College Quarterly
Spring 2013 - Volume 16 Number 2

History and systems of psychology: A course to unite a core curriculum

By Joshua L. Williams, Nancy McCarley, and John Kraft

Abstract

Core curricula are designed, in part, to help undergraduate students become intellectually well-rounded. To merge core curricula with the components of the scholarship of teaching and learning movement, students engaged in core curricula need capstone courses designed to aid them in retaining information over the long term and synthesizing information from the various core areas. We used an existing core curriculum to delineate the congruency of core subject areas with topics covered in a history and systems of psychology course, which may be used as a capstone course for students across disciplines to unite the areas of a core curriculum.

The American Association of Colleges and Universities (AAC&U), a leading force in the implementation of liberal education in the higher education environment, has highlighted the importance of fostering an interdisciplinary undergraduate education (American Association of Colleges and Universities, 2012). To address this goal, institutions of higher education have created general education requirements, or, as we prefer, core curricula. Core curricula typically consist of general areas of study and align with the key components of a liberal education, containing courses from a wide array of liberal arts and sciences disciplines from which students may choose (Boyer Commission, 2010). Surveys indicate that most AAC&U member institutions offer some sort of core curriculum or common intellectual experience. However, these same surveys reveal that the majority of schools are seeking to modify their general education requirements, including the core curriculum (Hart Research Associates, 2009). At first glimpse, the implementation of such an eclectic curriculum may seem daunting, and rightfully so. Specifically, for university administrators and faculty, it is a formidable task because simply providing undergraduate students with a variety of courses from which to choose and thus construct an interdisciplinary degree is but one early step of many in the potentially protracted process toward graduation.

Indeed, for some students the completion of a core curriculum may take several years. Furthermore, students' ability to retain information over the long term varies widely (Park et al., 1996). Contemporary memory research suggests that retention of information over the long term may be enhanced through varied reactivation of previously-encoded information (Doyle, 2011; Herrmann, Raybeck, & Gutman, 1993). In addition, thinking about information as a function of its relationship to other concepts has been shown to facilitate long term memory (Craik & Lockhart, 1972; Fink, 2003). From a scholarship of teaching and learning perspective, in which the goal of integrating scholarly information on teaching with a burgeoning emphasis on enhancing long term student learning is touted, one final, but integral, step in the process toward successful completion of a core

curriculum should be to present students with opportunities to enroll in courses that tie the core areas together, so-called capstone courses (Boyer Commission, 2010; Brew & Ginns, 2008; Hutchings & Shulman, 1999; Trigwell & Shale, 2004). Specifically, students not only need to reactivate the previously-encoded information, but also actively reflect on that information in a context that highlights the interconnectedness of the core areas of study. It is our contention that engagement in such a course will enhance the retention of the information presented in the core areas of study over the long term.

So, what courses qualify as a capstone course for a core curriculum? Again, the course should be one in which all general core areas are addressed and connections among them highlighted. One option proposed in the Boyer Report was to have the core curriculum culminate with a research project conducted under the supervision of a research-oriented faculty member (Boyer Commission, 2010). There is strong potential with this option, but in our experience the projects on which students work are quite specific to the interests of the supervising faculty member rather than interdisciplinary. “Senior Seminar” courses have been proposed as another option, but are typically designed for specific majors to help students recap pertinent aspects of their major (Dickson, 1993). If designed to be truly interdisciplinary, the two aforementioned options may be effective as capstone courses but, often, appropriate courses from which to choose may be few and far between. Through our personal reflection on, and knowledge of, our discipline, we contend that the discipline of psychology, informed by a diverse composition of disciplines, has something to offer. Specifically, a history and systems of psychology course, if designed well and with an emphasis on establishing interdisciplinary connections, has the potential to meet and exceed all qualifications for the perfect capstone course. Ultimately, and in the spirit of Hutchings and Shulman (1999), we seek to demonstrate how a key course in our discipline may have a positive impact on a broad community of disciplines interested in enhancing long term student learning. Specifically, we use the general knowledge areas focused on by most AAC&U institutions and an existing core curriculum from an AAC&U member institution (see Table 1) to provide support for the use of a history and systems of psychology course as a capstone course for a basic core curriculum.

