epilepsy state:

> It seems to me to be no more divine and no more sacred than other diseases, but like other affections, it springs from natural causes. . . . Those who first connected this illness with demons and described it as sacred seem to me no different from the conjurers, purificators, mountebanks and charlatans of our day. Such persons are merely concealing, under the cloak of godliness, their perplexity and their inability to afford any assistance. . . . It is not a god which injures the body, but disease.

As a number of his progenitors had done, Hippocrates emphasized that the brain was the primary center of thought, intelligence, and emotions. It is only from within the brain, he asserted, that pleasures and joys and laughter arise, as well as sorrows, griefs, and tears. It is, he went on to say, this very same source that makes us mad or delirious, inspires us with dread and fear, and brings sleeplessness, inopportune mistakes, aimless anxieties, absentmindedness, and other acts contrary to the person's habitual ways. All of these stem from the brain when it is not

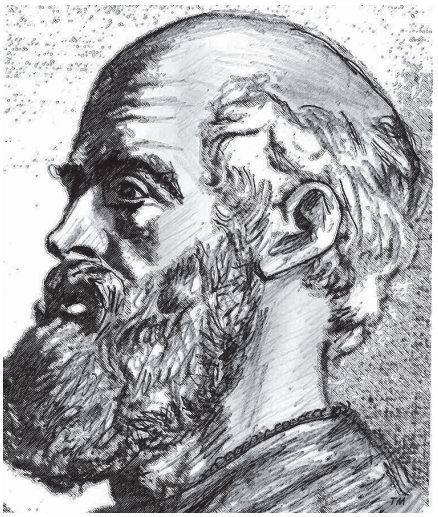

FIGURE 1.1. Hippocrates.

healthy (i.e., as when an imbalance exists between hot and cold or moist and dry).

Hippocrates's approach was essentially empirical, despite the growing eminence of philosophical thought that characterized his time. He was a practical biologist stressing the role of bodily humors and focusing on the use of physical treatments (notably diet, massage, music, and remedies promoting sleep and rest) rather than philosophical ones. Central to the medical practices of Hippocrates and his followers was the crucial role given keen observation and fact gathering. Contrary to the work of Plato, who relied on abstract hypotheses and so-called self-evident truths, Hippocrates focused his attention on observable symptoms, their treatments, and their eventual outcomes. In this regard, Hippocrates modeled Aristotle's empirical orientation, emphasizing facts rather than abstractions.

As were a number of his forebears, Hippocrates was convinced that dreams could serve as indicators of health or illness. Mental pathology stemmed from a disparity between the content of dreams and that which existed in reality. Dream symbolism, as regarded by Hippocrates, led him to anticipate later hypotheses concerning the operation of "unconscious forces."

Hippocrates also established the tradition of carefully recording personal case history, detailing the course and outcome of the disorders he observed. These histories provide surprisingly accurate descriptions of such varied disorders as depression, phobias, convulsions, and migraine. With his associates at the Cos College of Medicine in Athens, he provided a logic for differentiating among various mental ailments—not only those we now label the DSM-IV-TR Axis I syndromes, but also the Axis II personality types, the latter of which were construed as abnormalities of temperament. Temperament was associated with the four-humors model, which transformed earth, fire, water, and air into their parallel bodily elements. Individuals were characterized in terms of which one of the four elements predominated. Among other clinical syndromes differentiated were delirium, phobia, hysteria, and mania. Lacking precise observations of bodily structure, and prevented by taboo from performing dissections, Hippocratic physicians proposed hypothetical explanations of disease. They adhered closely, however, to the first nonsupernatural schema that specified temperament dimensions in accord with the doctrine of bodily humors. Interestingly, history has come full circle, in that much of contemporary psychiatry continues to seek answers with reference to inner biochemical and endocrinological processes.

Hippocrates identified four basic temperaments: the "choleric," the "melancholic," the "sanguine," and the "phlegmatic." These corresponded, respectively, to excesses in yellow bile, black bile, blood, and phlegm. As elaborated by a Roman, Galen, centuries later, the choleric temperament was associated with a tendency toward irascibility; the sanguine temperament prompted an individual toward optimism; the melancholic temperament was characterized by an inclination toward sadness; and the phlegmatic temperament was conceived as an apathetic disposition. Although the doctrine of humors has long been abandoned, giving way to studies on topics such as neurohormone chemistry, its archaic terminology still persists in contemporary expressions such as persons being "sanguine" or "good-humored."

Hippocrates and his Cos associates were among the first to stress the need for a relationship between diagnosis and treatment. The mere description of a clinical disturbance was not sufficient for them, unless it provided a clear indication of the course that therapy should follow. Indeed, Hippocrates anticipated that much effort may be wasted in specifying diagnosis, unless followed by a consideration of its utility for therapeutic decisions. Although naive in conception and execution, Hippocrates's approach to therapy followed logically from his view that disorders were of natural origin. To supplant the prevalent practices of exorcism and punishment, he recommended such varied prescriptions as exercise, tranquility, diet, venesection or bloodletting where necessary, and even marriage. Systematically (in a contemporaneous sense), Hippocrates and his colleagues devised a series of therapeutic regimens that they believed would reestablish the humoral balance thought to underlie most diseases; they also employed surgical techniques such as trephining to relieve purported pressure on the brain.

Several themes relevant to the mind and its difficulties characterize ***Plato***'s (429–347

B.C.) work: (1) Powerful emotional forces could come to the foreground and overwhelm the everyday behavior typifying a person's life; (2) conflicts could exist between different components of the psyche (e.g., the personal discord that often arises between an individual's rational side—that which is desired—and the surge of emotional feelings); and (3) mental disorders did not result from simple ignorance, but from irrational superstitions and erroneous beliefs. To Plato, all humans were partly animal-like; hence all humans acted irrationally at times—some more, some less. He found evidence for these conclusions in dreams, where bizarre events invariably occur and unnatural connections among thoughts and images are dominant.

Not to be overlooked was his contention that therapeutic efforts could modify any and all forms of mental illness. For Plato, the use of educational procedures could dispel ignorance and uncover "truth" through the application of fundamental principles. No less important with regard to therapy was Plato's use of a dialectical model to change a patient's cognitions and belief systems. In this regard, Plato's philosophy provided a methodology for engaging in therapy, essentially the application of rational discussions to modify faulty cognitions (shades of contemporary cognitive therapies!).

Plato had many distinguished students, the most eminent of whom was ***Aristotle*** (384–322 B.C.). Though he was Plato's student for over 20 years, Aristotle turned sharply away from Plato and toward matters more realistic and tangible than abstract and idealistic. Some would say that Aristotle provided history's first integrated and systematic accounts not only of psychological matters, but of astronomy, physics, zoology, and politics. The last of the great philosophers of the 4th century B.C., Aristotle was more scientist than philosopher. He gave special attention to the need for experimental verification and the use of sensory-based observable data; in fact, he was the first of the major philosophers to take an inductive and empirical approach in his writings. He was interested in the concrete observables of experience as registered through the senses. Although he admired the abstract rationalism of Plato, he was much more disposed to deal with the tangible world than with high-order abstractions or broad principles. He believed that data should be grounded in empirical observables in order to minimize the risk of subjective misinterpretations. Despite these reservations, Aristotle believed that thought transcended the sensory realm. As he saw it, imagination could create thoughts of a higher order of abstraction than could sensations themselves.

Yet not all matters were successfully brought within Aristotle's purview. Despite growing evidence that the brain was the center of thought and emotion, Aristotle retained the erroneous belief that the heart served as the seat of these psychological experiences. He made keen and significant observations, however, in recognizing the psychological significance of cognitive processes, dreams, and emotional catharses. For example, it was Aristotle who said that events, objects, and people were linked by their relative similarity or their relative difference from one another. To Aristotle, things became "associated" if they occurred together; in this, he was clearly a forerunner of the associationist school of the 18th and 19th centuries. Aristotle viewed dreams as afterimages of the activities of the preceding day. Although he recognized that dreams might fulfill a biological function, he judged the content of dreams to be ideal gauges of potential pathology. He had a specific interest in how physical diagnoses could be deduced from dream content.

Aristotle's scope was exceptionally broad and inventive. It was he who wrote most perceptively of the intellectual and motivational features of the mind from the viewpoint of a natural scientist. Thus, in what might be termed a psychobiological theory, he outlined the basics of human perception and rational thought, stressing the importance and validity of sense impressions as the source for an objective form of experimental study. Along the same lines, Aristotle articulated a series of proposals concerning the nature of learning—a model based on the principles of association and reinforced by what we have come to term the "pleasure principle." Similarly, he emphasized the importance of early experience and education in the acquisition of skills, and the role of habit and practice in the formation of psychological attitudes. To him, the processes of development were key themes in understanding human behavior.

When Aristotle left Athens in the year 322 B.C., following the death of Alexander the Great, he arranged to have his associate

Theophrastus (371–286 B.C.) succeed him as head of the Lyceum. Shortly thereafter, Aristotle, alone and despondent over the turn of political events in Athens, died in exile. Theophrastus was only a decade younger than Aristotle and had come to Athens to study with Plato. He and Aristotle had been friends, joined together in their travels and shared in their study of nature. Theophrastus remained head of the Lyceum for some 30 years. Perhaps most significant was the attention Theophrastus paid to the study of botany, establishing him as the true founder of that science, just as Aristotle's works established the field of zoology.

A prolific and sophisticated thinker, Theophrastus wrote no less than 220 treatises on a variety of different topics. Although this diversity of work was substantial, he became best known for a secondary aspect of his career, the writing of personality sketches he called "characters." Each of these portrayals emphasized one or another psychological trait, providing a vignette of various personality "types" (e.g., individuals who were flatterers, garrulous, penurious, tactless, boorish, surly, etc.).

Whether these portrayals were penetrating or poignant, Theophrastus (as well as later novelists) was free to write about his subjects without the constraints of psychological or scientific caution. Such lively and spirited characterizations most assuredly captured the interest of many, but they could also often mislead their readers about the true complexities of natural personality patterns.

Although the beginning and ending of the Roman period cannot be sharply demarcated, it basically spanned a 12-century period from the 7th century B.C. to the 5th century A.D., when the last of the major Roman emperors was deposed. As a formal organization, the Roman Republic dated from the 5th century B.C. to the 3rd century A.D.

The more cultured classes of Rome were determined to eliminate magic and superstition as elements in considering psychic processes. A mechanistic conception of mental disorders came to the foreground; it was fundamentally materialistic and opposed to all transcendental mythologies, which were regarded as superstitious beliefs that originated from fear and ignorance. Mental disorders were caused not by the action of mysterious forces, nor by biohumoral movements or conflicts, but by the periodic enlargement or excessive tightening of the pores in the brain. In this corpuscular hypothesis, a derivative of the atomistic notions of Democritus of Greece, the task of the mental healer was to confirm and normalize the diameter of the pores. Persons with certain mental illnesses were seen as apathetic, fearful, and in a depressed mood, by what was called a *laxum* state. Those with other disorders presented an excited, delirious, and aggressive appearance; they were in a *strictum* state. If both sets of these symptoms co-occurred, there was a *mixtum* state.

A follower of the vitalist school of thought that adopted the concept of *pneuma*, the natural or animal spirit, as the physical embodiment of the soul, ***Aretaeus*** (30–90 A.D.) was little known in his time and was rarely quoted by fellow Roman scholars. This was probably owing to the fact that his works were written in the Ionic dialect rather than in Latin or Greek. Furthermore, his vitalistic philosophy, based on the fluidity of the soul's nature, and adopted by Galen a century later, rivaled the more atomistic or solidistic corpuscular theory of his contemporary Roman thinkers. Scarcely familiar with the Greek language and its medical philosophies, Aretaeus was a born clinician who was retained as a physician for the ruling Roman classes.

According to Aretaeus, the vicissitudes of the soul served as the basis of psychic disturbances. Specifically, the interconnecting linkages among "solid organs, the humours, and the pneuma" generated all forms of mental aberration. For example, anger and rage stirred the yellow bile, thereby warming the pneuma, increasing brain temperature, and resulting in irritability and excitability. Conversely, fear and oppression stirred black bile, augmenting its concentration in the blood, and thus leading to a cold pneuma and consequent melancholy.

Disturbances of consciousness usually resulted from the sudden diminishing of the strength of the pneuma around the heart. Aretaeus's descriptions of epilepsy were notably impressive. He spoke of its premonitory symptoms, such as vertigo and nausea, the perception of sparks and colors, and the perception of harsh noises or nauseating smells. Aretaeus also described the origins and characteristics of fanaticism; he formulated a primitive psychosomatic hypoth-

esis in stating that emotions could produce problematic effects on humoral metabolism, noting that "the black bile may be stirred by dismay and immoderate anger." Similarly, he formulated what we speak of as cyclothymia in describing the alternation of depression with phases of mania. He stated, "Some patients after being melancholic have fits of mania . . . so that mania is like a variety of melancholy." In discussing the intermittent character of mania, he recognized its several variants, speaking of one type as arising in subjects "whose personality is characterized by gayness, activity, superficiality, and childishness." Other types of mania were more expansive in which the patient "feels great and inspired. Still others become insensitive . . . and spend their lives like brutes."

Perceptive observations by Aretaeus strengthened the notion of mental disorders as exaggerated normal processes. He asserted that a direct connection existed between an individual's normal characteristics of personality and the expression of the symptoms the individual displayed when afflicted. His insightful differentiation of disorders according to symptom constellations (i.e., syndromes) was a striking achievement for his day.

Although Hippocrates may have been the first to provide a medical description of depression, it was Aretaeus who presented a complete and modern portrayal of the disorder. Moreover, Aretaeus proposed that melancholia was best attributed to psychological causes (i.e., that it had nothing to do with bile or other bodily humors). As noted, he may have been the first to recognize the covariation between manic behaviors and depressive moods, antedating the views of many clinical observers in the 16th and 17th centuries.

Aretaeus was also a major contributor to the humanistic school of thought in early Rome. Most notably, he introduced long-term follow-up studies of patients. He tracked their lifetime course, their periodic disease manifestations, and their return to a more normal pattern of behavior; in this regard, he anticipated the authoritative writings of Emil Kraepelin, who recognized the course of an illness as a key factor in discriminating a specific disorder from others of comparable appearance. He seriously studied the sequence and descriptive characteristics of his patients, contending that a clear demarcation could be made between the basic personality disposition of a patient and the form in which a symptomatic and transient disorder manifested itself periodically.

No less important was Aretaeus's specification of the premorbid conditions of patients; he viewed these conditions as forms of vulnerability or susceptibility to several clinical syndromes. As Aretaeus phrased this, he found that persons disposed to mania are characteristically "irritable, violent, easily given to joy, and have a spirit for pleasantry or childish things." By contrast, those prone to depression and melancholia were seen as characteristically "gloomy and sad often realistic yet prone to unhappiness." In this manner, Aretaeus elaborated those essentially normal traits that make an individual susceptible to a clinical state. As Zilboorg and Henry (1941) have noted, the melancholia of Aretaeus is still observed in our time, although under different psychiatric labels. Owing to his observations of patients over extended periods of time, Aretaeus proposed a series of predictions about the general outcomes of different mental conditions. More than other physicians of his day, Aretaeus not only described psychological conditions with keen sensitivity and humane understanding, but (in a spirit more akin to recent scientific work) sought to compare various clinical syndromes and illuminate ways in which they could be differentiated.

Claudius Galenus (Galen) (131–201; see Figure 1.2) was the last major contributor to adopt a psychological perspective in Rome. He preserved much of the earlier medical knowledge, yet generated significant new themes of his own. Galen lived more than 600 years after the birth of Hippocrates. A Greek subject of the Roman Empire, he was born in Asia Minor about 131 A.D. During his mature years, numerous radical political and cultural changes took place in Rome. Galen and his medical associates set out to synthesize primitive conceptions of disease with then-modern methods of curing the sick. Following the ideas of Hippocrates, he stressed the importance of observation and the systematic evaluation of medical procedures, arguing against untested primitive and philosophical hypotheses in favor of those based on empirical test. As a follower

FIGURE 1.2. Galen.

of Aristotle as well as Hippocrates, Galen emphasized the data of experience, rather than logical hypotheses that were devoid of factual evidence. Unfortunately, he doubted that environmental and psychological factors could affect the course of human disease. Although Galen avoided philosophical themes concerning the nature of illness, he nevertheless proposed a principle termed *spiritus anima*, in which he asserted that humans possessed an extraphysical life-giving force; this thesis was based on his efforts to distinguish organic from inorganic matter.

Galen's conception of psychic pathology was based on the physiology of the central nervous system. He viewed clinical symptoms as signs of dysfunctional neurological structures and characterized mental diseases as "a concourse of symptoms," among which a specifically pathognomonic one could be isolated. According to his organic-functional approach, mental symptoms originated from the pathogenic action of a toxic, humoral, vaporous, febrile, or emotional factor that affected the brain physically and then altered certain of its psychic functions. Consonant with the beliefs of his time, Galen believed that the activities of the mind were prompted by animal spirits that carried out both voluntary and involuntary actions. These animalistic spirits (*pneuma*) were divided by Galen into two groups: those that controlled sensory perceptions and motility, whose damaging effects would cause neurological symptoms; and those that had more directive functions, such as coordinating and organizing imagination, reason, and memory. To him, most psychiatric symptomatology stemmed from alterations of the second group of functions.

In describing catatonic psychosis, Galen suggested a paralysis of the animal spirits in which the imaginative faculty was "blocked or incomplete." As far as the syndrome of hysteria was concerned, he disagreed strongly with Hippocrates's uterocentric view. Galen asserted that hysteria, on the basis of his own clinical examinations, could not be a disease that reflected the uterus "wandering agitated in the body." As he saw it, hysterical symptoms were provoked by the toxic action of vapors that formed in the normal uterus and vagina; it arose from the stagnation of semen, owing to a lack of sufficient sexual intercourse. The disease therefore signified a lack of sexual hygiene.

