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History and Systems of Psychology

James F. Brennan

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for reproduction, but also for enriching offspring with the diverse characteristics of two parents. He was one of the first scientists of the eighteenth century to use the term *evolution,* although he meant by it the chain of life from simple atoms to human beings. His investigations of plants led him to conclude that plants are endowed with sensation, discrimination, and even judgment, which Bonnet viewed as evidence of intelligence. Accordingly, Bonnet's interpretation of the living world focused on the unity of living beings based upon the mediation of mechanical agents.

Bonnet extended Condillac's views by examining the physiological mechanisms of sensory processes. To continue with Condillac's statue analogy, Bonnet gave the statue a nervous system to accomplish sensation. He argued that the tracing of nerve fibers would explain not only sensory processes but also the psychological functions of attention, memory, and recognition. In so doing, Bonnet was one of the first scholars to mention specific nerve energies, wherein a given function is accommodated by a certain system of neural fibers. He viewed higher mental processes in terms of the association of sensations or memories through the commonality of some dimension, such as time, place, or meaning. For example, sensory event *A* may be linked to sensory event *B* by their simultaneous occurrence. Thus, Bonnet added to Condillac's view by establishing a more reasonable basis for psychological materialism through the nervous system, and the necessity of a special mental agency was further diminished.

Julien Offroy de La Mettrie. Julien Offroy de La Mettrie's (1709–1751) most famous work, *L'Homme Machine* (*Man, a Machine;* 1748), shook intellectual Europe because of its simple and clear statement of materialism. La Mettrie was the son of a wealthy merchant, who gave his precocious son a superb education. After receiving his doctorate in medicine, La Mettrie studied anatomy in Leiden, the Netherlands, and published several works that emphasized the role of the brain in human pathology. He eventually became a surgeon in the French army but continued his studies and writings.

La Mettrie's materialism held that matter has an active element, which is motion. He based this conclusion on sensory feelings found in the lowest animals and plants. This observation led him to propose a type of evolutionary hierarchy in the motion of matter. Thus, in the higher animals, the motion of matter allows the heart to beat and the brain to think. La Mettrie argued that psychology is ultimately physiology, and the dualism of Descartes was completely forsaken for the animal machine.

La Mettrie's views created problems for him with his military superiors, and he had to flee to Leiden for safety, but eventually, in 1748, he received an invitation from Frederick the Great to join the Berlin Academy of Sciences with a stipend. There La Mettrie developed his psychology further by asserting a motivational principle for human activity. This principle was hedonistic in that the seeking of pleasure was the ultimate force that propels the individual. In three publications he opposed Christian teachings and argued the importance of sensual pleasure. He established an ethic that judged the actions of people as determined by their desire for sensual gratification. Although La Mettrie's views were received with considerable scorn, he placed French psychology under the direction of the mechanistic laws of physiology. In his short, frantic life, La Mettrie succeeded in arguing against the

need for a separate discipline of psychology. Faith in materialistic science was pushing psychology out of consideration only 100 years after Descartes first defined psychology by distinguishing it from physiology.

Claude Adrien Helvétius. Retreating from the extreme materialistic position of the French tradition, Claude Adrien Helvétius (1715–1771) retained some use for the concept of mind. The son of the queen's physician, he was born in Paris and educated by the Jesuits. As a tax collector, he became wealthy, married a beautiful countess, and retired to the countryside to live a contented life as a gentleman philosopher. The charm of his estate drew many of Europe's finest thinkers, and in 1758 Helvétius published his memorable work, *De l'Esprit (On Intelligence).*

In this work Helvétius added a critical, complementary dimension to the French sensationalistic tradition. He concentrated on the environmental determinants of the individual. Although agreeing with La Mettrie on the basis of desire in pleasure seeking, he related this motivational principle to environmental influences. According to Helvétius, all people are born with equal capacities, but the environment acts differently on individuals, strengthening attention and widening perception in some people but not in others. This difference in capacity to deal with the environment is what Helvétius defined as intelligence. Believing that the key to success in the environment is the opportunity for enriching experiences, Helvétius argued for better educational benefits and more open social structures. Thus, although he did not disagree with the French sensationalists, Helvétius' emphasis on the environment reserved a place for psychology: Physiology may explain the mechanisms of psychological functions, but the mechanisms are still dependent on environmental context.

Pierre Cabanis. A final figure in the French sensationalistic tradition is Pierre Cabanis (1757–1808). Like Helvétius, Cabanis modified the extreme views of Condillac, Bonnet, and La Mettrie. A distinguished physician, he met the great thinkers who gathered in the literary salons of Paris. Although accepting the materialism of mechanical sensations, Cabanis nevertheless argued against the complete reductionism of his predecessors. Their view equated mental operations with their sensory input, logically leading to the discarding of the mind as unnecessary. Cabanis drew back from this position and proposed a central ego of the brain that acts as the integrator and synthesizer of sensory input. Cabanis' view, then, preserves the need for the concept of mind, even if described in terms of the physical brain. Moreover, he recognized levels of consciousness, including unconscious and semiconscious processes. According to Cabanis, sensations do not exist as pure forms; rather, sensations are part of an entire system, mediated by the central ego, or self, and sensations are known only through the integration of the entire system.