Table 1

A topical list of general core areas of study

Core Area Title	Topics
Communication and Quantitative Skills	English compostion Mathematical skills and reasoning
Ethical and Cultural Perspectives	Societal ethics and values Global perspectives of gender, race, religion, and politics Anthropology
	Philosophical standpoints

Humanities and Arts	Literature Fine arts
Physical and Life Science	Biology Chemistry Physics Astronomy
Social Sciences	Historical concepts and civilizations Economics and society Sociology Psychology

Note. Core area titles adopted from the 2009 report by Hart Research Associate entitled, "*Trends and emerging practices in general education.*"

Communication and Quantitative Skills

This area of the core curriculum is designed to ensure that all students possess essential communicative and quantitative skills. In history and systems of psychology, communication skills may be honed through both oral and written critical thinking exercises. Many times students may be prompted to step outside of their intellectual comfort zones on topics to better understand historical perspectives, which may or may not conform to information they have learned over their college careers. For instance, students could be asked to cite historical viewpoints as they debate both sides of the question, "May the topics of psychology be studied scientifically?" Some students, whose interests lie in the physical sciences, may by default be attracted to the viewpoint of Galileo and exclude conscious experience, or secondary qualities, from scientific investigation (Malone, 2009). However, these same students can be challenged to discuss opposing arguments on the same topic. Specifically, they may be asked to formulate a counterargument to their own through the use of Locke's paradox of the basins to gain an understanding of the proposal for the inclusion of secondary qualities in scientific investigations (Locke, 1690/1975). In such an exercise, whether it is oral or written, students have the opportunity to review and synthesize many perspectives into a coherent argument.

The communication emphasis of this core area, in particular, concerns itself with the effective use of language. English composition instructors teach students how to effectively communicate their ideas through well-written, grammatically correct sentences by rewarding excellence, correcting errors, and revision. The psychological study of language acquisition played a pivotal role in the struggle between behavioral and cognitive orientations in modern psychology. The conventional view of the history of psychology is that the behaviorist dogma of the first half of the 20th century gave way to a cognitive paradigm shift that took hold in the 1960s and 1970s. This so-called cognitive revolution has some elements of a Kuhnian paradigm shift, but historians wonder if *revolution* is a proper descriptor (Leahey, 1992). B.F. Skinner, an advocate for the experimental analysis of operant behavior, framed language as verbal behavior which he defined in his book, *Verbal Behavior*, as "…behavior reinforced through the mediation of other

persons…" (Skinner, 1957, p 2). From Skinner's point of view, effective communication was viewed functionally (i.e. by the behavior of the receiver of the message). In 1959, Noam Chomsky published a contemptuous review of Skinner's *Verbal Behavior* that many would come to view as the beginning of the end of behaviorism and the start of the shift to cognitive accounts of behavior (Leahey, 2001). Chomsky's main criticism was that language was not like other operant behavior and emerged without schedules of reinforcement for utterances. Chomsky's proposal spawned the notion that children have innate rules of language, or deep grammar, that are used to generate culturally correct lingual utterances after some exposure to more advanced cultural speakers (Chomsky, 1957, 1959). It is in this context of the Skinnerian-Chomskian debates about language that the composition student may understand the importance of his or her ability to express ideas with language and the impact of language on others.

Students may also receive the opportunity to reactivate and critically apply basic quantitative skills. A perfect example of the connection made to basic mathematics lies in coverage of Gustav Fechner's psychophysical approach to understanding and measuring the relationship between physical and mental experiences. Fechner himself alluded to this when he stated "Psychophysics, already related to psychology and physics by name, must on the one hand be based on psychology, and on the other hand promises to give psychology a mathematical foundation" (Fechner, 1860/1966, p. 10). In detail, students must employ and interpret basic mathematical principles such as logarithms to understand Fechner's historical method of explaining the connection between mind and body.

Another way mathematical principles may be tied into history and systems is through discussions of the basic statistics to which most undergraduate students are exposed. First, as probability theory is foundational for statistics and statistical inference, classic probability problems such as the *dice problem* and *division problem* addressed by the aptly-named "Father of Statistics," Blaise Pascal, may be covered (Ore, 1960; Thorne & Henley, 2005). Second, the work conducted by Sir Francis Galton in his anthropometry laboratory, out of which the concepts of correlation and median emerged, may be discussed (Hergenhahn, 2009). Here, students can use their understanding of correlation and measures of central tendency to interpret Galton's measurements and discussions of individual differences (Galton, 1888).