Galen's stature grew over the next millennium—so much so that his views were thought to be sacrosanct. His writings were summarized and commented on by many lesser physicians, most of whom were recognized as being wrong-headed; indeed, their books were often referred to as "wretched treatises." Some of these post-Galen compilations were not based on his work at all, but dishonestly carried his name for its ability to promote the sale of untenable or alien ideas. Although many of his notions were diluted by the passage of time or refuted by empirical knowledge, his vast contributions must be considered significant, in that no other figure in history exercised so extended an influence on the course of medicine.

Later in Roman history, there emerged an organized theology known as Christianity, including faith healing, magic, and superstition. The doctrine of the early Christian church became the dominant approach to thought, medicine, and mental healing in the Western world until the 17th century. Most of the populace remained illiterate during this period. Education was religious, otherwise inchoate, and of dubious value. The idea of a scientific basis for understanding mental disorders barely appeared on the scene. Faith was the all-powerful guide.

During the first two to three centuries A.D., a distinction was made between psy-

chologically normal individuals who doubted the dogma of the church's ideology, and those whose "peculiar" beliefs arose not out of opposition, but out of a mental affliction. Nevertheless, both groups were considered guilty of heresy and subjected to punishment. In a similarly irrational twist, others' implausible or nonsensical behavior ostensibly demonstrated their fervent adherence to church authorities and their dogma. Such persons were venerated. It was not long thereafter that the works of Aristotle and other Greek philosophers were condemned.

Christianity in the 3rd century led physicians to assume a moralistic and judgmental approach to psychic pathology. Unable to escape the growing spirit of superstitiousness, they proposed that mental cases were definitely the products of mystical events that could not be understood in the natural world. More seriously, they adopted the ancient belief that demons often appeared under the guise of confused humans, and that it was the job of physicians to identify and to "eliminate" them. In this and other similar matters, they laid the groundwork for a return to the age of supernaturalism and superstitions; they were nevertheless thought well of until the close of the 17th century.

Aurelius Augustine (354–430) was a key figure in the transition from early Roman thought to the Middle Ages. Better known as St. Augustine of Hippo, we can see in his writings an effort to synthesize the Greek and the new Christian perspectives on mental maladies. Perhaps the most influential philosopher of his time, Augustine set the foundation and tone of Christian intellectual life for centuries to come. To him, all knowledge was based on the belief that only God could provide the ultimate truth, and that to know God was the ultimate goal. To think otherwise, as Augustine averred, would not only be vain, but would assuredly lead to error and corruption. Individuals, as children of God, would in their faith begin to understand the very nature of life, and thereby would be able to lead a life of grace and honor.

The Early Muslim World

Three major medical figures from the Muslim world of the Middle East around the end of the first millennium A.D. are worthy of note: Rhazes, Unhammad, and Avicenna. Each proposed helpful ideas that came to represent a fresh and innovative point of view concerning mental illness.

Rhazes (860–930) lived during the late 9th and early 10th centuries and wrote textbooks dealing with a wide variety of medical, psychological, philosophical, and religious subjects. In contrast to the predominant religious orientation of Baghdad, Rhazes strongly argued against the notion of a demonological concept of disease and the use of arbitrary authority to determine what is scientific and what is not. He attacked the superstitious religious beliefs of his contemporaries and was strongly in favor of developing a rational schema for understanding all disorders. Empirically oriented, he nonetheless subscribed to the theory of the four elements originally developed by Empedocles and Hippocrates.

Unhammad (870–925) was a contemporary of Rhazes who provided intelligent descriptions of various mental diseases. The observations he compiled of his patients resulted in a nosology that was the most complete classification of mental disorders in its day. Unhammad described nine major categories of mental disorders, which, as he saw it, included 30 different diseases. Among the categories was an excellent description of anxious and ruminative states of doubt, which correspond in our thinking today with compulsions and obsessions. Other categories of mental disease were judged by Unhammad to be degenerative in their nature; a few were associated with the involutional period of a man's life. The term used by the Greeks for mania was borrowed to describe states of abnormal excitement. Another category, most closely associated with grandiose and paranoid delusions, manifested itself, according to Unhammad, in the mind's tendency to magnify all matters of personal significance, often leading to actions that proved outrageous to society.

A most significant and influential philosopher and physician of the Muslim world was ***Avicenna*** (980–1037), often referred to as the "Galen of Islam," largely as a consequence of his vast and encyclopedic work called the *Canon of Medicine*. The *Canon* became *the* medical textbook chosen throughout European universities from the 10th through

the 15th centuries. However, Avicenna was not regarded as a highly original writer, but rather as a systematizer who encompassed all knowledge from the past that related to medical events. Similar to Galen, Avicenna noted the important connection between intense emotions and various medical and physiological states, although he fully accepted Hippocrates's humoral explanations of temperament and mental disorder. To his credit as a sophisticated scholar of the brain, Avicenna speculated that intellectual dysfunctions were in large part the results of deficits in the brain's middle ventricle, and asserted that common sense and reasoning were mediated by the frontal areas of the brain.

The Middle Ages

The enlightened ideas of Hippocrates were submerged for centuries after the death of Galen and the fall of the Roman Empire. During the thousand years of the so-called Dark Ages, superstition, demonology, and exorcism returned in full force and were further intensified by sorcery and witch burning. With few dissenting voices during this period, the naturalism of the Greco-Roman period was all but condemned or distorted by notions of magic. Only in the Middle East did the humane and naturalistic aspects of Hippocratic thought remain free of the primitivism and demonology that overcame Europe.

Signs for detecting demonic possession became increasingly indiscriminate in the Christian world. During epidemics of famine and pestilence, thousands wandered aimlessly until their haggard appearance and confusion justified the fear that they were cursed. The prevalent turmoil, the fear of one's own contamination, and the frenetic desire to prove one's spiritual purity led widespread segments of the populace to use these destitute and ill roamers as convenient scapegoats.

As the terrifying uncertainties of medieval life persisted, fear led to wild mysticism and mass pathology. Entire societies were swept up simultaneously. Epidemic manias of raving, jumping, drinking, and wild dancing were first noted in the 10th century. Referred to as "tarantism" in Italy, these epidemic manias spread throughout other parts of Europe, where they were known as St. Vitus's Dance.

During the early Middle Ages, before later catastrophes of pestilence and famine, few people with mental illnesses were totally destitute. Monasteries served as the chief refuge for such individuals, providing prayer, incantation, holy water, relic touching, and mild exorcism as prescriptions for cure. As the turmoil of natural calamity grew more severe, mental disorders were equated increasingly with sin and Satanic influence. Significant advances were made in agriculture, technology, and architecture during the Middle Ages, but the interplay between changing theological beliefs and naturalistic catastrophe speeded acceptance of the belief that "madness" and "depravity" were the devil's work. At first, it was believed that the devil had seized mentally ill individuals against their will, and such individuals were treated with established exorcistic practices. Soon, however, the afflicted were considered willing followers of Satan; classed now as witches, they were flogged, starved, and burned.

Among the major tenets of this medieval mythology was a belief that an international conspiracy, based on Satanic forces, was bent on destroying all forms of Christianity. The agents of this widespread conspiracy were witches, who not only worshipped Satan at secret meetings, but attempted to desecrate Christian symbols and beliefs, as well as to engage in murder, cannibalism, and sexual orgies. The ideas of a demonic and Satanic conspiracy existed first and foremost in the imagination of the religious leaders of the day. It was Pope Gregory IX who established the Inquisition in 1233 to root out witches, heretics, and all other agents of Satan, who he asserted were setting out rapidly to destroy the clerical and political orders of the Church. Those with an administrative status possessed the legal right to judge which aspects of Satanic witchcraft would be deemed demonic. It was not only higher-order religious leaders who conveyed this dogma; the common people took these belief systems to heart, as well. From the 15th through the 17th century, demonic possession and exorcism became common phenomena among the masses. In the postmedieval period, both Catholics and Protestants believed that

witches, fueled by Satanic forces, would send demons to possess those judged to be undesirable. It was the task of religious authorities to coerce those possessed by demons to admit that they were witches. These individuals could justly be arrested and tortured, especially if they "confessed" to their involvement in these nonexistent Satanic conspiracies. "Witch finders" soon became prominent guardians of the faith, prompted by religious authorities who sought to undo the political powers of their ostensible "enemies."

Encouraged by the 1484 *Summis Desiderentes Affectibus*, in which Pope Innocent VIII exhorted the clergy to use all means for detecting and eliminating witchcraft, two inquisitional Dominicans, Heinrich Kramer and Johann Sprenger, issued a notorious manual titled *Malleus Malefacarum* (*The Witches' Hammer*). Published between 1487 and 1489, this "divinely inspired" text set out to prove the existence of witchcraft, to describe methods of identification, and to specify the procedures of examination and legal sentencing.

Malleus Malefacarum reflected the spirit of its time, even though it was published in the early stages of the Renaissance and at the threshold of the Reformation. Here the conflict between paganism and Christianity, between magic and a monotheistic outlook, had not ceased to be a burning issue (in more than one sense of the word). As the ancient idols and deities were torn down from their pedestals, demons nevertheless retained their grip on the minds of the ordinary people. Idols and deities were relegated to the role of fallen angels, but devils and evil demons continued to reside in the human unconscious, and belief in them continued to be widely embraced.

With torture recommended as a means of obtaining confession, and with feelings of guilt and hopeless damnation characteristic of many of the afflicted, the inevitable consequence for most persons with mental illnesses was strangulation, beheading, or burning at the stake. Unredeemed by good sense and wise judgment, this barbaric epidemic swept Protestant and Catholic countries alike, including several American colonies. Although the last execution of a witch occurred in 1782, the bewildering notion that mentally ill individuals were in league with the devil persisted in popular thought well into the 19th century.

It was in the 15th century that the medieval period began to be gradually transformed into what we view today as the modern world. Slowly but persistently, the importance of human emotions and strivings became a significant element to guide intellectual thought, ultimately replacing the medieval belief that the revelation of deeper human truths were beyond human capabilities. Psychological processes became increasingly humanized; opportunities to study human beings as biological rather than purely spiritual organisms permitted these processes to be considered as aspects of natural rather than metaphysical science. Christianity had begun to lose its spirit and vitality; although the supernatural world still existed in human minds, it had lost much of its power, increasingly ruled by static and rigid belief systems and symbols.

Desiderius Erasmus (1465–1536) was a sincere churchman who asserted a new humanism. He attacked the formalism and the corruption of the church, which he judged as sterile and possessed of rituals that were divested of their purpose and humanism. As Robinson (1976) has noted, his "psychology" was both practical and wise, expressed with verve and clarity in Erasmus's *Colloquies*. Here he pricked vanity, exorcised exorcism, lamented superstition gleefully, and guided individuals to their duty to adhere to the simple and humane lessons of Christ's life, rather than to behaviors that would obscure or deceive his worthiness. In his essays and letters, Erasmus, neither scientist nor formal philosopher, addressed the everyday world, seeking to expose its vanities, follies, charlatans, and warmongers. His was the attitude of a Renaissance humanist, with a fine mind and a sympathetic heart. So, too, was the humanistic outlook of the Spanish Jew ***Juan Louis Vives*** (1492–1540), who contributed fundamentally to educational reforms and evinced a passionate concern for the welfare of those with mental illnesses, who were routinely incarcerated and maligned.

The Renaissance and Beyond

Gradually, the horrors of the Inquisition were left behind. In the 16th century, the

work of intelligent and humanistic thinkers slowly awakened humankind from its long slumber. Zilboorg and Henry (1941) have written that for several centuries, philosophers had repeatedly stated that human beings should be studied and not their souls; these scholars slowly convinced themselves by listening to their own voices. These scholars were not physicians, because physicians had turned their attention to the new anatomy and physiology of animals and cadavers, rather than the emotions and natural states of living humans.

The waning of medieval supernaturalism and the advent of the liberating Renaissance era had numerous effects upon the emergence of psychological thought. The Renaissance broke the hold of medieval dogma upon the mind of early clinicians. It also opened up new nonphilosophical pathways for purely psychological ventures and inquiries into the general character of human nature, as well as the substantive nature of mental disorders.

The Theories of Paracelsus

Paracelsus (1493–1541) would have been an extraordinary person in any historic age, but, given his time, he looms as a strange if not rare blend of the mysticism of the past with the practicality of his day. Paracelsus's actual name was Theophrastus Bombastus Von Hohenheim. Perhaps in anticipation that he would be a courageous and intrusive battler all of his life, he shortened his name to simply Paracelsus, even if its selection was rather pretentious. Specifically, he adopted this name to suggest that his views were superior to those of Celsus, the chief medical authority of ancient Rome. Others have suggested that he gave himself this name in order to show that he was surpassing the encyclopedists and medical methodists of his time—in other words, that he intended to blaze a new trail by his adventurous approach to mental disorders. Like most thinkers of his day, Paracelsus was a believer in divination from the stars and in the healing powers of such preparations as powdered Egyptian mummy. As such, he was both an astrologer and an alchemist.

For some of his disciples, Paracelsus was the towering medical figure of the Renaissance period, comparable to such other contemporary luminaries as Leonardo da Vinci, Copernicus, and Shakespeare. To most historians of today, he is regarded as an imaginative adventurer, if not a charlatan, and most are inclined to view his contributions to scientific medicine as modest at best. Among his works were efforts to test the effects of various chemical agents to treat several medical conditions (attempts not unlike the activities of pharmaceutical firms today). Although he made no lasting discoveries, he was an inventive and creative pioneer. Nevertheless, the whimsies he had proposed were consigned largely to the rubbish heap. Despite a number of sound insights, he dissipated much of his energy combating colleagues who did whatever they could to make his life unbearable.

When Paracelsus interrupted his mystical flights of fantasy to deal with his medical opportunities, he spoke in a voice akin to that of a seeker of scientific truth, despite his rebellious defiance of ancient traditions and scholastic dogma. Most notably, he denounced the cruelties of the Inquisition, stating that "there are more superstitions in the Roman Church than in all these poor women and presumed witches." In his rejection of the views of the clergy regarding the sources of mental disorders, Paracelsus (1567/1941) wrote:

> In nature there are not only diseases which afflict our body and our health, but many others which deprive us of sound reason, and these are the most serious. While speaking about the natural diseases and observing to what extent and how seriously they afflict various parts of our body, we must not forget to explain the origin of the diseases which deprive man of reason, as we know from experience that they develop out of man's disposition. The present-day clergy of Europe attribute such diseases to ghostly beings and threefold spirits; we are not inclined to believe them.

Paracelsus was the first physician to lay out a systematic classification of disorders that abandoned the habit of categorizing disorders by beginning with the head, then working down step by step to the feet. His mental health classification was outlined in a treatise titled "On the Diseases Which Deprive Men of Health and Reason." Here whole groups of persons with mental disorders were identified, notably *lunatici*, *insani*,

vesani, and *melancholici*. *Lunatici* suffered from disorders stemming from their reactions to the phases of the moon. *Insani* suffered from disorders identifiable at birth and clearly derived from family heritage. *Vesani* were poisoned or contaminated by food or drink. *Melancholici*, by virtue of their temperament, lost their ability to reason accurately. In addition to these four forms of mental illness, Paracelsus identified others as *obsessi*—that is, obsessed by the devil. In this latter formulation, Paracelsus was dissenting from the dogmatic view of earlier centuries in which a devil obsession lay at the heart of all mental disorders. As he perceived it, numerous sources of mental dysfunction existed, only one of which could be traced to demonic preoccupations; he saw the other disorders as problems of defective thought processes, rather than as consequences of supernatural powers.

Physiognomy and Phrenology before, during, and after the Renaissance

"Physiognomy," the art of interpreting people's psychological characteristics from aspects of their physical characteristics, was present in ancient times, reaching its peak of study in the 2nd century A.D. Advocates of physiognomy assumed that inner traits of people are expressed in their outer physical features, especially the face. The great thinkers of Greece made formal efforts to systematically interpret physiognomic characteristics—for example, in Pythagoras's 6th-century B.C. writings, and later in Aristotle's *Analytica Priora* (Tredennick, 1967) and *Historia Animalium*, where he wrote: "Persons who have a large forehead are sluggish, those who have a small one are fickle; those who have a broad one are excitable, those who have a bulging one, quick tempered" (Peck, 1965, I, VIII, 891b, p. 39).

Physiognomica (Hertt, 1936)—also attributed to Aristotle, but more likely written by his followers—examined parallels between the physiques of men and animals, to compare different ethnic groups, and to investigate the relationship between bodily characteristics and temperamental dispositions. Among the useful signs recorded were the movements, shapes, and colors of the face; the growth of hair; the smoothness of skin; the condition of the flesh; and the general structure of the body. Sluggish movements denoted a soft disposition, quick ones a fervent temperament; a deep voice denoted courage, a high one signified cowardice. The writers were wise enough to note that it would be foolish to base a judgment on any one of these signs. Centuries later, ***Leonardo da Vinci*** (1452–1519) made similar physiognomic proposals in his *Treatise on Painting*, in which he explored relationships between emotional states and overt facial expressions.

In the 16th century, ***Giovanni Battista della Porta*** (1535–1615) published a book titled *De Humana Physiognomia* (1586), derived from Aristotle's writings, which included many drawings designed to show similarities between humans and animals. For example, a person who looked leonine ostensibly possessed the courage, strength, and will of a lion. This book proposed the theory that every person's head resembled a specific animal's head, thereby suggesting that the person possessed the same personal characteristics as that animal. Another work by Porta, *Natural Magick* (1558/1957), outlined similar speculations by a number of his contemporary colleagues. No less speculative was Porta's *Phytognomonica* (1588), in which he addressed matters of vegetable physiognomy—that is, the art of determining the inner nature of plants on the basis of their exterior appearance.