Cabanis' additions to Condillac's psychology rescued the mind, but tied it firmly to brain physiology. Unlike the British thinkers, Cabanis disagreed with the view of the mind as passive and reactive, filled up by the accumulation of experiences. In contrast to German philosophers, especially Kant, Cabanis did not consider the mind as an entity having an integrity and independent processes divorced from physiology. Without necessarily

attempting a compromise, Cabanis articulated a view that retained the need for the mind, recognized by the British and German scholars. Loyal to the French tradition, however, he embedded mental processes in the materialism of the nervous system.

To summarize briefly, although the major figures of the French sensationalistic tradition held differing views, they limited the concept of psychological processes to the level of sensory input. Emphasizing the critical role of sensory experience, they de-emphasized the need for the initiating central construct of the mind. Thus, their selectivity within Cartesian psychology tended to be one-sided, neglecting Descartes' defined province of psychology—the mind.

The Psychology of Maine de Biran

The renowned American philosopher and psychologist of the late nineteenth century, William James, referred to Maine de Biran (1766–1824) as the greatest psychologist of the eighteenth century. Biran began his writing committed to the French sensationalist tradition, but steadily moved beyond such restrictions to advocate a more complete, dynamic psychology. Although his writings reflect the interest of the sensationalists, he cannot be categorized in that group, as he personified the full gamut of eighteenth-century psychological views.

Biran was a soldier of the Garde du Corps of Louis XVI and witnessed the women's march on Versailles in 1789. During the Revolution he wisely retired to his country estate, reemerging to oppose the rule of Napoleon. He ended his political career as treasurer of the Chamber of Deputies after the restoration of Louis XVIII. During this politically tense time he continued his writings, which went through four rather distinct phases of intellectual evolution.

During the first phase, 1790–1800, Biran belonged to a group called the Ideologists, which had been founded by Cabanis to promote the teachings of Condillac. At this stage of Biran's thinking, he agreed that human understanding comprised the sum of the associations of the brain, caused by the stimulation of nerve fibers from motion in the environment. Accordingly, Biran believed in a physiological psychology explained by sensory processes. He broke with the Ideologists in 1805 and published *Mémoire sur la décomposition de la pensée (Essay on the decomposition of thought)*. In this work he argued against the "fiber" psychology of the Ideologists that relegated human activity to the mechanistic atomism of sensory elements. Biran wrote that thought is a whole entity composed of distinct processes, but that it is not simply an aggregate of those processes. He focused on the will as an intentional activity that defines the essential character of the self. Thus, the will makes the individual more than the passive receptacle of sensations; it defines a spiritual force that explains life itself.

By 1810 Biran had moved into a third phase, and his conception of psychology took final form in *Essai sur les fondements de la psychologie* (*Essay on the fundamentals of psychology;* 1812). He concluded that psychology is the science of the immediate data of consciousness. To Descartes' "I think, therefore I am," Biran responded, "I will, therefore I am." Psychology's province is to study the intentionality of the self

represented in consciousness. In terms of methodology, Biran insisted on the objective observation of the self through individual experience. Thus, the active self or ego is the central fact of psychology, so that the individual is intelligent to the extent that he or she is free. In his fourth phase, beginning in 1820, Biran turned to religious experience and attempted to integrate religious aspirations in life to his total concept of psychology.

Biran has been criticized for his changing views of psychology, ranging from physiological to mystical interpretations. However, the range of his opinions is fascinating. Indeed, Biran seems to have expanded his conception as he became dissatisfied with the limitations of fundamental explanations based on sensory physiology. His emphasis on the uniqueness of the individual dictated his intellectual evolution. Biran was impressed not with the commonality of physiological makeup or even psychological processes. Rather, his interest steadily centered on those aspects of human nature that result in creative, unpredictable activities fully expressive of the individual person. This same trend toward expanding psychology into a more comprehensive discipline aimed at explaining individual diversity is common to several figures in the history of psychology. Although Biran died at the comparatively early age of 58, he was able to accommodate an entire evolution in his thinking. Others who lived longer, such as Wundt, did not succeed in completing the cycle, although they were well on their way to the same goal that Biran achieved. Nevertheless, we can well understand James' appreciation of Biran for the breadth of his vision of psychology as well as for his anticipation of the variety of models that may be applied to psychology.

The Advent of French Positivism: Auguste Comte

By considering Auguste Comte (1798–1857) at this point, we are jumping ahead somewhat and leaving the historical sequence of psychology in a strict sense. Indeed, Comte's place in history is clouded by ambiguity. He expressed the scientific spirit that psychology adopted as it emerged as a formal discipline. At the same time, Comte's application of his own views resulted in an attempted utopia that proved embarrassing to those who tried to take him seriously.