Ethical and Cultural Perspectives

This area is aimed at exposing students to the many facets and applications of ethics in cultural contexts. Ethical considerations abound in a history and systems of psychology course because the discipline was molded by and developed through many cultural changes. Historically, research in psychology provided the impetus for change in many areas. The instances that closely fit with this core area deal with racial and gender equality.

Racial segregation is one ethical topic covered in history and systems of psychology. Psychological research into this topic was at the forefront of enacting social change through the many pioneering works of two African American psychologists, Kenneth and Mamie Clark. Specifically, Clark and Clark (1947) demonstrated the negative effects of segregation on African American children, especially in the development of racial identity. Subsequently, the study was cited in the 1954 Supreme Court case, *Brown v. Board of Education*, in which the legal requirements for racial segregation were overturned. However, it is important to note that in building toward coverage of the seminal work of the Clarks, students learn two other important pieces of information: (a) acceptance of African Americans into graduate programs was not typical in the culture of the early 1900s and (b) without G. Stanley Hall's admission to graduate school of Francis Sumner, an African American, who in turn mentored Kenneth Clark, the importance of the Clarks' research may never have been realized (Hergenhahn, 2009).

Despite the many insightful studies that provided the support and impetus to overturn racial segregation, most students will recall that social change moved slowly. In the context of discussing the process of change, Gordon Allport's (1954) views on intergroup contact may be discussed. Specifically, his "contact hypothesis" stated that prejudice and stereotyping may be reduced via opportunity for direct contact between conflicting groups. In order to connect Allport's (1954) hypothesis with the slow rate of change, the necessary social and environmental conditions for the contact hypothesis to be effective, which were not present when racial segregation was overturned, may be covered (Allport, 1954; Kassin, Fein, & Markus, 2011).

A second ethical topic is equality between females and males. This particular topic may be highlighted in discussions on the admission of females into Psychology graduate programs, which paralleled the acceptance of females in other schools and professions. For instance, Edward Titchener, who is extensively discussed in most history and systems courses, may be considered one of the main drivers of change for females in psychology, despite his denial of female participation in his "Experimentalists" group (Hergenhahn, 2009). During the late 1800s and early 1900s, Titchener supervised 21 female doctoral students, which equated to nearly half of his total doctoral students. Also noteworthy was the fact that his first doctoral student was Margaret Floy Washburn, the first female to earn a Ph.D. in Psychology in America (Malone, 2009). Of particular interest to the ethics of equality is Leta Stetter Hollingworth, not only for her biography which typifies many of the hurdles faced by women in academia in the early 1900s, but also for her research which dispelled the sexist myths of the variability hypothesis and functional periodicity. Her pioneering work on sex differences helped to destroy the 'scientific' notion of male superiority (Shields, 1975).

Beyond racial and gender issues, key issues in the ethical conduct of scientific research may be covered. Part of the training for students of psychology, as well as many undergraduate students, are the tenets for the appropriate treatment of research participants. One approach to highlighting and reviewing many of these ethical notions is to discuss

Stanley Milgram's (1963) obedience study, which is also one of the more popular studies covered in introductory psychology courses. A thorough discussion of Milgram (1963) will provide students with the opportunity to understand the risk-to-benefit analyses of the scientific research process. Specifically, many have pointed out that despite the potential ethical concerns of the Milgram (1963) study, social psychologists learned a great deal about the notions of conformity and obedience (Blass, 2002). In addition, students may be permitted to engage in debates about the "ethical gray lines" of the original obedience study and how they believe it has impacted their current understanding of the research process.

Humanities and Arts

This core area is constructed to foster students' exploration of philosophy, literature, and art. There is a plethora of topics which may be discussed to connect with these three key subjects. First, along with physiology, philosophy is one of the primary intellectual roots of psychology. Thus, in a history and systems of psychology course, key philosophical traditions such as empiricism, existentialism, nativism, rationalism, realism, and skepticism, to name a few, are covered. In addition, the connection with philosophy may be highlighted through discussions on the emergence of psychology as an independent discipline and removal of psychology from philosophy departments.