In his five-volume work, *Les Charactères des Passions* (1640), eminent French physician ***Marin Cureau de la Chambre*** (1594–1669) wrote:

> the resemblance Man has with other Creatures . . . teacheth us that those who have any part like to those of beasts, have also their inclinations . . . that men who have anything of a feminine beauty, are naturally effeminate; and that those women who have any touch of a manly beauty, participate also of manly inclinations.

Burdened with the prejudices of his day, de la Chambre (1640) was nevertheless a highly insightful physiognomist, addressing in detail the significance to be found "in the motions of the eyes, the inflection of the voice, the color of the lips," and so on. Unfortunately, he could not help but draw

upon astrological influences, speculating on the power, especially of the moon upon the brain, "causing it to increase or decrease in volume upon whether the moon is waxing or waning."

A distinguished philosopher and jurist, ***Christian Thomasius*** (1655–1728) helped inaugurate the period of German enlightenment, founded the University of Halle, and asserted that philosophy should concern itself with practical matters of everyday life. A prolific author, Thomasius wrote only briefly on physiognomy, drafting an essay entitled *Recent Proposals for a New Science for Obtaining a Knowledge of Other Men's Minds* (1692). Basing his ideas on the work of de la Chambre, Thomasius recommended that observation can be most useful when obtained through personal conversation with one's subject; he also cautioned that observers must distinguish between genuine and affected emotions.

A theorist of physiognomy in the late 18th century, ***Johannes Kaspar Lavater*** (1741–1801), asserted unequivocally the existence of a relationship between fixed aspects of the body's surface and a person's character. In his well-received book *Essays on Physiognomy* (1789), published in four lavish volumes, Lavater claimed that physiognomy was truly a science because it offered law-like regularities and depended on empirical observation. In characterizing the trait of obstinacy, Lavater wrote:

> The higher the forehead, and the less the remainder of the countenance, the more knotty the concave forehead, the deeper sunken the eye, the less excavation there is between the forehead and the nose, the more closed the mouth, the broader the chin, the more perpendicular the long profile of the countenance—the more unyielding the obstinacy: the harsher the character.

Though similar in many respects to classical approaches in physiognomy, a new "scientific" model known as "phrenology" emerged in the late 18th century. Both approaches drew inferences about character and personality from external bodily features—physiognomy from facial structure and expression, phrenology from external formations of the skull. Their underlying assumptions, however, were quite different. Physiognomists believed that a person's inner feelings and characteristics were expressed in facial features, voice, and so on. Phrenologists made no assumptions as to the external expression of varied dispositions. Their two fundamental assumptions were unusual for their era: First, that different mental functions were located in different regions of the brain; and, second, that the skull's external topography reflected the magnitude of these functions. This was the first "scientific" effort made to analyze the underlying brain structure from which character and personality might be derived.

Despite its discredited side, phrenology, as ***Franz Joseph Gall*** (1758–1828) proposed it, was an honest and serious attempt to construct a neurological substrate in the brain to undergird a science of character depiction. Although numerous writers such as Vesalius, Willis, and Stensen in medieval times (Millon, 2004) had speculated and explored brain structures as the center of mental functioning, Gall took this view in an original direction. Most early characterologists conceived the brain as a locale where the immaterial soul might influence bodily activities. Gall asserted not only that the brain *was* the mind in an explicitly material sense, but that different regions subserved different dispositions.

Gall identified 27 different "organs" in the brain that undergirded separate psychological tendencies. Through "reading" the skull (usually by running one's hands over the head), one could identify different enlarged organs. Gall went to prisons and lunatic asylums to read skulls and collect data on correlations between protuberances in certain locations and personality traits.

Gall referred to his research on brain physiology as "organology" and "crainoscopy," but the term "phrenology," which his younger associate Johann Spurzheim coined, came to be its popular designation. As noted, the rationale that Gall presented for measuring contour variations of the skull was not illogical. In fact, his work signified an important advance over the naive and subjective studies of physiognomy of his time, in that he sought to employ objective and quantitative methods to deduce the inner structure of the brain. He concluded, quite reasonably, that both the intensity and character of thoughts and emotions would correlate with varia-

tions in the size and shape of the brain or its encasement, the cranium. That this gross expression of personality proved invalid is not surprising when we think of the exceedingly complex structure of neuroanatomy.

Views from the Later Renaissance to the 17th Century

A chronically depressed clergyman and reclusive scholar, ***Robert Burton*** (1576–1640), wrote a single major work of extraordinary insight and sensitivity in 1621, titled *The Anatomy of Melancholy*. Burton's introspective accounts of his moods contained a wealth of impressive clinical analyses. He also sought to record the behavior and emotions of others, recognizing patterns similar to his own moodiness and eccentricity. This great volume of work, despite rambling irrelevancies and inaccuracies, makes fascinating reading today, as may be judged from the following excerpt:

> It is most absurd and ridiculous for any mortal man to look for a perpetual tenure of happiness in this life. Nothing so prosperous and pleasant, but it hath some bitterness in it, some complaining, some grudging; it is all a mixed passion, and like a chequer table, black and white men, families, cities, have their falls and wanes; now trines, sextiles, then quartiles and oppositions. We are not here as those angels, celestial powers and bodies, sun and moon, to finish our course without all offence, with such constancy, to continue for so many ages: but subject to infirmities, miseries, interrupted, tossed and tumbled up and down, carried about with every small blast, often molested and disquieted upon each slender occasion, uncertain, brittle, and so is all that we trust unto. (Burton, 1621, p. 261)

Although his perspective was limited, Burton did establish a classification system, one that differentiated melancholy from madness—a distinction akin to our differentiation of neuroses from psychoses. He outlined the following general categories: (1) diseases emanating from the body; (2) diseases of the head (primarily the brain); (3) madness (mania); and (4) melancholy, for which Burton further distinguished melancholy of the head, the body, or the bowels, and identified the major sources of melancholy (e.g., excessive love, excessive study, intense preoccupation with religious themes).

Burton's introspective awareness of his own personal sadness and depression led him to recognize the sources of his own melancholy. He recognized guilt as a major element, despite his exemplary lifestyle. Other causes of melancholy included bodily deterioration and old age; bad diets; sexual excesses; idleness; solitariness; and an overpreoccupation with imagination, fears, shame, and malice. Burton clearly stated that melancholy could be engendered by a wide range of human frailties and life circumstances.

Among the many topics that Burton included in his book on melancholy, he touched on a variety of mental aberrations that we recognize today as obsessions and compulsions. Thus he wrote of an individual

> who dared not to go over a bridge, come near a pool, rock, steep hill, lie in a chamber where cross-beams were, for fear he'd be tempted to hang, drown, or precipitate himself. In a silent auditorium, as at a sermon, he was afraid he shall speak aloud at unawares, something indecent, unfit to be said. (1621, p. 253)

Burton anticipated what ultimately became the core of modern psychotherapy—that is, engaging a patient in a dialogue with a trusted and sympathetic outsider. But because he was not part of the medical establishment, his proposals had little effect on the course of mental health study of his time, despite the brilliance of his book.

A man of great intensity and imagination, ***Thomas Willis*** (1621–1675) was the originator of the term "neurology"; he also generated the term "psychology" to designate the study of the so-called "corporeal soul." Arguably the most significant founder of what came to be referred to as "biological psychiatry," he considered most ailments to be disorders of nerve transmission, rather than diseases of the blood vessels. He is perhaps best known by the circuit of arteries located at the base of the brain, known today as the "circle of Willis."

In 1664, Willis published a major book on the history of the brain sciences, entitled *Cerebri Anatome*. It was a work of considerable scope and insight, and was for many decades thereafter without equal in the field. The title suggested that the book was limited to anatomy. However, Willis, a thoroughly educated Oxford physician, concerned himself not only with brain functions, but with

their behavioral consequences. Willis proposed also that vital and involuntary systems existed in the brain that were mediated not by the higher centers of the brain, but by the "cerebellum." The detailed articulation of the functional segments of the brain, grounded in comparative anatomic precision, was enriched by his clinical observations. Drawing ideas from existing theories, his work, both speculative and empirical, stimulated many another neuroanatomist.

In his clinical work, Willis (1664/1978) reported his observation of a sequence in which "young persons who, lively and spirited, and at times even brilliant in their childhood, passed into obtuseness and hebetude during adolescence." Thus Willis anticipated by two centuries an idea more fully developed by Benjamin Morel, who termed this behavioral course "dementia praecox." To his credit, Willis rejected the idea of a "wandering womb" that ostensibly led to the syndrome of hysteria. In his view, the brain functioned as the center of all mental disturbances, and the various nerves emanating from the brain served to connect this overarching organ to the rest of the body. Willis, like most others of his time, spoke of processes generated by "animal spirits"—that is, the soul, which somehow or other could be sucked out of the brain. Also of note was Willis's observation that melancholia and mania frequently coexisted within the same person, who would shift erratically from an excited state to one of depression. This observation contributed to what we now refer to as bipolar disorder and/or manic–depressive psychosis.

Willis's clinical observations were uncontaminated by formal theories. His accurate inferences were based on repeated observations of patients over time—that is, on the long-term course of their difficulties. Included in Willis's classification system were some 14 categories, of which several were primarily neurological. His system, published in *De Anima Brutorum* (1672/1971), specified three major impairments: morosis, mania, and melancholia (each encompassing several subcategories). It also encompassed a number of neurological disorders, such as headache, insomnia, and vertigo.

Thomas Sydenham (1624–1689), a colleague of the philosopher John Locke, held strongly to the view that hypotheses should be set aside in favor of closely observing all forms of natural phenomena, such as various medical diseases. As he put it, too many writers had saddled fairly distinct diseases with excessive features that stemmed from their overblown interpretations. Sydenham did not trust books, believing only what he could see and learn from his own bedside observations (Comrie, 1922). Locke preached that all reliable knowledge came from observation. In his work, Sydenham came to typify the 17th-century empiricist emphasis in England.

Especially informative were Sydenham's contributions to the description of hysteria. His observations of hysterical patients enabled him to recognize the variations of conversion symptoms among patients with paralysis and pain, as well as to speculate on the operation of intense but unconscious emotions. The precision of his descriptions of hysterical phenomena was so comprehensive that little can be added today to what he said over three centuries ago. He recognized that hysteria was among the most common of chronic diseases, and observed that men exhibited the symptom complex no less than women. He averred that hysterical symptoms could simulate almost all forms of truly organic diseases; for example, he noted that a paralysis of the body might be caused by stroke, but could also be found in a hysterical hemiplegia "from some violent commotion of the mind." He spoke of hysterical convulsions that resembled epileptic attacks, psychogenic palpitations of the heart, and hysterical pain that could be mistaken for kidney stones; he also suggested that differential diagnosis between real biological diseases and those generated by the mind could only be made if the patient's psychological state could be thoroughly known. He was among the most successful in illustrating that emotions can generate and simulate physical disorders. In his efforts to formulate a syndromal pattern for numerous disorders, he extended the range of his observations to include not only the patient's dispositions, emotions, and defenses, but the family context within which they arose. In this way, he sought to determine the overall pathogenesis of certain syndromes, largely through the use of both physical and psychological phenomena. What was most informative was Sydenham's recognition that a syndromal picture rarely developed from a single pathogenic agent, be it a humoral imbalance or a systemic disturbance of the

body. In fact, to Sydenham, multiple influences operated simultaneously on a patient, each of which took a somewhat different turn and produced a somewhat different appearance in the same disease process. He strongly believed in syndrome complexes rather than in a distinct or singular expression of a disorder. As a consequence, all physicians were eventually trained to consider a wide range of elements, which together play a partial role in generating disease. However, Sydenham believed that hypotheses and philosophical systems should be set aside to ensure that pathological phenomena were observed with reliability and accuracy.

Particularly notable was Sydenham's belief in nature's own healing processes. These natural remedies of the body would not invariably solve a problem because they were often delayed or displaced. Included among the healing processes of nature, according to Sydenham, were a variety of well-established "excretions, eruptions, and fevers." Sydenham's speculations were based on comprehensive observations, which comprise the most modern methods for investigating mental illness and diagnosing specific clinical syndromes. He also emphasized the importance of identifying the antecedent emotional factors that may lead to the development of mental disorders. Insightfully, he observed the interplay between personal emotions and social pressures.

Born in Germany, ***Georg Ernst Stahl*** (1660–1734) wrote his doctoral dissertation in his early 20s. In it, he expressed the view that the then-prevalent theory of animal spirits was essentially incorrect, and that the various processes of the mind stemmed from a life-giving force, to which he applied the term "soul." However, Stahl's soul was not the supernatural phenomenon that characterized ancient and medieval thinking; it represented the source of energy of all living organisms, both human and animal.

Stahl's life force was not notably different from Freud's conception of the libido. It was the sum total of the nonmaterial side of humans and animals, which, together with nature, had the power to effect desired cures. Hence Stahl's "soul," which in many ways is equivalent to our "psyche," was able to perform a variety of functions that could either bring on or stave off various diseases.

Many present-day scholars consider Stahl the originator of the distinction between organic and functional mental disorders. To him, mental disorders were the result of neither physical, mechanical, nor supernatural forces, but were in fact essentially psychogenic. Stahl was appalled by the sharp demarcation of body and mind. Not only did he judge this dichotomy to be unjustified, in that it hindered a fundamental understanding of disease unity, but it was especially problematic in understanding the complexity of forces involved in mental diseases. He advocated a synthesis of physical and mental phenomena.

The 18th and 19th Centuries

As clinics and hospitals began to record case histories and detail observations, physicians could identify syndromal groupings (i.e., clusters of symptoms) and classify them into disease entities. The success with which botanical taxonomists had systematized their field by the 18th century provided additional impetus to the trend toward categorizing symptom clusters into a formal psychiatric taxonomy or nosology.

A second major trend within biological medicine—the view that mental disorders might result from organic pathology—can be traced to the early writings of Hippocrates, Aretaeus, and Galen. With the advent of valid anatomical, physiological, and biochemical knowledge in the early 18th century, and the discovery in the 19th century of the roles played by bacteria and viruses, the disease concept of modern medicine (including the view of mental illness as a disease) was firmly established. Efforts at developing somatic (e.g., electrical, chemical, surgical) treatment methods followed naturally. Although these three stages—diagnostic classification, biological causation, and somatic treatment—rarely proceeded in a smooth or even logical fashion, they characterized progress in psychopathology and continue today to guide neuroscientists who follow the medical and biological tradition.

These scientific and medical activities, however, presuppose a classification system (i.e., a taxonomy) that is not only logical but valid. Unfortunately, physicians classified diseases long before they understood their true nature. Such nosologies have persisted because of widespread or authoritative use; however, they rested most often

upon unfounded speculations or, at best, judicious but essentially superficial observations. Criticism of premature nosological schemes is justified, given the frequent slavish adherence to them. On the other hand, there is no reason to overlook the *potential* value of a taxonomy, or to abolish a sound classification system that may serve many important purposes. With the waning role of supernaturalism and the advent of liberating thought during the Renaissance, several enlightened thinkers of the 16th and 17th centuries began to explore ideas related to a realistic classification of mental disorders, as reported above.

Perhaps the leading taxonomist of the 18th century was ***François Boissier de Sauvages*** (1706–1767). He had completed his dissertation at the age of 20, defending the teachings of the faculty at his medical school, Montpelier. Conservative in mind but clearly distant from the demonological prejudices that were prevalent in most academic circles of his day, he thought that all mental diseases were located in distinct anatomical regions. Moreover, he believed that the "will" had much to do not only with the generation of mental aberrations, but also with their ultimate treatment. He also believed that physicians had a responsibility to shape or guide individual behaviors; otherwise, there would be no social compact or personal justice.

de Sauvages followed Linnaeus in seeking to create an encyclopedic framework for the many categories of mental disorder. He outlined 10 classes, 295 genera, and 24,000 species, spending the better part of his life immersing himself in the large body of medical knowledge that had accumulated from early times. His urge to catalog the bewildering and scattered array of human disorders can be viewed as an effort to surmount the rather spotty and supernatural beliefs that typified earlier thought.

Besides being a physician, de Sauvages was a botanist. Most of his colleagues spent their time arranging plants and animals in a clearly articulated and "evolutionary" system; the latter was a new departure that did not achieve its fullest impact until the work of Darwin a century later. The details of de Sauvages's presentations were first published in a small book, *Treatise de Nouvelles Classes de Maladies* (1731). Included in his broad classification were such illnesses as fevers, inflammations, spasms, breathing disturbances, weaknesses, pains, and dementias. Dementias, which comprised the bulk of mental diseases in this book, were organized into four types: those of extracerebral origin, disturbances of the instinctual and emotional life, disturbances of the intellectual life, and irregular eccentricities and follies.

de Sauvages completed the three-volume *Nosologie Methodique* (1771) late in life, and it was published several years after his death. In this work, de Sauvages made available to others the complete model he had constructed; this model was used as an orderly classification for decades, if not centuries, to come. In this comprehensive volume, de Sauvages organized all forms of mental illness. For example, he grouped the syndrome of melancholia into numerous species (e.g., religious, imaginary, extravagant, vagabonding, enthusiastic, and, sorrowful).

In the late 1770s and early 1780s, a distinguished physician and professor at the University of Edinburgh, ***William Cullen*** (1710–1790), became a most influential nosologist; he drew upon the work of de Sauvages, but extended the Linnean themes even more comprehensively. The Frenchman Philippe Pinel, who played a well-publicized role in the movement toward humane mental treatment, used Cullen's nosology as the basis for his "scientific" teachings. In contrast to most of his colleagues, Cullen became a popular educator because he refused to lecture in esoteric Latin and spoke in the vernacular.

