Jun-2005

Editor's Notebook: A Legacy of Distinction

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Recommended Citation
Available at: http://vc.bridgew.edu/br_rev/vol24/iss1/4

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A Legacy of Distinction
by Michael Kryzanek

The Bridgewater Review has now entered a new era, the A.B. era. A.B. stands for After Barbara, meaning that Barbara Apstein, the associate editor of the magazine for twenty-two years, is retiring. During these twenty-two years I have been privileged to have Barbara as the associate editor. Her skill at spotting all those awkward sentences, her patience in working with anxious authors, her calming presence dealing with a hyperactive editor, and most of all her commitment to highlight the fine work of the Bridgewater State College faculty will be sorely missed and difficult to replace.

Over the years Barbara has written some wonderful articles for the Review on student writing, literary analysis, travels to Italy, and insights into campus life. Her writing “voice” was always clear, precise and thought-simply about our own foibles and idiosyncrasies. Those memories and many friendships. When Barbara retires she leaves behind all those wonderful articles and commentaries that made people think and broadened their understanding of the world. That’s quite an accomplishment.

I can only wish Barbara the best as she enters the next stage of her career. The Review will miss her kind editing, her clear thinking and her commitment to the thousands of students she touched over the years.

Barbara Apstein’s success as an associate editor was based on her firm belief that the faculty at Bridgewater State College was indeed special and was making contributions to the advancement of knowledge that some did not expect from a small state school. Barbara wanted to help tell the story of a fine and distinguished faculty through the Bridgewater Review, and after twenty-two years her legacy is contained in all those issues that she helped publish.

Barbara, like many of us senile faculty who have given much to public higher education, realizes that there is indeed “life after Bridgewater.” Barbara will likely play tennis, attend the opera, travel to Italy and enjoy life with her husband Carl. But Barbara will never leave Bridgewater because there is a body of work published in the faculty magazine that she was so influential in shaping. When people retire they leave behind fond memories and many friendships. When Barbara retires she leaves behind all those wonderful articles and commentaries that made people think and broadened their understanding of the world. That’s quite an accomplishment.

Alzheimer’s Disease and Contrast Sensitivity
Implications for Everyday Functioning
by Sandra Neargarder

Alzheimer’s disease (AD) is a progressive brain disorder that gradually destroys an individual’s mental functions and social capabilities, including memory, reasoning, decision-making, communication, and the ability to carry out everyday activities. According to the Alzheimer’s Association, AD affects approximately 4.5 million Americans, and by the year 2050 this number could increase to 11.3–16 million. Increasing age is the greatest risk factor for AD. Approximately 10% of individuals over the age of 65 and 50% of those over the age of 85 are affected. It is estimated that after the onset of symptoms, individuals with AD live an average of 8 years, but the duration of the disease can range anywhere from 3 to 20 years. With rising healthcare costs (the average lifetime cost of care for an individual with AD is $174,000), it is imperative that individuals with AD be able to function independently for as long as possible.

Patients, caregivers, and most health-care professionals primarily identify AD as a memory disorder. Although a memory deficit is usually the first sign of AD, impairments are evident in other domains, including visual function. These impairments are commonly overlooked because visual function is typically measured in terms of visual acuity (the standard letter chart used in an optometrist’s office), which is normal in individuals with AD. Based on previous research we know that impairments exist in a variety of visual domains, including color vision, depth perception, motion perception, and contrast sensitivity. In fact, approximately 60% of individuals with AD show a decline in one or more of these visual abilities, which is not the result of normal aging processes.

Contrast sensitivity has been the most extensively examined visual function, and may, in fact, have the greatest influence on the ability of individuals with AD to carry out activities of daily living. Contrast sensitivity is defined as the smallest difference in intensity that a person can resolve between an object and its immediate surroundings. It is typically measured in a laboratory setting using standardized vision charts such as the Vistech or the FACT (Functional Acuity Contrast Test). These tests measure an individual’s ability to detect differences in contrast (both high and low) across a range of spatial frequencies (both high and low). Thus, one’s contrast sensitivity measure is based on both contrast and spatial frequency. We will consider these two terms separately, starting with contrast.

A high contrast example would be detecting a white electrical outlet against a dark-brown wall, a low contrast example would be detecting a white electrical outlet against a white wall. Healthy elderly adults would be able to detect the electrical outlet in both cases, individuals with AD would not. They would be able to detect the outlet in the high contrast example, but because of deficits in contrast, would be unable to detect the outlet in the low contrast example.

Now consider high versus low spatial frequencies. High spatial frequencies convey visual information about details such as angles and lines. Low spatial frequencies convey visual information about gross form and smooth, flat planar surfaces. Any given object in the environment contains both high and low spatial frequencies. For example, consider a picture of a human face. Extraction of high spatial frequencies would result in a cartoon-like looking face with lines detailing the eyes, mouth, and so on. Extraction of low spatial frequencies would result in a shadow-like looking face where details cannot be seen, but the overall contour and shadows of the face are observed. When high and low spatial frequencies are combined, a face with details, shadows, and contours are observed. Research suggests that healthy elderly adults exhibit impairments at high spatial frequencies, whereas individuals with AD exhibit impairments at both high and low spatial frequencies.

Assessments such as the Vistech and the FACT enable researchers to measure individual contrast thresholds at different spatial frequencies. In other words, when presented with individual spatial frequencies ranging from high to low, researchers measure at what contrast these frequencies need to be in order for individuals with AD to detect them. These individual frequencies are typically created using sinusoidal gratings in a laboratory setting. This information can then be used to examine how specific deficits relate to real-world functioning. A perfect example of this is the AD filter, developed by our colleagues Drs. Grover C. Gilmore and Cecil Thomas at...