The traditional link between literature and psychology is quite strong, allowing for numerous discussions about the presence of psychological principles in literature. For instance, while learning about the physiognomical and phrenological traditions of Gall (1835) and Spurzheim (1825), students are exposed to how these ideas were used in the literary works, and even the personal lives, of famous writers. Nowhere is this more apparent than in Herman Melville's *Moby Dick*, in which he critically discussed, and essentially demeaned, the use of physiognomy to assess the character of the whale (Hillway, 1949; Melville, 1851/1930). Furthermore, the link to the entrepreneurial side of these early pseudoscientific approaches may be made by highlighting the ties between Herman Melville and the Fowler brothers (Hillway, 1949).

A final link to the literature may be made when discussing literary works by famous psychologists. Perhaps the best exemplar is B.F. Skinner, whose original ambition, prior to becoming one of the great minds of psychology, was to be a novelist (Malone, 1991). Eventually, Skinner did publish *Walden Two*, to which students in history and systems are typically exposed. *Walden Two* was Skinner's fictional attempt to apply the principles of operant learning in order to improve the human condition and create a utopian society (Skinner, 1948). Thus, despite the fictional nature of the writing, coverage of this work allows students to view the practical emphasis of Skinner's positivism.

In order to tie the arts into a history and systems course, one of the most recognizable figures of psychology, William James, may be discussed. Similar to Skinner, James pursued a different goal in life prior to becoming one of the giants of psychology; he wanted to be an artist much like his brother, Henry James, albeit through a different medium. James' talent as an artist is evident and can be easily demonstrated by

showing students some of his original sketches. Indeed, he was recognizably gifted because at 18 years of age he became an apprentice with William Morris Hunt (Bjork, 1988). Scholars have argued that his training, though brief, shaped the scientific philosophy and psychology of James. For instance, Leary (1992) elegantly pointed to the many instances of artistic metaphors in James' writings. Furthermore, the use of such artistic metaphors, which permits the readers of James' writings to better grasp difficult topics by relating them to personal experiences, not only lay at the heart of James' notions on the purposefulness and practicality of consciousness, but allowed his proposals on psychology to maintain relevancy across inevitable cultural change (Leary, 1992).

Physical and Life Sciences

The objective for this core area is to provide students with a scientific background through the opportunity to engage in courses from the physical and life sciences. Topics that may be classified within this area are extremely prevalent in history and systems of psychology. When tracing the development of a scientific psychology, key figures in physics and astronomy, such as Copernicus, Galileo and Keplar may be discussed. For instance, the work of Galileo may be discussed with regard to the relevancy of primary and secondary qualities and what may be studied scientifically (Malone, 2009). Specifically, discussions of his argument that consciousness, which is composed of secondary qualities, may not be studied scientifically permits students to unite old ideas of science with novel ideas of science covered in contemporary courses (Hergenhahn, 2009).

Also, a primary intellectual root of psychology is physiology. Key processes from the life sciences may be reviewed and discussed at length. The psychological concept of stimulus-response associations was born out of a metaphor from physiological psychology. Physiologists investigating reflexes where physical stimuli innately produced physical responses crossed over to psychology when they noticed that similar responses were produced through learned processes. The most notable example is the work of Ivan Pavlov whose expansive research on classical conditioning began when he noticed "psychic secretions" of saliva to the sight of food among his dogs in physiological experiments (Pavlov, 1927/1960).

Other topics typically discussed in history and systems are the foundational ideas of the nervous system and color vision. For example, the basic structure of the nervous system, which is included across many courses in the physical and life sciences core area, may be reviewed through the coverage of early discoveries regarding the anatomical and functional structure by Alexander Bain, Charles Bell, Johannes Muller, and Hermann von Helmholtz (Hergenhahn, 2009). In addition, specific aspects of the functional anatomy of the eye may be discussed in relation to our knowledge of color vision, which stemmed from the works of Thomas Young, Hermann von Helmholtz, and Ewald Hering (Goldstein, 2002). Finally, with regard to the nervous system, the focus of many core courses is on the brain and how it functions to serve many organismal needs in a complex world. Much of what we now know about the functioning of the

brain is typically covered at length in history and systems of psychology. One example in which the old philosophy of sensations, perception, and understanding may be united with more recent understandings of the nervous system is the notion of multisensory brain mapping that may be traced back to the empiricist philosophers, especially, George Berkeley (Armstrong, 1965). Another example may be the discovery of the location and function of the motor cortex by Fritsch and Hitzig (Fritsch & Hitzig, 1870/1960; Finger, 1994) and the notion of topographical mapping across the many cortical regions, which was contributed by Ferrier (Ferrier, 1876; Gross, 2007). Of course, there are many more connections that may be highlighted if an instructor were to design the history and systems course in such a way as to highlight the scientific origin and evolution of the psychological discipline.