In his first major work, the four-volume *First Lines of the Practice of Physick* (1777), Cullen made an effort to categorize all the then-known diseases (both psychological and physical) in line with the symptoms they displayed, the methods by which diagnoses were generated, and the therapy that might best be applied. Cullen was a notable pioneer of neuropathology and, in keeping with his orientation, believed that most pathological conditions of the mind should be attributed to diseases of the brain. Despite this orientation, he recognized that life experiences often influenced the character in which these biologically grounded diseases were expressed. Cullen proposed the term "neuroses" to represent neurologically based diseases. Most etiologically obscure mental illnesses were labeled neuroses, ostensibly to represent diseases of nerves that were inflamed and

irritable. As he perceived it, neuroses were affections of sense or motion that stemmed from a disharmony of the nervous system. Into the general category of neuroses, Cullen subcategorized four variants: those representing a diminution of voluntary motion, those representing a diminution of involuntary activity, those representing disturbances in the regular motions of the muscles or muscle fibers, and disorders of judgment.

Along with Cullen, ***Robert Whytt*** (1714–1766) played a large role in providing Scottish physicians of his day with a classification system of "neurotic" individuals. Cullen and Whytt proposed somewhat different schemas of mental disorders, although each adhered to a physiological grounding for these disturbances. Whytt attended to the less severe mental conditions of his time, categorizing them into three broad syndromes: hysteria, hypochondriasis, and nervous exhaustion—the last of which was subsequently referred to by ***George Beard*** (1839–1883) as neurasthenia. This classification does not deviate much from our current diagnostic manual, although Whytt's ideas were not based on detailed psychological observations. Whytt's basic theory was similar to Cullen's: He posited that disturbed motility within the nervous system produced nervous disorders. The selection of the term "neuroses" made good sense, as both Cullen and Whytt assumed that different sensibilities of the nerves could be the foundation upon which certain problematic behaviors might be based. This belief continued for at least another century, anticipating ideas that were explored in greater depth first by Charcot, and later by Janet and Freud.

John Haslam (1766–1844), a British psychiatrist, is perhaps best known for the diligence and astuteness of his clinical observations. As Zilboorg and Henry (1941) noted, "Through the sheer effort of keen observation of minute, seemingly unrelated details . . . and orderly arrangements of these details . . . a coherent clinical picture of the disease came to the fore" (p. 303). More careful than his predecessors, Haslam provided the first clinical description of various forms of paralysis, most notably general paresis. Alert to the epidemic of venereal disease that spread across Europe in the early 19th century, he wrote:

> A course of debauchery long persisted would probably terminate in paralysis . . . frequently induces derangement of mind. Paralytic affections are a much more frequent cause of insanity than has been commonly supposed, and they are also a very common effect of madness; more maniacs die of hemiplegia and apoplexy than from any other disease. (1809, p. 209)

Also of great significance was Haslam's recognition that states of excitement and depression alternated in the same individual—an observation recorded by Aretaeus 17 centuries earlier. Importantly, it also recognized the significance of the course of a disease as a factor in classifying mental syndromes, thereby laying the groundwork for Kraepelin's central rationale for his nosological model almost a century later. In his 1809 book, *Observations on Madness and Melancholy*, Haslam described a number of cases that would subsequently be classified as dementia praecox or schizophrenia. In the following year, he published an innovative text, *Illustrations of Madness*, which presented a detailed examination of an individual with diverse paranoid features.

No less significant was Haslam's sophistication in matters of nomenclature and semantics. In his 1809 text he wrote:

> Madness is therefore not a complex idea, as has been supposed, but a complex term for all the forms and varieties of this disease. Our language has been enriched with other terms expressive of this affliction. . . . Instead of endeavoring to discover an infallible definition of madness, which I believe will be found impossible, [I will] attempt to comprise, in a few words, the wide range and mutable character of a Proteus disorder. (1809, pp. 5–6)

Note should be made in this chronological sequence of the important contributions of ***Jean Esquirol*** (1772–1840), the great humanistic reformer and associate of Philippe Pinel. Among Esquirol's diagnostic proposals was the attention he gave to a patient's dispositions and deficits of affect and impulse in his concept of *lypemanie*, by which he meant a deficiency in the capacity to feel or desire—a feature seen in patients whom many would speak of today as depressed. Esquirol grouped the several variants of mental disorder into five broad classification syndromes: *lypemanie, monomanie, manie*,

dementia, and imbecility/idiocy—a series of distinctions utilized in France for over a century. Esquirol also made significant contributions to the clarification of delusions and hallucinations. He wrote:

> In hallucinations there is no more sensation or perception than in dreaming or somnambulism, when no external object is stimulating the senses. . . . In fact, [a] hallucination is a cerebral or psychological phenomenon that takes place independently from the senses. The pretended sensations of the hallucinated are images and ideas reproduced by memory, improved by the imagination, and personified by habit. (1838, pp. 191–192)

His description of a hallucination as essentially a variant of a delusion differentiated it from simple sensory errors such as illusions and brought it into the realm of the patient's personality dysfunctions.

Also notable were the contributions of ***Jean-Pierre Falret*** (1794–1870), another humane reformer and student of Esquirol, who articulated notions similar to his mentor's regarding delusions. He specified several factors instrumental in their formation—notably, the state of the brain, the character of the patient, the circumstances surrounding the time the delusion began, and concurrent internal and external sensations. He expressed his conception of delusions as follows:

> Delusions may reflect the most intimate preoccupations and emotions of the individual. Indeed, the features of delusions may help us recognize what aspects of the subject's organization are suffering the most. Practitioners should give attention to relationships between delusions and the character of the subject. (1862, p. 357)

Falret also contributed an early and insightful series of papers that further detailed the variable character of mania and melancholy, which he called *forme circulaire de maladie mentale*, consisting of periods of excitation followed by longer periods of weakness. Presenting this theme as a facet of his 1851 lectures at the Salpêtrière Hospital, he subsequently elaborated these views in a book published in 1854; similar ideas were proposed almost concurrently by Jules Baillarger.

A series of novel classifications also gained prominence in Germany. They were based on a threefold distinction among the "faculties of the mind" (volition, intellection, and emotion), as well as a number of "morbid" processes (e.g., exaltation and depression). Among the early promoters of this schema was ***Johann Christian Heinroth*** (1773–1843)—perhaps the first physician to occupy a chair in psychiatry, that at Leipzig University in 1811. He subdivided one of the major categories of mental disorder, *vesania*, into several orders, genera, and species. Designing a complex matrix combining the major faculties on one dimension with the morbid processes on the other, he proposed a classification system comprising subtypes that became the basis of several variations throughout Germany and England in the ensuing century. Heinroth also developed a theory of mind with a tripartite structure. The basic or undergirding layer was characterized by the animalistic instinctual qualities of human beings; the intermediary layer reflected consciousness, including both intelligence and self-awareness; and, finally, a superior layer consisted of what we would call conscience. Presaging ideas proposed later by Freud, Heinroth also proposed the notion of conflict when two layers became opposing forces—such as the instinctual impulses of sin on the one hand, and the conscience's sense of moral correctness on the other.

Especially insightful was Heinroth's (1818) recognition of the significance of the patient's affect, or passions. He specified these insights in the following passage:

> The origin of the false notions in patients are erroneously attributed to the intellect. The intellect is not at fault; it is the disposition which is seized by some depressing passion, and then has to follow it, and since this passion becomes the dominating element, the intellect is forced by the disposition to retain certain ideas and concepts. But it is not these ideas or concepts which determine the nature of the disease.

Heinroth recognized a deep connection between the human qualities of mind and the more fundamental vegetative or animal passions that are fundamental to mental disorders, notably those of melancholy and rage. Heinroth also conceived of a term akin to what today we call "psychosomatics," in

which he took exception to Descartes's contention of a dualism between mind and body. In his view, health reflected harmony between these two components when they acted as a singular entity. He not only recognized a unity between mind and body, but considered that each person was composed of the same elements that made up the rest of nature.

Heinroth traced the term "paranoia" some 2,000 years back in the medical literature. The word had disappeared from the medical lexicon in the 2nd century B.C. and was not revived until Heinroth, following the structure of Kantian psychology, employed the term in 1818 to represent a variety of disorders. He termed disturbances of the intellect "paranoia"; he called disturbances of feeling "paranoia ecstasia." He also proposed the parallel concepts of *Wahnsinn* and *Verrucktheit* (the latter term is still in use as a label for paranoia in modern-day Germany). Griesinger, to be discussed shortly, picked up the term *Wahnsinn* in 1845 to signify pathological thought processes and applied it to cases of expansive and grandiose delusions. In 1863, Kahlbaum, also discussed later in this chapter, suggested that paranoia be the exclusive label for delusional states.

British alienist ***James Cowles Prichard*** (1786–1848), credited by many as the first to formulate the concept of "moral insanity," was in fact preceded in this realization by several theorists; nevertheless, he was the first to label it as such and to give it wide readership in English-speaking nations. Although he accepted Pinel's notion of *manie sans délire*, he dissented from Pinel's morally neutral attitude toward these disorders and became the major exponent of the view that these behaviors signified a reprehensible defect in character that deserved social condemnation. He also broadened the scope of the original syndrome by including under the label "moral insanity" a wide range of previously diverse mental and emotional conditions. All of these patients ostensibly shared a common defect in the power to guide themselves in accord with "natural feelings"—that is, a spontaneous and intrinsic sense of rightness, goodness, and responsibility. In Prichard's opinion, those afflicted by this disease were swayed, despite their ability to intellectually understand the choices before them, by overpowering "affections" that compelled them to engage in socially repugnant behaviors.

A major figure in extending the ideas of Esquirol and Falret at the Salpêtrière Hospital, ***Felix Voisin*** (1794–1872) was also a strong adherent of the phrenological speculations of Gall. His particular expertise was related to the linkage between the brain and the sexual organs; he stressed the importance of the nervous system as causally involved in generating various disorders of sexual desire. Placing special attention on the pathologies of nymphomania and satyriasis, especially as they were related to hysteria, Voisin articulated a progression in these disorders from their early stages to their more severe forms, contributing to the idea that disease *course* was central to clinical diagnostics.

In his major work, *The Analysis of Human Understanding* (1851), Voisin specified three major faculties of human functioning: moral, intellectual, and animal. This division predated and paralleled Freud's subsequent formulation of the mind's structure of superego, ego, and id. Also notable was Voisin's contribution to the moral treatment of persons with mental retardation at the Bicêtre Hospital. Influenced by Prichard, Voisin delved briefly in his later years into the problems of criminal and forensic pathology, speaking of criminals as products of lower-class origins and of their inevitable moral degeneration—a theme addressed elsewhere by Cesar Lombroso and Benedict Morel.

Another contributor to French thinking of the day was ***Paul Briquet*** (1796–1881), who focused primarily on problems of hysteria and their ostensive connection to female maladies. In his extensive monograph, *Traite Clinique et Therapeutique a l'Hystérie* (1859), he took exception to the notion posited by Plato and Hippocrates that hysteria was a consequence of sexual incontinence. Briquet specified with great clarity the multiple, exaggerated gastrointestinal, sexual, and other complaints that typified the symptoms presented by his "hysterical" patients. Such symptoms are labeled "somatization disorder" in official nosologies today, as well as occasionally referred to as "Briquet's syndrome." He recorded, in contrast to prior beliefs, that married women were no more inclined to hysteria than were unmarried women; that numerous cases appeared before puberty; and, most significantly, that an

active sexual life was no assurance that one would not develop such symptoms.

Going beyond the assumptions of many of his contemporaries, Briquet rejected the view that men could not develop symptoms of hysteria. He also pointed to numerous psychological influences that often contributed to the symptomatological expression of the disorder, noting painful emotional states (such as sadness and fear) as elements in precipitating the syndrome. Moreover, he speculated on a variety of untoward developmental and life experiences as playing a pathogenic role (e.g., parental mistreatment, spousal abuse, unfavorable employment circumstances or business failures). Recognizing that only a small subset of those subjected to these psychosocial experiences developed the hysterical syndrome, Briquet proposed the concept of "predispositions" as pathogenic factors. Aware that life circumstances often troubled his patients, he suggested that many would benefit from speaking to an empathic counselor or physician who might serve as a confidant. Briquet showed great sensitivity in going beyond the crude medications of the day to employ a psychotherapeutic approach to his patients' difficulties.

Ernst von Feuchtersleben (1806–1849) may have been the first Austrian psychiatrist to gain a distinguished status in European circles during the mid-19th century. His one major publication, *The Principles of Medical Psychology*, published in 1847, probably had a significant influence on Freud and his many disciples in Vienna. A strong critic of those who supported the Cartesian mind–body dichotomy, Feuchtersleben (like many in the 20th-century psychosomatic movement) considered the mind and the body to be a unitary phenomenon, essentially indivisible. An exponent of the role of personality qualities in the life of mental patients, Feuchtersleben wrote with great sensitivity on the psychic sources of mental disorders. In describing those inclined to the development of depressive diseases, Feuchtersleben said:

> Here the senses, memory, and reaction give way, the nervous vitality languishes at its root, and the vitality of the blood, deprived of this stimulant, is languid in all its functions. Hence the slow and often difficult respiration, and proneness to sighing. . . . When they are chronic, they deeply affect vegetative life, and the body wastes away. (1847, p. 135)

Moreover, in what may have been the first purely psychological description of what is now referred to as histrionic personality disorder, Feuchtersleben depicted women disposed to hysterical symptoms as being sexually heightened, selfish, and "over-privileged with satiety and boredom." Attributing these traits to the unfortunate nature of female education, he wrote: "It combines everything that can heighten sensibility, weaken spontaneity, give a preponderance to the sexual sphere, and sanction the feelings and impulse that relate to it" (1847, p. 111). Chauvinistic as this judgment may be regarded today, Feuchtersleben at least recognized and was sensitive to the limitations Victorian society placed upon women in his time. Moreover, he asserted the important role that psychological factors could play in helping patients understand the origins of their difficulties. He also espoused a hopeful therapeutic attitude and recommended opportunities for patients to acquire a second education in life.

As noted earlier in this chapter, the great English neurologist Thomas Willis (1664/1978) reported having observed a pathological sequence in which "young persons who, lively and spirited, and at times even brilliant in their childhood, passed into obtuseness and hebetude during adolescence." Better known historically, however, are the texts of Belgian psychiatrist ***Benedict-Augustin Morel*** (1809–1873), who described the case of a 14-year-old boy who had been a cheerful and good student, but who progressively lost his intellectual capacities and increasingly became melancholy and withdrawn. Morel considered such cases to be irremediable and ascribed the deterioration to an arrest in brain development that stemmed from hereditary causes. He named the illness "dementia praecox" (*demence precoce*), to signify his observation that a degenerative process began at an early age and progressed rapidly.

After Morel became chief physician at St. Yon Asylum in 1856, he continued to lecture and write on the inevitable sequence of deterioration, which he considered to be an inexorable course in all mental disorders.

He judged this "incessant progression" of degeneration to be human destiny. Speaking of those subjected to hereditary mental disorders, he wrote:

> The degenerate human being, if he is abandoned to himself, falls into a progressive degradation. He becomes . . . not only incapable of forming part of the chain of transmission of progress in human society, he is the greatest obstacle to this progress through his contact with the healthy portion of the population. (1857, p. 46)

Although his work secured him a niche in the history of psychiatry, Morel's views contributed to the pessimistic attitude regarding mental illness that was then pervasive in the European public at large—a view that unfortunately gained a horrendous following a century later in Nazi Germany.

In 1854, ***Jules Baillarger*** (1809–1892) and Jean-Pierre Falret summarized the results of their independent work with depressed and suicidal persons. They reported that a large proportion of these patients showed a course of extended depression, broken intermittently by periods of irritability, anger, elation, and normality. The terms *la folie circulaire* (Falret, 1854) and *folie à double forme* (Baillarger, 1853) were applied to signify this syndrome's contrasting and variable character. Baillarger contributed to a wide range of psychopathological conditions beyond the syndrome known today as bipolar disorder, notably in his ideas on hallucinations and delusions, neurohistology, epilepsy, and general paralyses. With regard to delusions, he sought to describe the perceptual basis of this disorder by stating that delusions were based on false interpretations of normal sensations, whereas illusions were distortions at the sensory rather than the ideational level. Similarly, he explored the question of whether hallucinations were sensory or psychological phenomena. He proposed two types: psychosensory hallucinations, which stemmed from the interaction of both sensory and imaginal distortions, and psychological hallucinations, which were independent of any sensory involvement.

Although born and educated in Germany, ***Richard von Krafft-Ebing*** (1810–1874) became a close follower of Morel, whose concept of degeneration struck a resonant chord in his work and practice at the Illenau Asylum in Baden. Krafft-Ebing was convinced that the Morelian process of degeneration was the primary cause not only of mental disorders, but also of criminality and sexual pathology. He wrote: "Madness, when it finally breaks out, represents only the last link in the psychopathic chain of constitutional heredity, or degenerate heredity" (1879, p. 439). Moving to Graz, Austria, he became a professor of psychiatry at the university there and the director of its provincial asylum. In his major work, *Lehrbuch der Psychiatrie* (1879), he referred to the problem of progressive sexual degeneration as follows: "It is specially frequent for sexual functioning to be . . . abnormally strong, manifesting itself explosively and seeking satisfaction impulsively, or abnormally early, stirring already in early childhood and leading to masturbation" (p. 424). By the mid-1880s, Krafft-Ebing assumed the chair at the University of Vienna and wrote his most famous book, entitled *Psychopathia Sexualis* (1882/1937), in which he spoke of the pervasive pathology of all variants of sexual activity (i.e., those differing from the approved and "proper" behavior of Victorian times).