The controversial life of Auguste Comte began at Montpellier, where he received his early education under Catholic auspices. He then studied at the École Polytechnique in Paris under some of the leading scientists of France. Expelled because of his republican sympathies, Comte remained in Paris and continued to study with the Ideologists. He secured a position as secretary to the social philosopher Saint-Simon (1760–1825), who advocated a reorganization of society under the guidance of emerging social science. Comte incorporated many of Saint-Simon's ideas into his own views. After a bitter quarrel, he parted with Saint-Simon and supported himself mainly by tutoring and giving lectures through private subscriptions. The lectures formed the basis of his most famous work, *Cours de Philosophie Positive (Course on Positive Philosophy),* published in six volumes between 1830 and 1842. This monumental and revolutionary work took on the ambitious task of completely reorganizing intellectual conceptions of knowledge and applying this theory to the eventual reformation of social structures.

AUGUSTE COMTE (1798–1857).
(Courtesy, New York Public Library.)

Although Comte never gained a professorship, he did gather loyal and devoted students, and his views spread widely. The British philosopher-feminist Harriet Martineau (1802–1876) translated the *Cours* into English in 1858, and Comte carried on an extensive correspondence with the foremost spokesman of British psychology, John Stuart Mill. His precarious livelihood and seemingly reckless ventures soured many of his earlier admirers, including Mill. By the late 1840s, Comte's application of his theory took the form of a religion of humanity. The structure of his proposed society was remarkably similar to the hierarchical organization of the Roman Catholic Church, with humanity substituted for God and Comte substituted for the pope. This fanciful utopia based on reformulated social relationships tainted Comte's entire systematic thought.

However, Comte's earlier writings contained in the *Cours* are important, both for their consistency with the model of sensationalism in French thought and for their attempt to instill an objective method of science for psychology. Briefly, he argued that explanations of life shift in focus from a theological to a metaphysical basis as human intellectual progress continues. A final shift from a metaphysical to a positivist basis defined the maturity of science for Comte. Whereas the metaphysical stage seeks causal explanations in nonphysical abstractions or universals, the positivist stage seeks to coordinate observable facts and find descriptive laws of natural events. By emphasizing description, Comte did not preclude causal relations in positivism, but he did argue against the preoccupation with the search for causality, which concerned so many previous philosophers. According to Comte, such a preoccupation led to artificiality because philosophers were susceptible to a preconceived notion of universals at the expense of observables, the true level of scientific enterprise.

Various sciences progress at different rates through these stages of intellectual development. Accordingly, science for Comte is relative knowledge, for positivism permits only a limited and changing view of nature. Comte listed six basic sciences: mathematics,

astronomy, physics, chemistry, physiology or biology, and social physics or sociology. Interestingly, he omitted psychology, and placed the study of the individual under physiology, thereby agreeing with the sensory–physiological view of psychology advocated by Condillac and La Mettrie. The individual behaving in a group context is the subject matter of sociology for Comte. Elaborating on this "social psychology," Comte later added the science of ethics, which he meant not as the study of morals but rather as the study of observable social behavior aimed at finding laws of prediction for social planning.

It may be argued that Comte, writing before the advent of psychology's formal emergence, could not foresee the later coherence of psychology as a discipline. However, it appears that he recognized the trend of French sensationalism and saw disparity rather than unity. Accordingly, he was consistent with the French trend and simply carried to its logical conclusion the reduction of psychology, defined as sensation, to physiology. Comte's conclusions about psychology did not directly help the push toward its recognition as a discipline. However, his positivism indirectly helped identify a methodological strategy that helped psychology emerge as a recognized, separate discipline within the sciences. The emphasis on objective observation was clearer among British writers, whom we shall consider next. Moreover, Comte's positivism was resurrected in an updated form during the early part of the twentieth century and succeeded in establishing behaviorism as a dominant model in contemporary psychology.

This survey of two centuries of French thought identifies several influences on psychology. First, the benefits of a natural science were articulated, and they created an ideal model for psychology to emulate. Second, Descartes' dualistic conception of mind–body interaction was seriously challenged. Emphasizing materialism at the expense of mentalism, the main theme of French thought opted to restrict mental operations to sensory mechanisms, leading to the questioning of psychology's place by both Biran and Comte.

CHAPTER SUMMARY

The seventeenth and eighteenth centuries marked the ascendancy of French political power, literary success, and scientific achievement. In the natural sciences, such investigators as Lagrange, Laplace, and Lavoisier gave mathematical and empirical support to the modern basis of chemistry, physics, and biology. In a parallel movement, philosophical discourses on psychology led to a reinterpretation of Descartes' formulation so as to focus on sensation. Condillac, Bonnet, and La Mettrie progressively argued for the equation of mental operations with sensory input and worked to articulate the physiological mechanisms of sensation. In so doing, they logically reduced psychology to sensation. Helvétius and Cabanis attempted to back off from such extremism by asserting the mediating role of a central ego, although both remained committed to sensory physiology. Biran and Comte recognized the consequences of reducing psychology to mere sensory physiology, but each worked out separate solutions. Biran rejected sensationalism as completely inadequate, suggesting a total view of individuality based on the immediate data of consciousness expressing the dynamics of the will. In contrast,