Social Sciences

The social sciences core area permits students to explore areas of the social sciences in order to enhance their understanding of human behavior, especially an understanding of behavior within social contexts. From a historical perspective, many proposals from prominent figures in the history of psychology had a significant impact on the behavior of leaders and societies, which did not always lead to positive outcomes. One example was Sir Francis Galton and his treatise on how eugenics via selective breeding may improve the human condition and impede the degradation of society (Galton, 1892, 1909). The most conspicuous aspect of world history in which the notion of eugenics was actively employed was during World War II by Hitler and Nazi Germany.

A second figure typically discussed in history and systems is Herbert Spencer, who coined the term “Social Darwinism” (Spencer, 1864). Spencer applied this notion to argue against governmental support for members of society who are unable to “fend for themselves,” as it would be working against the natural evolutionary mechanisms of survival of the fittest (Hergenhahn, 2009).

Another significant part of a social sciences core area is sociology, which may be traced back to one of the early positivists in the history of psychology, Auguste Comte. In a course on history and systems, the gradual change from irrationalism to scientism, or the use of only science in explaining phenomena, is typically covered. Specifically, Comte’s positivism, in which he argued for the parallel between scientific knowledge and direct observation of nature, provided the foundation for his proposal of societal development. For instance, society has reached the highest form of development when it has moved out of the realm of religious or metaphysical explanations of phenomena and adopted scientific explanations (Hergenhahn, 2009). In addition, it is typically noted that Comte discussed the impact of society at the individual level in the form of how individuals tend to adopt and conform to societal ideals, which is typically a large part of not only social psychology courses but also sociology courses (Martineau, 1853/1893).

Discussion

Dunn et al. (2009) proposed the ideal components for the undergraduate psychology curriculum, chief among them, a course on the history and systems of the discipline. We agree with Dunn et al. (2009) in that history and systems serves students of psychology very well in helping them to understand their chosen discipline through exposure to historical traditions in psychology. For the psychology major, we believe that a history and systems of psychology course is beneficial when offered as a capstone course allowing students to reactivate key information and tie the seemingly disparate aspects of psychology together. However, ideals of the scholarship of teaching and learning tradition promote the need for teaching practices to induce significant learning experiences in students across a wide variety of disciplines (Brew & Ginns, 2008; Hutchings & Shulman, 1999; Trigwell & Shale, 2004). Thus, we further contend that a history and systems course has the potential to be a beneficial capstone course for non-psychology majors as well, especially at institutions that require the completion of a core curriculum. As many institutions face both shrinking budgets and shrinking curricula, a single capstone course applicable for majors and non-majors alike offers an efficient solution.

For a capstone course to be effective it must provide students with the opportunity to both reactivate and discover the interconnectedness between previously covered topics (Doyle, 2011; Fink, 2003; Herrmann et al., 1993). When viewing a core curriculum under low magnification, it may seem that the topics are much more disparate than even the topics covered in a psychology curriculum. However, when placed under the magnifying glass, the general core areas are quite compatible with one another. We believe that a good magnifying glass to give students wrapping up a core curriculum is a history and systems of psychology course, which is an accessible course for any student who has successfully completed a single, introductory course in psychology. Conservatively, the number of students who complete a single psychology course each year has been estimated to be approximately one million (Munsey, 2008).

The notion that topics in psychology are compatible with other disciplines is not a new one. For instance, Dunn (1993) made an excellent case for the possibility of embedding psychological topics in multiple core courses that are typically not taught from a psychological vantage point, such as quantitative reasoning, global perspectives, and science to name a few (Dunn, 1993). We believe that Dunn's (1993) proposal strengthens our case that a history and systems of psychology course may be used as an effective capstone course for many majors to link areas of a core curriculum and further integrate students' knowledge.