The label "masochism" was proposed by Krafft-Ebing as a new concept in his catalog of sexual perversions. In a manner similar to the creation of "sadism" from the name of the Marquis de Sade, the "masochism" label was created from the name of a well-known writer of the time, Leopold von Sacher-Masoch. In Sacher-Masoch's novel *Venus in Furs* (1870), the hero suffers torture, subjugation, and verbal abuse from a female tormentor. Krafft-Ebing asserted that flagellation and physical punishment were necessary elements in the perversion, but were less significant than a personal relationship that included enslavement, passivity, and psychological serfdom. Hence, from its first formulations, the concept of masochism (although centrally sexual in nature) included the need to experience suffering, not just physical pain.

The growth of knowledge in anatomy and physiology in the mid-18th century strengthened the trend toward organically oriented disease classifications. ***Wilhelm Griesinger*** (1817–1868; see Figure 1.3), a young German psychiatrist with little direct patient experience, asserted the disease concept in his

FIGURE 1.3. Wilhelm Griesinger.

classic text *Mental Pathology and Therapeutics*, published in 1845 when he was barely 28 years of age. His statement "Mental diseases are brain diseases" shaped the course of German systematic psychiatry for the next 40 years. Griesinger's contention that classifications should be formed on the basis of underlying brain lesions was not weakened by the fact that no relationship had yet been established between brain pathology and mental disorders. In fact, Griesinger's own system of categories—depression, exaltation, and weakness—did not parallel his views regarding the importance of brain pathology. Nevertheless, he convinced succeeding generations of German neurologists, led by Thomas Meynart and Carl Wernicke, that brain diseases would be found to underlie all mental disturbances.

Griesinger was born in Stuttgart, Germany, and completed his medical studies in Zurich and Tübingen. There he learned to view medicine as a science based on the direct observation of patient experiences and behaviors rather than on historical speculations and philosophy. He began his formal career in psychiatry at the Winnenthal Asylum in Stuttgart. Assuming that he had gathered sufficient expertise in a 3-year span, he penned his classic 1845 text. To him, the study of mental illness was integral to the study of general medicine. He conceived of mental disorders as chronically progressive, like most medical diseases. Thus he regarded depression as beginning with a minor level of cerebral irritation, leading next to a chronic and irreversible degeneration, and ending ultimately in pervasive dementia—a path of deterioration that became a central theme of Kraepelin's belief that the course of a mental disorder was its most crucial characteristic.

It was not until 1861 that Griesinger revised his 1845 text, following which he returned to his work in psychiatry at the University of Berlin. Here he both lectured and practiced at its Charité Clinic, where he divided his patients into those with routine nervous diseases and those with nervous diseases that also exhibited psychiatric symptoms. He also initiated and assumed the editorship of a new journal, the *Archives for Psychiatry and Nervous Diseases*. In its first volume, Griesinger wrote:

> Psychiatry has undergone a transformation in its relationship to the rest of medicine. . . . This transformation rests principally on the realization that patients with so-called mental diseases are really individuals with diseases of the nerves and the brain. . . . Psychiatry . . . must become an integral part of general medicine and accessible to all medical circles. (1868, p. 12)

Although the work of Griesinger and his followers regarding the role of the brain in mental disorders soon dominated continental psychiatry, a different emphasis regarding the basis of classification was developing concurrently. Jean Esquirol, Pinel's distinguished associate, had often referred to the importance of age of onset, variable chronicity, and deteriorating course in understanding pathology. This idea was included as a formal part of classification in 1856 when German psychiatrist ***Karl Ludwig Kahlbaum*** (1828–1899) extended Esquirol's idea by developing a classification system in which disorders were grouped according to their course and outcome. It became the major alternative system to the one Griesinger proposed. Kraepelin, noting his indebtedness to Kahlbaum's contributions, stated that "identical or remarkably similar symptoms can accompany wholly dissimilar diseases while their inner nature can be revealed only through their progress and termination" (Kraepelin, 1920, p. 116).

Kahlbaum wrote of how useless attempts had been to group disorders on the basis of the similarity of their overt symptomatology, as if such superficial symptom collections would themselves expose something essential concerning the underlying diseases. He commented as follows:

> It is futile to search for the anatomy of melancholy or mania, because each of these forms occurs under the most varied relationships and combinations with other states, and they are just as little the expression of an inner pathological process as the complex of symptoms we call fever. (1874, p. 2)

Kahlbaum turned his attention in 1857 to psychoses that were typical of young adolescents, focusing on the sudden emergence of mental disorientation and rapid disintegration—a pattern not unlike that described by Morel a decade or two earlier. Similarly, reading the work of Falret and of Jules Baillarger, he also directed his attention to the problems of patients whose mood disorders appeared to follow a sequential course from mania to depression and back.

In a series of monographs and books published between 1863 and 1874, Kahlbaum not only established the importance of including longitudinal factors in psychiatric diagnosis, but described newly observed disorders that he labeled "hebephrenia" and "catatonia," as well as coining the modern terms "symptom complex" and "cyclothymia." Kahlbaum, together with his disciple Ewald Hecker, introduced the term "hebephrenia" to represent conditions that began in adolescence, usually starting with a quick succession of erratic moods, followed by a rapid enfeeblement of all functions, and finally progressing to an unalterable psychic decline. The label "catatonia" was introduced to represent "tension insanity" in cases where the patient displayed no reactivity to sensory impressions, lacked "self-will," and sat mute and physically immobile. These symptoms ostensibly reflected deterioration in brain structure.

It was Kahlbaum also who, in 1882, clearly imprinted current thinking on the fixed covariation of mania and melancholia, known today as bipolar disorder. Although he regarded them as facets of a single disease, which he termed "dysthymia" (following a label introduced two decades earlier by Carl Flemming), the disease actually manifested itself in different ways at different times—occasionally euphoric, occasionally melancholic, and occasionally excitable or angry. It was the primacy of the former two emotions that rigidified future conceptions of the syndrome and redirected thinking away from its more typical affective instability and unpredictability. He termed a milder variant of the illness, notable for its frequent periods of normality, "cyclothymia." A more severe and chronic form of the same pattern was designated by Kahlbaum as *vesania typica circularis*.

Henry Maudsley (1835–1918) was admitted to London's University College at age 15; here he proved to be a brilliant student, completing his medical degree at age 21. Unsure about his future and lacking the means to follow an early interest in surgery, he entered the East India Company's service, spending the better part of a year as medical officer at the Wakefield Mental Asylum. Owing to his high intelligence and vigorous appearance, at age 23 he was appointed medical superintendent of the Cheadle Royal Hospital, despite a total lack of administrative experience or formal psychiatric training. Shortly thereafter, he became superintendent of the newly opened Manchester Royal Lunatic Hospital. His fame grew throughout England, and at age 27 he became the editor of the country's major psychiatric publication, the *Journal of Mental Science*. He was appointed to a professorship at the University College Hospital in 1870.

In his major text, *Physiology and Pathology of Mind* (1876), Maudsley attempted to redirect the philosophical inclinations typical of British clinicians and sought to anchor the subject more solidly within the biological sciences. He vigorously asserted that mind and body comprised a unified organism, "each part of which stirs the furthest components, [and] which then acts upon the rest and is then reacted on by it. . . . Emotions affect every part of the body and [are] rooted in the unity of organic life." He also wrote, consistent with comparable views expressed by Griesinger in Germany, that "mental disorders are neither more nor less than nervous diseases in which mental symptoms predominate" (1876, p. 41). Despite this view, Maudsley had asserted earlier

> that there is no boundary line between sanity and insanity; and the slightly exaggerated feeling which renders a man "peculiar" in the world differs only in degree from that which places hundreds in an asylum. . . . Where hereditary predisposition exists, a cause so slight as to be inappreciable to observers is often efficient to produce the disease. (1860, p. 14)

The Japanese first met with Europeans in the middle of the 16th century, but they were highly ambivalent toward European influences and remained isolated until the latter half of the 19th century. Western medicine (including Western psychiatry in Britain and Germany) was introduced, and Japanese psychiatry became strongly organically oriented. The writings of Maudsley, who viewed insanity as a bodily disease, and of Griesinger, whose approach has been described as "psychiatry without psychology," were among the most important influences. ***Shuzo Kure***'s (1865–1932) visit to Europe brought back not only the ideas behind Kraepelin's descriptive psychiatry, but also the emerging interest in psychoneuroses and psychotherapy. Also introduced was the term "neurasthenia," in which a wide variety of bodily symptoms were explained as exhaustion of the central nervous system under the influence of physical and social stressors.

Kure's pupil ***Shoma Morita*** (1874–1938), having personal experiences with neurasthenia, developed a psychogenic theory and treatment of neurosis. Subsequently labeled "Morita therapy," his approach deserves a closer description as an example of how Western and Eastern thinking met. (See Goddard, 1991, for a full discussion.) Morita translated Binswanger's work *Fundamentals of Treatment for Mental Illness*; Binswanger recommended a strictly regulated 5-week timetable for "life normalization," which included intellectual and manual activities. Morita was also influenced by American neurologist ***Silas Weir Mitchell*** (1829—1914), who invented a regimen of bed rest, isolation, rich diet, massage, and electrostimulation for neurasthenia, and by neuropathologist and psychotherapist ***Paul Charles Dubois*** (1848–1918), who believed that the therapist's task was to convince the patient that his or her neurotic feelings, thoughts, and behaviors were irrational. By integrating these ideas of Western scientists with thoughts from Zen Buddhism, Morita developed Morita therapy, which for a century has been widely used not only in Japan, but also in China and in some Western societies.

Morita's term for neurosis was *shinkeishitsu*. Everyone is born with *sei no yokubo*, the desire to live, but this drive may be hindered by oversensitivity to oneself and one's limitations. Morita did not regard patients as sick persons, but as healthy persons obsessed by their own anxieties and fears. He described three different kinds of *shinkeishitsu*: (1) the ordinary type, which resembles what is now labeled somatization disorder; (2) the obsessive/phobic type or *taijin kyofusho*, which includes symptoms of present-day agoraphobia, specific phobia, social phobia, and obsessive–compulsive disorder; and (3) the paroxymal neurosis type, which includes symptoms of agoraphobia and generalized anxiety disorder. Morita therapy followed a strict time schedule, starting with complete isolation in a private, familial, homelike room to give a feeling of security for a week; this was followed by light activities and the keeping of a diary, which each patient discussed with a therapist. Then followed a stage of work such as gardening, and finally a stage where the patients were turning toward realities with their families and society. The goal for the treatment was not necessarily the disappearance of symptoms, but the ability to function normally and productively despite the symptoms. Morita endorsed the concept of *arugamama*, meaning "things are as they are," which was the mental attitude patients were encouraged to show toward their symptoms. The emphases on body–mind–nature monoism, affirming and accepting worldly passion and desires, and the practice of daily life were clearly borrowed from Japanese Shintoism, Zen Buddhism, and Asian psychology, but they also owed much to Japanese cultural patterns (e.g., the meaning of and devotion to work, the acceptance of reality, persistence, and dependency).

Throughout the 19th century, German psychiatrists abandoned what they considered to be the value-laden theories of the French and English alienists of the time and toward what they judged to be empirical or observational research. Among this group was ***J. A. Koch*** (1841–1908), who

proposed that the label "moral insanity" be replaced by the term "psychopathic inferiority," which included "all mental irregularities whether congenital or acquired which influence a man in his personal life and cause him, even in the most favorable cases, to seem not fully in possession of normal mental capacity" (1891, p. 67). Koch used the word "psychopathic"—a generic label employed to characterize all personality diagnoses until recent decades—to signify his belief that a physical basis existed for these character impairments. Thus he stated: "They always remain psychopathic in that they are caused by organic states and changes which are beyond the limits of physiological normality. They stem from a congenital or acquired inferiority of brain constitution" (1891, p. 54).

Descriptive Psychopathology in the 20th Century

Kraepelin's comprehensive textbooks at the turn of the 20th century served as one of psychiatry's two major sources of inspiration; the other consisted of Freud's innovative psychoanalytic contributions. As the preeminent German systematist, ***Emil Kraepelin*** (1856–1926; see Figure 1.4) bridged the diverse views and observations of Greisinger and Kahlbaum in his outstanding texts, revised from a small compendium in 1883 to an imposing four-volume eighth edition in 1913. Kraepelin constructed a system that integrated Kahlbaum's descriptive and longitudinal approach with Greisinger's somatic disease view. By sifting and sorting prodigious numbers of well-documented hospital records, and directly observing the varied characteristics of patients, he sought to bring order to symptom pictures and, most importantly, to patterns of onset, course, and outcome. Kraepelin felt that syndromes based on these sequences would be best in leading to accurate identification and distinction among the different conditions that differentiated and caused these disorders. Psychiatric historian Ray Porter (2002) has summarized this contribution of Kraepelin as follows:

> He approached his patients as symptom-carriers, and his case histories concentrated on the core signs of each disorder. The course of psychiatric illness, he insisted, offered the best clue to its nature. . . . Kraepelin's commitment to the natural history of mental disorders led him to track the entire life histories of his patients in a longitudinal perspective which privileged prognosis (likely outcome) as definitive of the disorder. (pp. 184–185)

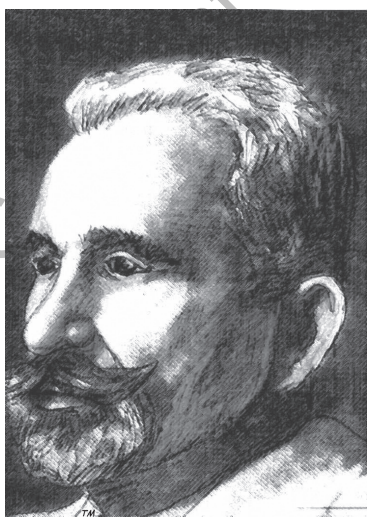

FIGURE 1.4. Emil Kraepelin.

Kraepelin was born in Germany in the same year as Sigmund Freud. A serious and diligent student, Kraepelin was exposed in medical school to several professors who were instrumental in shaping his style of thinking and research for the rest of his career. Most notable among these was Wilhelm Wundt, the founder of experimental psychology. Wundt himself had been trained by Hermann von Helmholtz, the great physiological theorist. Owing to visual difficulties that deterred him from research with microscopes, Kraepelin began to pursue psychological research, becoming one of Wundt's most distinguished students. Nevertheless, Wundt advised him to pursue medicine rather than psychology, which was then a fledgling science with limited career opportunities. In 1882, Kraepelin began the initial drafts of his first textbook, which later became the standard for educating psychiatrists.

His first text, a 300-page volume titled *Compendium of Psychiatry*, was so successful that it led to several subsequent editions published under the general title *Short Text-*

book of Psychiatry. By the sixth edition of what he subsequently called his *Lehrbuch* or *Textbook of Psychiatry* at the turn of the century, Kraepelin was known throughout the Continent and the English-speaking world. In 1904, he became chairman of the Psychiatric Clinic and Laboratory at the University of Munich—a distinguished department where he was able to bring along with him from Heidelberg such promising young researchers as Alois Alzheimer and Franz Nissl, both already known for their excellent neurohistological studies. At the time of his death in 1926 at age 70, Kraepelin was actively working on a ninth edition of his textbook, which had expanded to four volumes and more than 3,000 pages.

Kraepelin did not set out initially to create the nosology for which he became so famous. Although he proposed a series of revolutionary ideas concerning the nature of clinical syndromes, the astuteness of his observations and the clarity of his writing were what proved to be central to the success of his work. Kraepelin wrote very little about how classification should be organized; that is, he utilized no formal set of principles to rationalize how a nosology should be structured. It was the implicit structure of his books (i.e., their basic table of contents) that served as his classification system. Not to be dismissed was the logic that he presented for organizing syndromes on the basis of clinical symptomatology, course, and outcome. Perhaps it was the input of his mentor Wundt's keen observation and analysis of the behavior of his subjects in his research studies that taught him to provide such richly descriptive characterizations of his patients. Moreover, Kraepelin focused on the overt psychological manifestations of mental disorders, in contrast to his more organically and physiologically oriented contemporaries. The following paragraphs touch on only a few of his conceptions regarding the major forms of psychoses and the syndromes now termed "personality disorders."

Kraepelin constantly revised his diagnostic system, elaborating it at times, simplifying it at others. In the sixth edition of 1899, he established the definitive pattern of two modern major disorders: "manic–depressive psychosis" (now known as bipolar disorder) and "dementia praecox" (now known as schizophrenic disorders). These were clinically vivid syntheses of previously independent concepts that Morel and Kahlbaum had formulated. Within the manic–depressive group, he brought together the excited conditions of mania and the hopeless melancholia of depression, indicating the periodic course through which these moods alternated in the same patient. To be consistent with his disease orientation, he proposed that this disorder was caused by an irregular metabolic function transmitted by heredity.

As recorded previously, many of Kraepelin's predecessors viewed mania and melancholia as a single disease that manifested itself in different forms and combinations over time. Kraepelin borrowed heavily from these formulations, but separated the "personality" and "temperament" variants of the disorder from the clinical state of the disease. Nevertheless, in the fifth edition of his text, he proposed the name "maniacal–depressive insanity" for "the whole domain of periodic and circular insanity"; it included such diverse disturbances as "the morbid states termed melancholia and certain slight colorings of mood, some of them periodic, some of them continuously morbid" (1896, p. 161). Like Kahlbaum, Kraepelin viewed "circular insanity" as a unitary illness. Moreover, he believed that every disorder that featured mood disturbances—however regular or irregular and whatever the predominant affect, be it irritability, depression, or mania—was a variant or "rudiment" of the same basic impairment. To Kraepelin, the common denominator for these disturbances was an endogenous metabolic dysfunction that was "to an astonishing degree independent of external influences" (1896, p. 173).

