

¹ The newsletter title has been changed from **Aphasia Insights** to **Plasticity Insights** to encompass brain function and plasticity as the foundation of all learning as well as recovery.

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“Man can progress as beast cannot, precisely because he has so many ‘instincts’ that they cut across one another, so that most serviceable actions must be *learned*. In learning habits, it is possible for man to learn the habit of learning. Then betterment becomes a conscious principle of life.” (pp. 105)

Dewey, John. Human Nature and Conduct (1922), Henry Holt and Company, Introduction copyright, The Modern Library, New York (1930).

Aphasia Nation, Inc. is committed to educating the wider public about stroke and aphasia and the “*Aim High for Aphasia!*” international Aphasia Awareness campaign.

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Plasticity Insights!¹

John Dewey: A renowned Educator and an aspiring Neuroeducator.

By Tom Broussard, Ph.D.

This is the next in a series of articles about the science and scientists behind the brain, stroke, aphasia, plasticity, learning, recovery, and education.

John Dewey (October 20, 1859 – June 1, 1952) was an American [philosopher](#), [psychologist](#), and [educational reformer](#). He was one of the most prominent American scholars in the first half of the twentieth century. Dr. Dewey died of pneumonia at his home in New York City and was buried with his wife on the north side of the [Ira Allen Chapel](#) at the [University of Vermont](#) in [Burlington, Vermont](#) ([Wikipedia](#)).

John Dewey was born in [Burlington, Vermont](#) and was one of four boys born to Archibald Sprague Dewey and Lucina Artemisia Rich Dewey. Their second son was named John, but died in a tragic kitchen accident on January 17, 1859. The next John Dewey was born October 20, 1859, forty weeks after the death of his older brother ([Wikipedia](#)).

He attended the [University of Vermont](#) and graduated [Phi Beta Kappa](#) in 1879. After two years as a high-school teacher in [Oil City, Pennsylvania](#), and one year as an elementary school teacher in the small town of [Charlotte, Vermont](#), Dewey started work on his Ph.D., studying with [George Sylvester Morris](#), [Charles Sanders Peirce](#), [Herbert Baxter Adams](#), and [G. Stanley Hall](#). Dewey received his Ph.D. at [Johns Hopkins University](#) and took a faculty position at the [University of Michigan](#) in 1884 ([Wikipedia](#)).



Underwood & Underwood, Public domain, Wikimedia Commons

**John Dewey
(1859 – 1952)**

Dewey was one of the primary figures associated with the philosophy of [pragmatism](#) and was one of the fathers of [functional psychology](#). His paper “[The Reflex Arc Concept in Psychology](#)”,

published in 1896, is regarded as the first major work in the Chicago functionalist school of psychology. A [Review of General Psychology](#) survey, published in 2002, ranked Dewey as the 93rd-most-cited psychologist of the 20th century ([Wikipedia](#)).

Dewey was deeply influenced by the recent publication of [William James' Principles of Psychology](#) (James, 1890). In fact, James sent a letter to Dewey, asking him to review and provide comments on it. Dewey sent a “fan” letter back to

James about his masterpiece, with (mostly) good comments about psychology, [Hegelianism](#) and [pragmatism](#) (Dewey to James letter, May 6, 1891).

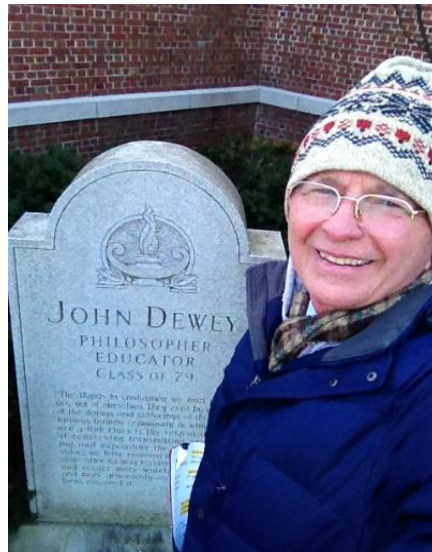
Dewey never mentioned ‘plasticity’ in the letter, but the [Principles of Psychology](#) clearly made an impact on his thinking and writing about the brain and education for decades to come. As James had said, “education is for behavior, and habits are the stuff of which behavior consists” (James, 1910). Dewey started using more of James’ updated [lexicon](#) about habit, learning, plasticity, and the brain.

Dewey published more than 700 articles in 140 journals and approximately 40 books from 1887 to 1952, but one slender book stands out, [Experience & Education](#) (Dewey, 1938). It was written almost 50 years after [Principles of Psychology](#) but with a similar train of thought as James’ approach to experience and learning.

Experience & Education “completes the first ten-year cycle of the Kappa Delta Pi Lectures Series...honoring Dr. Dewey as the Society’s first and tenth lecture” (Dewey, 1938, 9). It lays out a “firm foundation” regarding Dewey’s approach to the new “meaning of experience and its relation to education” (Dewey, 1938, pp. 10).

It is difficult to understand what experience *really* means, neurologically, without knowing more about it from a neurological perspective. As Dewey said, the philosophy of experience requires an “intimate and necessary relation between the processes of actual experience and education” (Dewey, 1938, pp. 20).

James’ used the term, plasticity, but the full term is now called, *experience-dependent* neural plasticity. Experience-dependent activities provide the stimulus and impulse that induce plasticity and converts the energy of those activities into new neural (brain) matter along with the resultant learning.



John & Roberta Dewey’s grave, Ira Allen Chapel, University of Vermont (Broussard, 2016)

Dewey’s theory of experience stated that “amid all uncertainties there is one permanent frame of reference: namely, the organic connection between education and personal experience” with the belief that “all genuine education comes about through experience” although that doesn’t mean that “all experiences are genuinely or equally educative” (Dewey, 1938, pp. 25).

The brain is highly plastic. Physically it is changed by experience, and new information is connected and coupled physically to the prior knowledge;

“At bottom, this principle rests upon the fact of habit, when *habit* is interpreted biologically. The basic characteristic of habit is that every experience enacted and undergone, modifies the one who acts and undergoes, while this modification affects, whether we wish it or not, the

quality of subsequent experiences. For it is a somewhat different person who enters into them.” (Dewey, 1938, pp. 35).

What Dewey said *then* is needed even more *now*;

“The educational system must move one way or another, either backward to the intellectual and moral standards of a pre-scientific age or forward to ever greater utilization of scientific method in the development of the possibilities of growing, expanding experience” (Dewey, 1938, pp. 89)

Signed: *The Johnny Appleseed of Aphasia Awareness*

The author is a three-time stroke survivor and has aphasia as a result of the strokes. His language skills continue to improve.

He is Founder and President, Aphasia Nation, Inc., a non-profit organization whose mission is educating the wider public, national and international, about aphasia and plasticity, the foundation of all learning.

1. Dewey, John to William James, May 6, 1891, William James Papers, Houghton Library, Harvard University, bMS Am 1092.9 (128).
2. Dewey, John. The Reflex Arc Concept in Psychology. *Psychological Review* 3, (1896): 357-370.
3. Dewey, John. Human Nature and Conduct (1922), Henry Holt and Company, Introduction copyright, The Modern Library, New York (1930).
4. Dewey, John. Experience & Education. Touchstone, Rockefeller Center, New York. Kappa Delta Pi Lecture Series, 1938.
5. James, William. The Principles of Psychology, Volume One & Two. Dover Publications, Inc., New York, 1918 (1890).