Using an illustrative core curriculum from an AAC&U member institution, and appealing to the principles put forth by the scholarship of teaching and learning movement, we denoted the breadth of topics covered in a history and systems of psychology course which directly overlap with the various disciplines that comprise each area of the core curriculum. Of course, there are many more topics covered in a history and systems course that relate to the most common elements of most core curricula, which include the humanities, natural sciences, social sciences,

global cultures, and mathematics (Hart Research Associates, 2009). However, even with the few examples provided, we believe we have achieved the goal of highlighting the utility of a history and systems of psychology course as a capstone course for all majors engaged in a general core curriculum. Furthermore, while we emphasized the use of a history and systems of psychology course to serve as a capstone course for non-psychology majors it is possible other courses may be designed to merge the core areas of study. For instance, one could imagine that capstone courses for majors such as biology, chemistry, mathematics, philosophy, and the arts, to name a few, could be designed with an interdisciplinary focus and serve non-majors well. Ultimately, we believe that any route in which students are encouraged to enroll in interdisciplinary courses to close out their undergraduate careers will serve to foster a reconnection to the core areas of study and strengthen the intellectual well-roundedness and curiosity that lie at the heart of a contemporary college education.

References

Allport, G. W. *The nature of prejudice*. Reading, MA: Addison-Wesley, 1954.

American Association of Colleges and Universities. (2012). About AAC&U. Retrieved from http://aacu.org/about/index.cfm.

Armstrong, D. M. (1965). *Berkeley's philosophical writings*. New York: Macmillan.

Bjork, D. W. (1988). *William James: The center of his vision*. New York: Harper & Row.

Boyer Commission. (2010). *Reinventing undergraduate education: A blueprint for America's research universities*. Stony Brook, NY: The Carnegie Foundation for the Advancement of Teaching. Retrieved from http://www.eric.ed.gov/PDFS/ED424840.pdf

Brew, A., & Ginns, P. (2008). The relationship between engagement in the scholarship of teaching and learning and students' course experiences. *Assessment & Evaluation in Higher Education, 33*(5), 535-545.

Chomsky, N. (1957). *Syntactic structures* (2nd ed.). Berlin: Mouton de Gruyter

Chomsky, N. (1959). A review of B. F. Skinner's *Verbal Behavior. Language, 35,* 26-58.

Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior, 11,* 671-684.

Clark, K. B., & Clark, M. P. (1947). Skin color as a factor in the racial identification of Negro pre-school children. In T. M. Newcomb & E. L. Harley (Eds.), *Readings in social psychology* (pp. 169-178). New York: Holt.

Dickson, J. (1993). The senior seminar at Rider College. *Teaching Sociology, 21*(3)*,* 215-218.

Doyle, T. (2012). *Learner-centered teaching: Putting the research on learning into practice*. Sterling, VA: Stylus Publishing.

Dunn, D. S. (1993). Integrating psychology into the interdisciplinary core curriculum. *Teaching of Psychology, 20*(4)*,* 213-218.

Dunn, D. S., Brewer, C.L., Cautin, R.L., Gurung, R.A.R., Keith, K.D., McGregor, L.N., …Voigt, M.J. (2009). The undergraduate psychology curriculum: Call for a core. In D. F. Halpern (Ed.), *Undergraduate education in psychology: A blueprint for the future of the discipline* (pp. 47-61). Washington, DC: American Psychological Association.

Fechner, G. T. (1966). *Elements of psychophysics*. New York: Holt, Rinehart & Winston.

Ferrier, D. (1876). *The functions of the brain*. London: Smith, Elder, & Company.

Finger, S. (1994). *Origins of neuroscience: A history of explorations in to brain functions*. New York: Oxford University Press.

Fink, L. D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses*. San Francisco, CA: Jossey-Bass.

Fritsch, G. T., & Hitzig, E. (1960). On the electrical excitability of the cerebrum. In G. von Bonin (Ed.), *Some papers on the cerebral cortex* (pp. 73-96). Springfield, IL: Charles C. Thomas.

Gall, F. J. (1835). *Organology*. Boston, MA: Marsh, Capen & Lyon.