Four varieties of the cyclothymic disposition identified by Kraepelin were termed "hypomanic," "depressive," "irascible," and "emotionally unstable." He described the hypomanic type as follows:

> They acquire, as a rule, but scant education, with gaps and unevenness, as they show no perseverance in their studies, are disinclined to make an effort, and seek all sorts of ways to escape from the constraints of a systematic mental culture. The emotional tone of these patients is persistently elated, carefree, self-confident. Toward others they are overbearing, arbitrary, impatient, insolent, defiant. They mix into everything, overstep their prerogatives, make unauthorized arrangements,

> as they prove themselves everywhere useless. (1913, p. 221)

In describing the depressive personality type, Kraepelin (1921) wrote:

> There are certain temperaments which may be regarded as rudiments of *manic–depressive* insanity. They may throughout the whole of life exist as peculiar forms of psychic personality, without further development; but they may also become the point of departure for a morbid process which develops under peculiar conditions and runs its course in isolated attacks. Not at all infrequently, moreover, the permanent divergencies are already in themselves so considerable that they also extend into the domain of the morbid without the appearance of more severe, delimited attacks. (p. 118)

Typically, Kraepelin considered this type to be characterized by an inborn temperamental predisposition to "a permanent gloomy emotional stress in all experiences in life" (p. 118). According to him, "the morbid picture is usually perceptible already in youth, and may persist without essential change throughout life" (p. 123).

The irascible type was ostensibly endowed simultaneously with both hypomanic and depressive inclinations. According to Kraepelin, "They are easily offended, hot-headed, and on trivial occasions become enraged and give way to boundless outbursts of energy. Ordinarily the patients are, perhaps, serene, self-assertive, ill-controlled; periods, however, intervene in which they are cross and sullen" (1921, p. 222). The emotionally unstable variant presumably also possessed both hypomanic and depressive dispositions, but manifested them in an alternating (or, as Kraepelin viewed it, true cyclothymic) pattern. He described these patients as follows:

> It is seen in those persons who constantly swing back and forth between the two opposite poles of emotion, now shouting with joy to heaven, now grieved to death. Today lively, sparkling, radiant, full of the joy of life, enterprise, they meet us after a while depressed, listless, dejected, only to show again several months later the former liveliness and elasticity. (1921, p. 222)

Kraepelin had considered hebephrenia, the diagnosis of adolescent psychosis, and dementia praecox to be synonymous prior to the sixth edition of his psychiatric text. In his original treatise, he concluded that the diverse symptom complexes of catatonia and hebephrenia, as well as certain paranoid disturbances, displayed a common theme of early deterioration and ultimate incurability. As he conceived them, each of these illnesses was a variation on Morel's concept of dementia praecox. By subsuming the disparate symptoms of these formerly separate syndromes under the common theme of their ostensible early and inexorable mental decline, Kraepelin brought a measure of order and simplicity to what had previously been diagnostic confusion. In line with the traditions of German psychiatry, Kraepelin assumed that a biophysical defect lay at the heart of this new coordinated syndrome. In contrast to his forebears, however, he speculated that sexual and metabolic dysfunctions were the probable causal agents, rather than the usual hypothesis of an anatomical lesion. Among the major signs that Kraepelin considered central to these illnesses, in addition to the progressive and inevitable decline, were discrepancies between thought and emotion; negativism and stereotyped behaviors; wandering or unconnected ideas; hallucinations and delusions; and a general mental deterioration.

Kraepelin believed that the "autistic" temperament served as the constitutional soil for the development of dementia praecox. Of particular note was Kraepelin's observation that children of this temperament frequently "exhibited a quiet, shy, retiring disposition, made no friendships, and lived only for themselves" (1921, p. 109). They were disinclined to be open and become involved with others, were seclusive, and had difficulty adapting to new situations. They showed little interest in what went on about them, often refrained from participating in games and other pleasures, seemed resistant to influence (but in a passive rather than active way), and were inclined to withdraw increasingly into a world of their own fantasies.

Among the "morbid" personalities, Kraepelin included a wide range of types disposed to criminal activities. As early as 1905, he identified four kinds of persons with features akin to what we speak of today as Cluster B personality disorders. First were the "morbid liars and swindlers," who were glib and

charming but lacked an inner morality and sense of responsibility to others. They made frequent use of aliases, were inclined to be fraudulent con artists, and often accumulated heavy debts that were invariably unpaid; this type proves to be descriptively similar to those we might classify today as having narcissistic personality disorder. The second group included "criminals by impulse"—individuals who engaged in crimes such as arson, rape, and kleptomania, and were driven by an inability to control their urges; they rarely sought material gains for their criminal actions. The third type, referred to as "professional criminals," was neither impulsive nor undisciplined; in fact, such persons often appeared well mannered and socially appropriate, but were inwardly calculating, manipulative, and self-serving. The fourth type consisted of the "morbid vagabonds," who were strongly disposed to wander through life, never taking firm root, lacking both self-confidence and the ability to undertake adult responsibilities.

Although less successful in influencing nosological thinking in the latter half of the 19th and early 20th centuries than Kraepelin, several other distinguished thinkers deserve recognition. ***Philippe Chaslin*** (1857–1923) was a great French theorist whose life's work overlapped with Bleuler's in Switzerland, Kraepelin's in Germany, and Freud's in Austria. A philosopher and linguist at heart, he spent the majority of his professional career at the Salpêtrière Hospital in Paris, where he wrote on a wide range of topics (including history, linguistics, and mathematics, as well as psychiatry). Among his central formulations was the concept of "discordance," a notion he used to describe and explain dementia praecox; Bleuler, who originated the term "schizophrenia" in his 1911 treatise on the subject, stated later that he might have preferred "discordant insanity" as an alternative label had he known of it earlier.

In his major work, *Elements de Seminologie et de Clinique Mentale*, written in 1912, Chaslin conveyed a series of ideas similar to those formulated concurrently by Freud, but with special reference to psychotic delusions. For example, he wrote:

> Delusional ideas seem to have their source in the emotions of the patient of which they are symbolic representations. . . . One could illustrate the origins of delusions by recollecting the mechanisms of dreaming. Propensities, desires, and feelings from the waking state reappear in dreams in symbolic scenes. (1912, p. 178)

Chaslin devoted much of his theoretical writing to articulating different variants of delusions and states of confusion. He spoke of the several ways in which delusions presented themselves—sometimes in isolation, sometimes combined with hallucinations; occasionally incoherent, but also at times systematic and logical, as in paranoid conditions. Regarding confusional states, Chaslin asserted that these temporary periods signified a loosening of intellectual, affective, and motivational functions; he concluded, for example, that the distinctions between confusion and dementia were modest and reflected an assumption that dementia possessed a chronic and deteriorating course.

Chaslin was also concerned, as were many philosophers of the day, with the failure of psychiatric language to adequately represent the nature of the disorders they diagnosed and treated. In describing the difficulties of psychopathological terminology, Chaslin exclaimed:

> I believe that the imprecision of terms is due to the imprecision of our ideas, but I also think that the inexactitude of a language may cause further inexactitude in our ideas. . . . If [the terminology] only helped to combat factual imprecisions, but the opposite is the case; it is often imagined that progress has been made simply because fancy names have been given to old things. (1912, p. 18)

Eugen Bleuler (1857–1939) is universally recognized for his description of what is presently known as "schizophrenia," the term he coined to replace the historic diagnostic label "dementia praecox." The label "schizophrenia" is now judged by many to be unfortunate, suggesting a splitting between segments of the mind—a concept then prevalent in French circles, and a notion Janet had proposed as an alternative to Freud's conception of three levels of consciousness. As evidence now indicates, patients diagnosed with schizophrenia do not suffer any form of splitting, but rather are characterized by disordered thinking leading to delusions and hallucinations.

In 1898 Bleuler took over the headship of the Burgholzli Mental Hospital, an already distinguished center for the clinical study of mental illness. Bleuler daily spent hours talking with his patients, often in their own unusual dialects, searching to gain an understanding of the psychological meaning of their seemingly senseless verbalizations and delusions. Most importantly, he urged his students and residents to be open-minded and to establish an emotional rapport with their patients; he believed that doing so would enable them to track the meaning of the words their patients used, as well as the word associations that might give meaning to their utterings. It was in this regard that he saw the utility of Freud's new free-association methods, and it was on these grounds also that he instilled an interest in his young associate, Carl G. Jung, in Freud's early psychoanalytic concepts.

Bleuler's studies of word associations led to his theory of schizophrenia. That is, the "loosening" or disintegration in patients' capacity to associate ideas and emotions reflected their ostensible inability to connect their thoughts with their feelings, and hence the presumed "split" between these two core psychic processes. Following upon ideas that were then emerging in the writings of both Freud and Janet, Bleuler asserted that his patients would display secondary symptoms that derived from the primary or fundamental thought–feeling disconnection—symptoms that evidenced themselves in an autistic separation from reality, in repetitive psychic ambivalences, and in verbal behaviors akin to dreaming. Although committed to Kraepelin's view that dementia praecox was primarily an organic disease, Bleuler emphasized the presence of psychological ambivalence and disharmony in this impairment, to signify the intellectual–emotional split he believed he observed in these patients.

Bleuler's conception of schizophrenia also encompassed a wider range of syndromes than Kraepelin's notion of dementia praecox. He included several acute disturbances that Kraepelin previously judged to be independent disease entities. Moreover, Bleuler believed that those displaying acute schizophrenic symptoms could recover readily with proper intensive care before their condition devolved into a more chronic state. Observing hundreds of patients diagnosed with dementia praecox in the early 1900s led Bleuler to conclude that it was misleading to compare the type of deterioration they evidenced with that found among patients suffering from metabolic deficiencies or brain degeneration. Moreover, he judged his patients' reactions and thoughts to be qualitatively complex and often highly creative, contrasting markedly with the simple or meandering thinking that Kraepelin observed. Furthermore, not only did many of his patients display their illness for the first time in adulthood rather than in adolescence, but a significant proportion evidenced *no* progressive deterioration, which Kraepelin considered the sine qua non of the syndrome. Thus Bleuler viewed the label "dementia praecox" as misleading, in that it characterized an age of onset and a course of development not supported by the evidence.

As noted, schizophrenia's primary symptoms, in Bleuler's view, were disturbances in the associative link among thoughts, a breach between affect and intellect, ambivalence toward the same objects, and an autistic detachment from reality. The several varieties of patients that displayed these fragmented thoughts, feelings, and actions led Bleuler to term their disorders "the group of schizophrenias." Nevertheless, he retained the Kraepelinian view that the basic impairment in these diverse disorders stemmed from a unitary disease process that was attributable to a basic physiological pathology. As he saw it, this shared neurological ailment produced their common primary symptoms. Bleuler ascribed the content of secondary symptoms to the patients' distinctive life experiences and to their efforts to adapt to their basic disease. Psychogenic factors shaped the unique character of each patient's impairment, but Bleuler was convinced that experience did not itself cause the ailment.

Bleuler recognized that some dispositions left untreated might ultimately evolve into a clinical schizophrenic state, which he termed *schizoidie*. In his initial formulation of the schizophrenia concept in 1911, he also provided one of the first portrayals that approximates what we now call avoidant personality disorder. Discussing several of the contrasting routes that often led to the psychotic syndrome, Bleuler recorded the early phase of certain patients as follows:

> There are also cases where the shutting off from the outside world is caused by contrary reasons. Particularly in the beginning of their illness, these patients quite consciously shun any contact with reality because their affects are so powerful that they must avoid everything which might arouse their emotions. The apathy toward the outer world is then a secondary one springing from a hypertrophied sensitivity. (1911/1950, p. 65)

Bleuler spoke of other personalities as being "irritable of mood"(*reizbare Verstimmung*), as Aschaffenburg (1922) did later in describing them as "dissatisfied personalities" who went through life as if they were perpetually wounded. Applying the label "amphithymia," Hellpach (1920) also depicted a similar pattern of "fussy people" who tended to be of a sour disposition, constantly fretted over whatever they did, and made invidious and painful comparisons between themselves and those of a more cheerful inclination (whose simpler and brighter outlook was both envied and decried).

Adolf Meyer (1866–1950), like Bleuler, was born in Switzerland. He completed his medical training in 1892 at the age of 26, following several predoctoral years in France, England, and Germany. A student of Forel at the University of Zurich, he decided to emigrate to the United States shortly after receiving his medical degree, having heard that Chicago was a city with numerous opportunities for young physicians. Meyer eventually served as a staff pathologist at the Illinois Eastern Hospital for the Insane, remaining there from 1893 to 1895. For the next 7 years, he was director of clinical research laboratories at the Worcester Insane Hospital and was associated with Clark University, both in Massachusetts. Increasingly recognized as a major contributor to neuropathology, as well as a lecturer known for his detailed history taking, interviews, and note taking, Meyer was appointed director of the New York Pathological Institute in 1902, as well as professor of psychiatry at Cornell University Medical School, where he continued autopsied brain research, teaching, and administrative activities until 1910. Along with Freud and Jung, he was awarded an honorary doctoral degree at Clark University in 1909. Owing to his distinguished achievements, Meyer later became chair of a new Department of Psychiatry and director of the Henry Phipps Psychiatric Clinic at Johns Hopkins University in Baltimore, where the aim was to blend scientific research and clinical practice. He remained at Johns Hopkins for over 30 years, building a German-style psychiatric clinic akin to Kraepelin's in Munich; in the process, he became the most influential psychiatrist in the United States and a mentor to an entire generation of both academic and clinical psychiatrists.

Meyer introduced the concept of a "constitutionally inferior" type into American literature at the turn of the century, shortly after his arrival from Germany. Although following Koch's ideas in the main, Meyer sought to separate psychopathic from psychoneurotic disorders, both of which were grouped together in Koch's "psychopathic inferiorities" classification. Meyer was convinced that the etiology of the neuroses was primarily psychogenic—that is, colored less by inherent physical defects or by constitutional inferiorities.

Meyer later became disillusioned with both Kraepelin's and Koch's approaches, particularly their fatalistic views of illness and their strictly deterministic prognosis and outcome for those of a problematic temperament. Meyer turned to a view increasingly shared by psychoanalysts—that is, discarding the disease model and viewing psychiatric disorders not as fundamentally organic conditions, but rather as consequences of environmental factors and life events. Although initially sympathetic to Freud's theories, Meyer soon became critical of the mystic and esoteric nature of psychoanalysis; despite his break from Freud's metapsychology, however, he shared Freud's view regarding the role of life experiences as central to the emergence of all psychiatric disorders.

As early as 1906, Meyer espoused the view that a true understanding of patients could be derived only by studying the individuals' total reaction to their organic, psychological, and social experiences. Although Meyer was the most prominent psychiatrist to introduce the Kraepelinian system in this country, he believed that these disorders were not disease entities, but "psychobiological reactions" to environmental stress. Through his work, Meyer bridged the physiological

orientation of the late 19th century and the psychodynamic orientation of the 20th.

For example, in 1912 Meyer asserted that dementia praecox was not an organic disease but a maladaptive way of reacting to stress, fully understandable in terms of a patient's constitutional potentials and life experiences. To him, these maladaptive reactions led to what he called "progressive habit deteriorations," which reflected "inefficient and faulty attempts to avoid difficulties" (1912, p. 98). He regarded symptoms of mental illness as the end products of abortive and self-defeating efforts to establish psychic equilibrium. His well-reasoned "psychobiological" approach to schizophrenia, which he called "parergasia" to signify its distorted or twisted character, was the most systematic recognition of his interactive and progressive view of the nature of pathogenesis. Of special note also was Meyer's view that parergasia could be present in dilute and nonpsychotic form—that is, without delusions, hallucinations, or deterioration. He considered the classic psychotic symptoms to be advanced signs of a potentially, but not inevitably, evolving habit system that might stabilize at a prepsychotic level. In its nonclinical state, parergasia could be detected from a variety of attenuated "soft signs" that merely suggested the manifest psychotic disorder. Meyer's proposal of a self-defeating and maladaptive reaction system (personality) that paralleled schizophrenia in inchoate form was a highly innovative, but unheeded, notion.

Karl Jaspers (1883–1969) was undoubtedly an influential pioneer of phenomenological and existential psychiatry, though, oddly enough, he did not consider himself a phenomenologist. His system of mental illness approached classification in a unique way; that is, it sought to describe each patient's true subjective experience and how he or she faced mental illness, rather than simply describing overt psychological syndromes as observed by the therapist. To this end, Jaspers made distinctions such as that between "feelings" and "sensations"; he described the former as emotional states of the individual, and the latter as part of the individual's reactions to and perceptions of the environment. The ultimate goal of this system was to enable the therapist to be as sensitive and empathic as possible with the patient. It was Jaspers's contention that the inexhaustibly infinite depth and uniqueness of any single individual—whether mentally ill or healthfully functioning—could not be completely understood and objectified, but that the medical/psychological practitioner must strive for as close an understanding as possible. This existential view of humankind was what set this system apart from the traditional means of diagnosis and treatment. In contrast with the psychoanalysts, who attempted to probe beneath the surface of patients' verbal reports to uncover their unconscious roots, Jaspers focused on patients' conscious self-description of feelings and experiences, believing that their phenomenological reports were the best routes to achieving a true understanding of their world.

Together, Meyer's notion of reaction types, Jaspers's existential phenomenology, and Bleuler's focus on cognitive and emotional experience reshaped Kraepelin's original system into a more contemporary psychiatric nosology. In their classifications, Kraepelin's clinical categories were retained as the basic framework, and Meyer's, Jaspers' and Bleuler's psychological notions provided guides to patients' inner processes and social reactions.

The Rise and Fall of 20th-Century Psychoanalytic Psychopathology

Many consider ***Jean-Martin Charcot*** (1825–1893; see Figure 1.5) the father of clinical neurology. Open-minded, deeply curious, and capable of observing subtle clinical details of his patients' behaviors, Charcot was an extraordinarily astute observer of physical defects and dysfunctions. Charcot was a senior physician at the Bicêtre, and later at the deteriorated Salpêtrière women's hospital, where Pinel had carried out his humane activities earlier in the century. In 1862, along with another young physician of exceptional ability, Edme F. A. Vulpain, Charcot studied the chronically ill women housed in its decaying wards. These two highly motivated and skilled physicians quickly recognized that more than half of those for whom they were responsible had been incorrectly diagnosed, most having been lumped indiscriminately into one or two categories.

Charcot's first discoveries were related to multiple sclerosis (MS), a significant neuro-

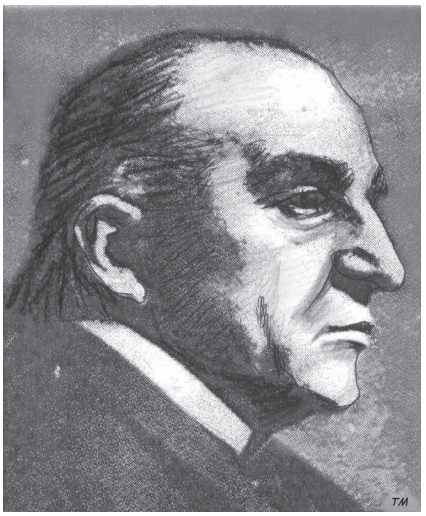

FIGURE 1.5. Jean-Martin Charcot.

logical disorder that was unrecognized as a distinct disease in the 1860s. Collaborating with Vulpain, he demonstrated the classic disintegration of the myelin sheath—the basic anatomical feature of the disorder. Also important was Charcot's recognition of the visual problems typical of those with MS, as well as his patients' tendency to exhibit extreme fluctuations in symptomological intensity over time. Another important contribution was his distinction between MS and the "shaking palsy," or what came to be called Parkinson's disease. Charcot identified features of the latter that Parkinson overlooked, such as patients' blank stares, motionless and stolid expressions, and periodic and involuntary oscillation of hand movements.

Owing to Charcot's distinguished work, the Salpêtrière was granted substantial funds to develop laboratory facilities for clinical research and for weekly lectures by "the master." These lectures were prepared in great detail and with careful thought, although their public presentation appeared to be spontaneous. Charcot had already achieved considerable recognition in France; his work was now quickly recognized throughout the Continent, attracting disciples and students from far and wide. Of special note in his later years was an interest in "hysteria," a label used in his day for patients with clinical signs of pathology that could not be correlated with underlying anatomical or neurological diseases. Because this category was generally considered a catch-all—a place to assign those who could not be properly diagnosed in one or another class of standard disorders—Charcot made a valiant effort to subdivide the variants of those so categorized. He differentiated subgroups still in use, such as those with defective memories, peculiar or inexplicable losses of sensitivity, apparently (false) motoric seizures that simulated epilepsy, and so on.

It was Charcot's contention that all patients with hysteria suffered from a "weak" constitution; that is, they possessed neurological vulnerabilities that made them highly susceptible to ordinary life conditions, such as work-related stresses. Among Charcot's assertions were that these constitutionally weak patients could be readily hypnotized. In fact, Charcot believed that *only* patients with hysteria could be hypnotized, as they were impressionable individuals whose neurologically weak minds could be readily swayed by the suggestions of others. Worthy of note, however, was Charcot's recognition that hysteria could be found in men as well as women, although he asserted that secondary psychological features typically differentiated the genders.

Charcot's stature and ideas concerning hysteria attracted the young Sigmund Freud, a neurologist in training from Vienna, who came to study with him during the winter of 1885. So impressed was Freud with Charcot's lectures that he set out to translate the professor's writings for German-reading neurologists. After this, Freud progressed in his own innovative direction, disagreeing fundamentally with Charcot's neurological assertions regarding hysteria.

Three classes of experience were stressed by Freud and his psychoanalytic colleagues as conducive to psychopathology: (1) the extent to which the earliest and most basic needs of a young child's nurturance and protection are frustrated; (2) the conflicts with which children must deal as they develop; and (3) the general parental attitudes and familial settings in which children's experiences occur and are learned.

The emphasis the psychoanalytic theorists placed on early childhood experience represented their view of disorders in adulthood as direct products of the continued

and insidious operation of past events. For them, knowledge of the past should provide information indispensable to understanding adult difficulties. To the question "What is the basis of adult disorders?", they would answer: "The anxieties of childhood and the progressive sequence of defensive maneuvers that were devised to protect against a recurrence of these feelings."

According to psychoanalysis, therefore, adult patterns of behavior are not the results of random influences, but arise from clear-cut antecedent causes. For the most part, these causes persist out of awareness; that is, they are kept unconscious because of their troublesome character—notably the stressful memories and emotions they contain, and the primitive nature of the child's youthful defenses. Central also to the analytic viewpoint is the concept of psychic conflict. In this notion, behavior is considered to result from competing desires and their prohibitions, which are expressed overtly only through compromise and defensive maneuver, and often in disguised form. Furthermore, all forms of behavior, emotion, or cognition are likely to serve multiple needs and goals; that is, they are "overdetermined." Behavioral expressions and conscious cognitions emerge as surface manifestations of several hidden forces that reside in the unconscious.

The concept of the unconscious—inner thoughts and feelings beyond immediate awareness—was brought to the fore through the dramatic methods of an Austrian physician, ***Franz Anton Mesmer*** (1734–1815). Borrowing Paracelsus's notion of a physically based planetary magnetism, Mesmer believed that many forms of illness resulted from imbalances of universal magnetic fluids. These imbalances, he concluded, could be restored either by manipulating magnetic devices or by drawing upon invisible magnetic forces that emanated from one person to another.

By the late 19th century, both magnetism and hypnotism, a method developed by ***James Braid*** (1795–1860), had begun to fall into disrepute as therapeutic procedures. A modest physician working in a rural region near Nancy in France had heard of James Braid's work at a lecture and decided to explore its possibilities in his limited practice. Well regarded in his local community, ***Ambroise-Auguste Liébault*** (1823–1904) utilized a simple method of inducing sleep by suggesting to patients that they look into his eyes while he spoke to them in quiet tones. In 1866, Liébault published a small book titled *Du Sommeil et des États Analogues* (*Sleep and Analogous States*), in which he stressed that the power of suggestion not only was central to successful hypnotism, but was the primary vehicle of therapeutic efficacy.

Liébault was generally considered a simpleton, if not a quack, by his colleagues. Nevertheless, rumors of his therapeutic successes came to the attention of a well-regarded professor of medicine at the Nancy School of Medicine, ***Hippolyte-Marie Bernheim*** (1840–1919), a young Jewish physician who had recently been appointed to this new medical institution. Bernheim had been treating a patient with sciatica for 6 years with minimal success. He referred this patient to Liébault, who utilized his methods of suggestive sleep and succeeded within 6 months in fully relieving the patient of the disorder. As a result, Bernheim decided to experiment with Liébault's radical hypnotic methods in his own clinic.

We have just discussed Charcot's signal importance in developing methods of clinical neurology. By contrast, his role in fostering a psychoanalytically oriented psychiatry stems less from the intent or the originality of his work than in the incidental part he played in stimulating the ideas of others, notably Freud and Janet. As noted earlier, Charcot studied the diverse and confusing symptoms of hysteria at the Salpêtrière. Because of his neurological orientation, he viewed trances, memory losses, and bodily anesthesia as diagnostically difficult cases of an underlying nervous system disease. It was not until his associates demonstrated that the symptoms of hysteria could be induced by hypnotic procedures that Charcot reconsidered his views of this puzzling ailment. His inability to differentiate between hypnotized and naturally produced paralyses, as well as the frequently noted migration or disappearance of symptoms and the anatomically impossible location of many of the paralyses he saw, convinced him that hysteria could not be a product of a simple injury or local disease of the nervous system. Despite suggestive evidence to the contrary, Charcot could

not abandon his biological perspective. To accommodate his observations, he proposed that hysteria resulted from a wide-ranging and congenital neurological deficiency, and that hypnosis merely served as a precipitant of the inborn defect.

Charcot presented his neurological thesis regarding hypnotism at the French Academy of Sciences in the early 1880s. Shortly thereafter, Bernheim brought to the world's attention Liébault's alternative interpretation concerning the role of suggestion in the hypnotic technique. First, Bernheim wrote, hypnosis could be employed with a variety of ailments; second, its effects stemmed from the power of suggestion; and third, all humans were susceptible to suggestion in varying degrees.

Although Bernheim was an internist and not a neurologist or psychiatrist, he vigorously disagreed with Charcot—maintaining that hysteria was primarily a state of heightened self-suggestion, and that hypnosis was an equivalent state induced by others. Moreover, Bernheim advanced the view that hysteria was essentially a psychogenic disorder, and applied the term "psychoneurosis" to this and similar puzzling symptom syndromes. His belief that unconscious self-suggestion might underlie the symptoms of many mental disorders played a significant role in influencing Freud's thinking. In developing the concept of psychoneurosis, Bernheim sought to parallel the medical tradition of seeking underlying biological causes for the disorder with a comparable notion of underlying psychological causes.

Josef Breuer (1842–1925) was born in Vienna, where his father was a well-known teacher and author of Jewish thought. He helped Freud financially in his early years. Even more importantly, he whetted Freud's curiosity about both hysteria and hypnosis in discussing a young patient of his, later to become famous under the pseudonym of Anna O. The case of Anna O. was described to Freud in 1880; it involved a classical example of hysteria, which followed a period when the young woman had nursed her father through a major illness. Breuer employed a hypnotic technique to encourage his patient to voice her experiences and thoughts at the time her symptoms had emerged. The memories that Anna O. recalled under hypnosis were accompanied by intense outbursts of emotion that she had been unable to vent at the time of her symptoms. Moreover, she became intensely attached to Breuer; uncomfortable with her affectionate feelings toward him, Breuer withdrew from the case.

Some years thereafter, Freud traveled to Paris and later to Nancy, where he observed the methods that Breuer had utilized—both those of Charcot and, later, those of Bernheim. Upon his return from these travels in the late 1880s, Breuer and Freud continued their discussions with a series of new cases employing the methods of hypnosis and the stirrings of emotional catharses. This work ultimately led to a series of papers and the publication of a major book, entitled *Studies on Hysteria*, in 1895. Freud and Breuer formulated their idea in this text that patients with hysteria suffered from repressed memories of emotionally traumatic events—events so distressing that the emotions they aroused could not be faced consciously at the time they occurred. It was Freud and Breuer's contention that the technique for curing hysteria was to unblock the repressed and pent-up emotions that were "kept secret" in the unconscious.

Pierre Janet's (1859–1947) career was an unusual one for a psychiatrist. Janet first taught philosophy at a small college, the Lyceum in Chateau Roux, in the rural province of Berry, and later at the Lyceum in Le Havre, where he remained for over 6 years. He began his early clinical work at the Le Havre mental hospital, where he was assigned the task of examining all incoming women who were deemed to have hysteria. Most of Janet's patients at Le Havre were young, fresh, and unsophisticated, unlike the usual inmates at the major institutions of France, such as the Salpêtrière, who had typically been examined numerous times by scores of physicians and students. By the mid-1880s, Janet had turned to the highly esteemed studies of Jean Charcot, as well as those of other scholars engaging in what was known as "psychical" research.

Janet might have been considered the most original thinker about psychoanalytic processes, had he not been overshadowed by the unusually courageous and innovative Freud. Janet evolved a theory in which neuroses resulted from an inability to integrate co-occurring psychic processes; this thesis foreshadowed, and may have led Bleuler to, the

concept of dementia praecox (schizophrenia) as a split between thought and emotion. As did Freud, Janet observed that painful experiences and undesirable impulses could not be tolerated by his patients. In developing his concept of "dissociation," Janet speculated that intolerable thoughts and feelings might take on an independent existence within a person and manifest themselves in amnesia, multiple personality, hysterical fits, and/or conversion paralyses. In this formulation, Janet recognized that different systems of thought could become pathologically separated, with one or another part lost to consciousness. This strengthened the idea that unconscious processes might persist unmodified within the person.

Despite his capacity to describe his patients and their frequent exotic behaviors and complaints, Janet did not display Charcot's and Freud's relentless curiosity, or their courage in exploring the outer reaches and deeper roots of their patients' psyches. He seemed overly cautious and circumspect, unable to plumb the depths of psychic conflict and sexual pathology. As some have characterized him, he was a "neat and well-stocked pantry, with everything in its proper place."

Sigmund Freud (1856–1939; see Figure 1.6) was arguably the most influential psychologist and physician of the 20th century. His reinterpretation of the observations first made by Charcot and Bernheim initiated an intellectual and cultural revolution of worldwide proportions. His theories have been both extravagantly praised and intensely castigated. Venerated by some and condemned by others, Freud has been spoken of at times as one of history's greatest scientists, and at others as a fraudulent cult leader. Numerous historians refer to him as the greatest psychologist of all time, the profoundest of all human scientists. Others are convinced that the unconscious never existed except in Freud's mind, and that his theories were baseless and aberrational. Some speak of him as a false prophet; others depict him as a courageous fighter for the truth. His most condemning detractors describe him as a neurotic egotist who propounded irrational and fantastic theories. More balanced historians aver that Freud's discoveries merely crystallized previously diffuse ideas of his many predecessors, such as those described in previous pages.

FIGURE 1.6. Sigmund Freud.

Personally and professionally, Freud was a man of divergent dispositions. A militant atheist and radical theorist, he espoused liberated attitudes toward sexuality; at the same time, he was politically conservative, usually somber and unsmiling, impeccably dressed, invariably anxious about finances, clearly suffering in his middle years from assorted psychosomatic symptoms, and fearfully hesitant about modern contrivances. He always felt that he was an outsider. "A godless Jew" and free thinker, yet conservative in personal behavior, prissy, and formalistic, he did not leave his home city until forced to do so following the Nazi takeover of Austria.

Freud devoted his long and fruitful life to the development and elaboration of his theories and techniques. Unlike his great German contemporary Kraepelin, who sought to classify broad groups of disorders with a common course and symptoms, Freud stressed the brightly etched inner memories, the feverish imaginations, and the unique attributes of each patient. And unlike Janet, his French contemporary, who viewed neuroses as the results of an underlying constitutional deficiency, Freud set out to trace the perplexing ambiguities, the afflicted emotional palette, the convoluted psychogenic origins, and the primitive passions that he perceived and explored as the unconscious source and undergirding force of each manifest disor-

der. It was not only the dense interplay of refracted realities in his findings that proved so epochal; the ever-dividing and sprawling new lines of his individualistic philosophy and his orientation toward the implausible and desultory character of life's realities, as well as the odds and ends of its rarefied energies, all served as a foundation for the 20th-century understanding of humankind's complicated and intriguing nature.

According to Freud, each stage of psychosexual development would produce a distinctive set of anxieties and defenses resulting from instinct frustration and conflict. Symptoms and character traits would arise from the persistence into adulthood of childhood anxieties and defenses. Freud's early disciples, notably ***Karl Abraham*** (1877–1925) and ***Wilhelm Reich*** (1897–1957), differentiated the oral psychosexual period into two phases: the "oral-sucking" phase, in which food was accepted indiscriminately, followed by the "oral-biting" period, in which food was accepted selectively, occasionally rejected, and aggressively chewed. In their view, excessive gratifications, conflicts, or frustrations associated with each of these phases could establish different patterns of adult personality. For example, an overly indulgent sucking stage might lead to imperturbable optimism and naive self-assurance. An ungratified sucking period might lead to excessive dependency and gullibility; for example, deprived children might learn to accept anything in order to ensure that they will get something. Frustration experienced at the biting stage might lead to the development of aggressive oral tendencies such as sarcasm and verbal hostility in adulthood.

At a later period in his exploration of the disorders of personality, Freud speculated that character classification could be based on his threefold structural distinction of "id," "ego," and "superego." Thus, in 1931, he sought to devise character types in accord with which psychoanalytic structure was dominant. First, he proposed an "erotic" type—persons whose lives were governed by the instinctual demands of the id. "Narcissistic" individuals were so dominated by the ego that neither other persons nor the demands of id or superego can affect them. "Compulsive" persons were so tightly regulated by the strictness of the superego that all other functions were dominated. Lastly, Freud identified a series of "mixed" types in which combinations of two of the three characterological structures outweighed the third. Freud's compulsive character type has been well represented in the literature, but only in the past 30 years have his proposals for a narcissistic personality disorder gained attention (Millon, 1981, 1996).

Alfred Adler (1870–1937), founder of the school of individual psychology, became an outspoken critic of Freud's views on infantile sexuality shortly before Jung did in 1911. On the basis of his own clinical observations, Adler concluded that superiority and power strivings were more fundamental to pathology than sexuality was. Although many of his patients were not overtly assertive, he observed that their disorder enabled them to dominate others in devious and subtle ways. Phobias and hypochondriasis, for example, not only excused patients from disagreeable tasks, but allowed them to control and manipulate others. Adler hypothesized that these strivings for superiority were consequences of the inevitable and universally experienced weakness and inferiority in early childhood. In this conception, Adler attempted to formulate a universal drive that would serve as an alternative to Freud's universal sexual strivings.

According to Adler, basic feelings of inferiority led to persistent and unconscious compensatory efforts. These were manifested in pathological struggles for power and triumph if individuals experienced unusual deficiencies or weaknesses in childhood. Among healthier personalities, compensation accounted for strivings at self-improvement and interests in social change and welfare. These compensatory struggles or strivings, acquired by all individuals as a reaction to the restrictions imposed by their more powerful parents, led to general patterns of behavior that Adler called "styles of life."