Galton, F. (1888). Co-relations and their measurement, chiefly from anthropological data. *Proceedings of the Royal Society, 45,* 135-145.

Galton, F. (1892). *Hereditary genius: An inquiry into its laws and consequences.* Cleveland, OH: The World Publishing Company.

Galton, F. (1909). *Essays in Eugenics.* London: The Eugenics Education Society.

Goldstein, E. B. (2002). *Sensation and Perception* (6th ed.). Pacific Grove, CA: Wadsworth.

Gross, C. G. (2007). The discovery of the motor cortex and its background. *Journal of the History of the Neurosciences, 16,* 320-331.

Hart Research Associates. (2009). *Trends and emerging practices in general education.* Washington, DC: Association of American Colleges and Universities. Retrieved from http://www.aacu.org/membership/documents/2009MemberSurvey_Part2.pdf

Hergenhahn, B. R. (2009). *An Introduction to the History of Psychology*. Belmont, CA: Wadsworth.

Herrmann, D., Raybeck, D., & Gutman, D. (1993). *Improving student memory*. Seattle, WA: Hogrefe & Huber.

Hillway, T. (1949). Melville's use of two pseudo-sciences. *Modern Language Notes, 64*(3)*,* 145-150.

Hutchings, P., & Shulman, L. (1999). The scholarship of teaching: New elaborations, new developments. *Change, 31*(5)*,* 10-15.

Kassin, S., Fein, S., & Markus, H. R. (2011). *Social Psychology*(8th ed.). Belmont, CA: Wadsworth.

Leahey, T. H. (1992) The mythical revolutions in American psychology. *American Psychologist, 47*, 308-18.

Leahey, T. H. (2001). *The history of modern psychology* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Leary, D. E. (1992). William James and the art of human understanding. *American Psychologist, 47*(2)*,* 152-160.

Locke, J. (1975). *An essay concerning human understanding* (P. Nidditch, Ed.). Oxford, England: Oxford University Press.

Malone, J. C. (1991). *Theories of learning: A historical approach*. Belmont, CA: Wadsworth.

Malone, J. C. (2009). *Psychology: Pythagoras to present*. Cambridge, MA: The MIT Press.

Martineau, H. (1893). *The positive philosophy of Auguste Comte* (Vol. 1). London: Kegan Paul, Trench, Trubner.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology, 67,* 371-378.

Melville, H. (1930). *Moby Dick*. New York: Random House.

Munsey, C. (2008). Charting the future of undergraduate psychology. *Monitor, 39*(8)*,* 54.

Ore, O. (1960). Pascal and the invention of probability theory. *The American Mathematical Monthly, 67*(5)*,* 409-419.

Park, D. C., Smith, A. D., Lautenschlager, G., Earles, J. L., Frieske, D., Zwahr, M., & Gaines, C. L. (1996). Mediators of long-term memory performance across the life span. *Psychology and Aging, 11,* 621-637.

Pavlov, I. P. (1960). *Conditioned Reflexes.* Mineola, NY: Dover.

Shields, S. A. (1975). Functionalism, Darwinism, and the psychology of women: A study in social myth. *American Psychologist*, *30*, 739-754.

Skinner, B. F. (1948). *Walden II*. New York: Crowell-Collier-Macmillan.

Skinner, B. F. (1957). *Verbal Behavior*. New York: Appleton-Century-Crofts.

Spencer, H. (1864). *Social Statistics*. New York: Appleton.

Spurzheim, J. G. (1825). *A view of the philosophical principles of phrenology* (3rd ed.). London: Treuttel, Wurtz, & Richter.

Thorne, B. M., & Henley, T. B. (2005). *Connections in the history and systems of psychology* (3rd ed.). Boston, MA: Houghton Mifflin Company.

Trigwell, K., & Shale, S. (2004). Student learning and the scholarship of university teaching. *Studies in Higher Education, 29*(4), 523-536.

Joshua L. Williams, **Nancy G. McCarley** and, **John R. Kraft**, are all in the Department of Psychology, Armstrong Atlantic State University in Savannah, Georgia. They can be reached at joshua.williams@armstrong.edu (mailto:joshua.williams@armstrong.edu?subject=CQ%20Article)

Contents (index.html)