Although chosen by Freud as his heir apparent, ***Carl Gustav Jung*** (1875–1961) did not agree with Freud's emphasis on the sexual nature of development and motivation, and established his own system of analytic psychology in 1913. Jung expanded the notion of "libido," Freud's concept for the basic sexual energies, to include all life-propelling forces. The concept of "racial memories," later termed the "collective unconscious," was proposed to suggest that instinctual

forces were more than seething animalistic impulses; according to Jung, these forces contained social dispositions as well. These primitive dispositions were often expressed in folklore and mystical beliefs. When no acceptable outlet could be found for them in societal life, they took the form of symptoms such as phobias, delusions, and compulsions. Jung's belief in unconscious social dispositions led also to his formulation of two basic personality types, the "extrovert" and the "introvert." Despite these and other original contributions, Jung's views had a minimal impact upon the mainstream of psychodynamic theory and practice.

Karen Horney (1885–1952) contended that neurotic disorders reflected cultural trends learned within the family; she minimized biological determinants and stressed interpersonal relationships. She believed that anxiety and repressed anger were generated in rejected children and led to feelings of helplessness, hostility, and isolation. As these children matured, they developed an intricate defensive pattern of either withdrawal, acquiescence, or aggression as a means of handling their basic anxiety. Although Horney felt that adult patterns resulted largely from early experience, she argued, in contrast with Freud, that therapy should focus on its adult form of expression. First, she averred that the intervening years between childhood and adulthood caused important changes in adaptive behavior. And, second, present-day realities had to be accepted, and the goals of therapy had to take them into account.

Horney's descriptive eloquence was without peer; nevertheless, difficulties arose when she summarized what she referred to as the major "solutions" to life's basic conflicts. Although her primary publications were written over a short period, she utilized different terms to represent similar concepts (Horney, 1937, 1939, 1942, 1945, 1950). Faced with the insecurities and inevitable frustrations of life, Horney identified three emergent modes of relating: "moving toward" people, "moving against" people, or "moving away" from them. In her 1945 book, Horney formulated three character types to reflect each of these three solutions: Moving toward was found in a "compliant" type; moving against, in an "aggressive" type, and moving away, in a "detached" type. In 1950, Horney reconceptualized her typology in line with the manner in which individuals solve intrapsychic conflicts; she termed these solutions "self-effacement," "expansiveness," and "neurotic resignation." Although these sets of three do not match perfectly, they do correspond to the essential themes of Horney's characterology.

Several major thinkers from Great Britain began to formulate what is referred to as the "object relations" approach to psychoanalytic theory in the 1940s and 1950s. Most inventive of these was ***Melanie Klein*** (1882–1960), one of the originators of child psychoanalysis (along with Anna Freud, with whom she vigorously differed and contended for leadership in the British analytic community). Klein's views met with intense opposition in the wider psychoanalytic world, and fierce battles raged within British analytic circles over her inventive concepts. Although she was a vigorous critic of more orthodox psychoanalytic thought, she believed that emphasizing the very earliest and most primitive stages of development was a natural extension of Freud's original formulations. In the United States since the mid-1960s, ***Otto Kernberg*** (1928–) has sought to develop a synthesis of drive reduction and object relations frameworks—an approach that has brought considerable attention to modern analytic thought, as well as generating considerable controversy.

Owing to numerous pragmatic considerations at the time—not the least of which were the advent of effective psychopharmacological medications and the emergence of the sophisticated community mental health movement—the balance of power within American psychiatry shifted slowly but surely away from psychoanalysis in the 1970s. The wider culture had also reconsidered the high repute in which it had formerly held for psychoanalysts: They were no longer seen as wise, generous, and kindly, but were depicted increasingly as irrelevant stumblebums. In a review of what was wrong with psychoanalysis, Richard Weber (1995) stated that concepts such as infantile sexuality were more than objects of disbelief, not so much disproven as incapable of disproof; in his view, they should be relegated to the same scientific status as astrology. And eminent English psychologist Hans Eysenck (1985) asserted that just as chemistry had had to

unshackle itself from the fetters of alchemy, and the brain sciences had had to disengage themselves from phrenology, so too must psychology and psychiatry abandon the pseudoscience of psychoanalysis.

Questions have been raised as to whether or not scientific concepts can be founded on unconscious data. Psychoanalytic theories have been criticized as unscientific mixtures of metaphorical analogies, speculative notions, and hypothetical constructs because their data are anchored so tenuously to the observable world. Added to this rather harsh judgment is the equally critical view that the methods of collecting unconscious data are both unreliable and imprecise. How can concepts of the unobservable unconscious be empirically anchored? Can one accept what a patient says without having it corroborated by external evidence? Is the patient an unbiased judge, or is he or she motivated to agree with the all-knowing therapist?

These and many other questions have been raised about the subjective and methodologically uncontrolled procedures used for the development of psychoanalytic theories. To critics, the ingenious speculations of psychoanalytic theorists are at best a starting point—a preliminary set of propositions requiring reformulation as clearly specified hypotheses that can be confirmed or disproved. Despite these criticisms, psychoanalytic processes may be a necessary part of the study of humankind's pathological functioning. These processes may be difficult to formulate according to the tenets of scientific objectivity, but their existence cannot be denied or overlooked. Efforts to unravel them may fall prey to theoretical obscurity and methodological difficulties, yet the search should be mandatory. To the deeply inquiring and instinctively insightful thinker, the intricate themes of mental life articulated by analysts have a richness and unquestionable accuracy about them.

Current Trends

In the latter decades of the 20th century, several major theorists appear to have developed a strong foundation of ideas that may influence the future course of psychopathology's history. We describe some of them briefly here.

Aaron Timothy Beck (1921–) has been a prominent and insightful contributor to cognitive therapy, especially as applied to a wide range of the Axis I clinical syndromes. More recently, he and his associates have addressed the subject of personality, articulating "cognitive schemas" that shape the experiences and behaviors of numerous personality disorders. Beck focused his early research efforts largely on testing psychoanalytic theories of depression, but when his studies failed to support his hypotheses, he explored a more cognitive explanation of the disorder. He found that most depressed patients had broad negative views of themselves, of the world at large, and of their own future. Beck reasoned that these negative "cognitive distortions," as he termed them, could be reoriented to accord with reality through the application of logic and the rules of evidence. He eventually applied these cognitive investigations to a broad range of disturbances, from anxiety to substance use to personality disorders. Cognitive approaches to the treatment of mental disorders have become more than merely the mainstream of "talking therapies" today. More than one-third of all therapists speak of themselves as cognitive in orientation; the others employ cognitive techniques periodically.

C. Robert Cloninger (1945–) has formulated a recent model of personality dispositions, drawing upon genetic and neurobiological substrates. Cloninger's complex theory is based on the interrelationship of several heritable characteristics or functional dispositions, notably "novelty seeking," "harm avoidance," and "reward dependence." Each of these is associated with different neurobiological systems (dopamaninergic, serotonergic, and noradrenergic, respectively).

More specifically, *novelty seeking* is hypothesized to dispose individuals toward exhilaration or excitement in response to novel stimuli; it leads to the pursuit of potential rewards, as well as an active avoidance of both monotony and punishment. Harm avoidance reflects a disposition to respond strongly to aversive stimuli, leading individuals to inhibit behaviors to avoid punishment, novelty, and frustrations. Reward dependence is hypothesized as a tendency to respond to signals of reward (e.g., verbal signals of social approval), and to resist extinction of behaviors previously associated with re-

wards or relief from punishment. To extend the theme of novelty seeking, for example, individuals high on this dimension but average on the other two dimensions would be characterized as impulsive, exploratory, excitable, quick-tempered, and extravagant—likely to seek out new interests, but inclined to neglect details and to become quickly distracted or bored.

Larry Siever's (1950–) theoretical model has also attempted to link neurotransmitters' properties to the various personality disorders. Siever has developed a dimensional model that has major clinical syndromes at one extreme and the milder personality disorders at the other end. He proposes four major dimensions: "cognitive/perceptual organization," "impulsivity/aggression," "affective instability," and "anxiety/inhibition." For example, schizophrenic disorders are viewed as disturbances of a cognitive/perceptual nature, exhibiting themselves in thought disorders, psychotic symptoms, and social isolation; schizotypal personality disorder would serve as the prototype among the Axis II disorders. Disorders of impulsivity/aggression are hypothesized as resulting in poor impulse control, particularly as evident in aggressive actions. In the more distinct clinical syndromes, Siever suggests the presence of impulsivity/aggression in explosive disorders, pathological gambling, or kleptomania. When this dimension is more pervasive and chronic, it may be seen in persistent self-destructive behaviors, such as those characteristic of borderline and antisocial personality disorders. Problems of affective instability are most clearly observed in the intensity and dysregulation of mood disorders. When this inclination is more sustained over time, it may interfere with the development of stable relationships and self-image, as may be manifested in borderline and histrionic personality disorders. Lastly, the anxiety/inhibition dimension appears to be related to the Axis I anxiety syndromes (e.g., social phobia, compulsive rituals); when it is present at a low threshold over extended periods of development, avoidant, compulsive, or dependent personality disorder may result.

Eric Kandel (1930–) left Austria for the United States with his family in 1939. He attended Harvard University to study the humanities. Intrigued by his reading of Freudian literature, Kandel went to medical school to pursue a career as a psychoanalyst. Early in his training, Kandel undertook work in neurophysiology, in the hope of gaining a clearer understanding of how memory and emotions are biologically generated and intertwined. His early research led him to explore the hippocampus as the primary source of memory formation, but he soon turned to a simpler neurosystem for his intensive analysis. Utilizing the *Aplysia* sea slug, a creature with only 20,000 nerve cells, as an experimental animal, Kandel identified a number of the biochemical changes that accompany memory formation—explicating how short-term memory involves just a minor modulation of the synapses, whereas long-term memory requires new synaptic linkages. More specifically, he showed that a protein termed CREB helps the nervous system retain a memory or a learned skill for a long period of time rather than just briefly.

This work earned Kandel, together with Paul Greengard and Arvid Carlsson, the Nobel Prize in Physiology or Medicine in 2000. Together, they began to decode how the vast numbers of synaptic connections in the brain (at least 100 trillion) are able to communicate continually, as well as to alter their strength, flexibility, and function.

Although ***Paul Meehl's*** (1920–2003) biologically oriented social learning model is limited to schizophrenia, it is notable for both its elegance and specificity. He hypothesized that only a certain class of people, those with a particular genetic constitution, have any liability to schizophrenia. Meehl suggested that the varied emotional and perceptual–cognitive dysfunctions people with schizophrenia display are difficult to explain in terms of single-region disorders. The widespread nature of these dysfunctions suggested to Meehl the operation of a more diffuse integrative neural defect. Although a combination of different neurological disturbances can account for this defect, he opted for an explanation in terms of deficits in synaptic control. More specifically, he believed that the major problem in schizophrenia lies in a malfunctioning of the two-way mutual control system between perceptual–cognitive regions and the limbic motivation center. Meehl proposed that integrative neu-

ral defects are the only direct phenotypic consequences produced by the genetic disorders; these consequences, given the label "schizotaxia," are all that can properly be spoken of as inherited. The imposition of certain social learning histories on schizotaxic individuals results in a personality organization that Meehl called the "schizotype." Four core behavior traits—namely, anhedonia, cognitive slippage, interpersonal aversiveness, and ambivalence—are not innate. However, Meehl postulated that schizotaxic individuals universally learn them, given any existing social learning regimen (from the best to the worst). If the social environment is favorable and a schizotaxic person has the good fortune of inheriting a low anxiety readiness, physical vigor, and a general resistance to stress, the personality organization will remain a well-compensated schizotype, and the individual may never manifest symptoms of clinical schizophrenia.

In England, two child-oriented analysts, ***Michael Balint*** (1896–1970), and ***John Bowlby*** (1907–1990), contributed to an understanding of developmental vicissitudes. Balint's concept of the "basic fault" was derived from studies of patients whose borderline characteristics appeared to be consequences of having missed something during the first year or two of life. In Balint's view, such a fault can lead to one of two extreme reactions. In the so-called "ocnophile" adaptation, infants deal with the experience by clinging excessively to others; in the "philobat" adaptation, children learn to distance themselves from others and rely entirely on themselves. Bowlby stressed "attachment learning," especially that resulting from the loss of a significant early relationship. He spoke of children suffering maternal loss as passing through three phases: protest, despair, and detachment. In the first stage, children evidence anger at their loss; in the second, children begin to lose hope that the mother will ever return; finally, despair turns to detachment (i.e., the children become depressed and unresponsive). Sharing Melanie Klein's object relations model, Bowlby asserted that the manner in which children deal with affectional deprivation will determine how they will react in later life to problematic relationships with loved ones.

In the 1980s, sharp criticisms were raised against the dominance of the DSM and ICD systems, both based on a Kraepelinian vision (Klerman, 1986). Some eminent psychiatrists have asserted that, except for organic disorders, a classificatory diagnosis is less important than a psychodynamic study of personality; that is, rather than fitting a patient's symptoms into a fixed classificatory scheme, a clinician should seek to understand the person in terms of his or her distinctive life experiences (American Psychoanalytic Association, 2006). Others have noted that too much research time is wasted and too many errors are perpetuated because investigators cling to an outdated classification. Proponents, on the other hand, have explained the viability of a Kraepelinian schema by the "fact" that there is a considerable amount of truth contained in the system and the practical implications associated with its labels; that is, they are more than merely sufficient when compared with the power of competing concepts. One of the major problems facing a field as inchoate and amorphous as mental health is its susceptibility to subjective values, cultural biases, and chance events. Were the field a "hard" science, anchored solidly in readily verified empirical fact, progress would presumably derive from advances of a tangible and objective nature. Unfortunately, that is not the case. Nevertheless, the field has endeavored to standardize, as much as possible, the language conventions and classification rules for diagnosing mental disease categories. To say the least, effective communication among clinical centers was seriously compromised, as were useful records for epidemiological statistics and research.

Theodore Millon (1928–) has come to believe that the widespread desire among theorists to unify science should not be limited to explicating physics; that is, it should be possible in all fields of nature that have been subdivided by habit, tradition, or pragmatics (e.g., economics, sociology, geology). He believes unification to be a worthy goal even within the newer sciences, such as personology. Efforts to coordinate the separate realms that constitute the field of the mind and, more specifically, the field of mental disorders should be particularly useful. Rather than independently developing autonomous

and largely unconnected professional activities and goals, a truly mature mental science should embody, and create a synergistic bond among, five explicit elements:

1. *Universal scientific principles* that are grounded in the ubiquitous laws of nature; despite their varied forms of expression, these principles may provide an undergirding framework for constructing narrow-based subject-oriented theories.
2. *Subject-oriented theories*, or explanatory and heuristic conceptual schemas of the mind and mental illness. These theories should be consistent with established knowledge in both their own and related sciences, and should enable reasonably accurate propositions concerning all clinical conditions to be both deduced and understood, enabling thereby the development of a formal classification system.
3. *Classification of personality styles and pathological syndromes*, or a taxonomic nosology that has been derived logically from the theories. The taxonomy should provide a cohesive organization within which its major categories can readily be grouped and differentiated, permitting thereby the development of coordinated assessment instruments.
4. *Personality and clinical assessment instruments*, or tools that are empirically grounded and sufficiently sensitive quantitatively to enable the theories' propositions and hypotheses to be adequately investigated and evaluated. Hence the clinical categories constituting the nosology should be able to be readily identified (diagnosed) and measured (dimensionalized), thus specifying target areas for interventions.
5. *Integrated therapeutic interventions*, or planful strategies and modalities of treatment. These interventions should accord with the theories and be oriented to modify problematic clinical characteristics, consonant with professional standards and social responsibilities.

Perhaps the only realistic and significant question to be posed in appraising a new taxonomy or nomenclature is not whether it mirrors the state of the science perfectly, or whether it provides answers to all possible questions professionals within the discipline may ask, but whether it represents an advance over preceding nosological systems and whether it will be employed with greater clinical accuracy and facility by future practitioners and researchers.

Having participated over two intense 5-year periods as a member of the DSM-III and DSM-IV committees, Millon is considerably more charitable than he once was about the purposes and success with which these task forces met their responsibilities. He has no illusion, however, that the task was completed. As he wrote nearly two decades ago,

> Classifying mental illness must be an outgrowth of both psychology and medicine. As such, efforts to construct a taxonomy must contend with the goals, concepts, and complications inherent in both disciplines (e.g., context moderators, definitional ambiguities, overlapping symptomatologies, criterion unreliabilities, multidimensional attributes, population heterogeneities, instrument deficits, and ethical constraints). (Millon, 1991, p. 245)

Thus the profession remains unsure today whether to conceive depression as a taxon (category) or an attribute (symptom); whether to view it as a dimension (with quantitative degrees of severity) or as a set of discrete types; or whether to conceive it as a neuroendocrinological disease or as an existential problem of life. Although debates on these issues often degenerate into semantic arguments and theoretic hairsplitting, it is naive to assume that metaphysical verbiage and philosophical word quibbling are all that are involved. Nevertheless, the language we use, and the assumptions such language reflects, are very much a part of our scientific disagreements. This volume addresses these substantive and philosophical issues as they may apply to DSM-V and ICD-11. In addition to reviewing the history of psychopathology, this chapter has sought to illustrate that philosophical issues and scientific modes of analysis must be considered in directing the future of mental illness classification. The many recommendations made in this book will not in themselves achieve clear resolutions to all nosological quandaries. It is more likely that their role will be to unsettle prevailing habits and thereby force progress, if only by challenging cherished beliefs and assumptions.

Acknowledgment

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