

EDITORIAL

Literature and the History of Neuroscience

Mary Harrington

Psychology Department & Neuroscience Program, Smith College, Northampton, MA 01063

Why is the novella *The Yellow Wallpaper* used in teaching a course on the history of neuroscience? This story, published in 1892 by Charlotte Perkins Gilman, describes the experience of a woman undergoing the “rest cure” prescribed for her depression. While seen in 1920 as a shockingly realistic tale of mental decline, a “Poesque tale of chilling horror” (Howells, 1920), it was revived in the 1970s in women’s studies classes as an example of feminist literature. The narrator’s descent into madness was interpreted as the only route to health for a woman in a patriarchal society, an escape from an insane society. Read as a quest for identity, the narrator triumphs by overcoming her husband, “who is last seen fainting on the floor as his wife creeps over him” (Kennard, 1981). For two years, I have used it as required reading in my undergraduate history of neuroscience seminar. *The Yellow Wallpaper* is very helpful in conveying three major themes important to understanding the history of our field.

The book conveys the experience of going mad so adroitly, students are left intensely curious. Was this post-partum depression, perhaps induced by hormonal changes following birth? Might it be reactive depression, induced by the expectations of husband and society that the protagonist now forgo previous intellectual pursuits and devote herself to the new baby? Could this be an endogenous depression, from a spontaneous “chemical imbalance,” the phrase so central to our current understanding of depression? Students are led to consider what happens in the brain when a person loses sanity and how treatments for mental illness have changed with time. Discussion of these issues leads to an appreciation that interpretation of mental illness has changed over the years. Awareness of some of the less humane treatments applied in earlier eras might lend sympathy to the apparently gentle treatments of the rest cure. While the rest cure can be appreciated on the surface as similar to the restorative value of a vacation, a deeper understanding of the theory upon which it was based helps students grasp the wider scientific context.

The rest cure was usually administered to a woman patient by a male doctor. In *The Yellow Wallpaper* the husband, a paternalistic physician, administers the cure. The male authority, as husband and doctor, dictates to the woman that she must not pursue intellectual pleasures, but must only eat and rest, raises the feminist sensitivities of modern readers. We clearly live in a different time, when women are encouraged to follow many more careers than the role of wife and mother espoused as ideal in the 19th century. This contrasting attitude toward women’s intellectual lives raises the question of why there are so few prominent women in the history of neuroscience prior to the current day. What were the forces blocking women

from the pursuit of science? Surely one major factor was the belief that women risked damaging their health by intellectual pursuits. Another was the idea that education of women was best directed toward their eventual role of wife and mother. Further discussion of this topic can be informed by Rossiter’s book on the struggles of women scientists in America (Rossiter, 1982).

The “rest cure” is largely credited to the neurologist S. Weir Mitchell. An essay by Otis (1999) provides an interesting accompanying reading. Otis’s analysis of Mitchell’s emotional life and his probable fear of women allows discussion of the manner in which personal biases and subconscious fears might influence scientific or medical propositions that superficially appear objective. The serious impact of such influences is illustrated by the subjugation and eventual insanity of the woman in the story of *The Yellow Wallpaper*. The intriguing analysis of Mitchell’s subconscious fears as revealed in his creative fictions as well as his scientific writings highlights the humanity of the neurologist as well as the blinders that a particular culture and socioeconomic class may impose.

Thus, through the use of literature, past neuroscientific beliefs come alive to students in a way that they might not otherwise. Literature reflecting scientific understanding allows awareness of how scientific thought influences the general culture, and indeed, how shared cultural beliefs in turn influence science. As students from diverse backgrounds study the history of neuroscience, and consider where they might fit in the current field, literature can be used to highlight the people missing from the canon of our history, and can help students grasp the important influences of cultural context on our history.

Gilman CP (1892) *The yellow wallpaper*. New England Magazine 5:647-656. Boston, MA: Maynard Small & Co.

Howells WD (1920) *The great modern American stories*. New York: West Richard.

Kennard J (1981) Convention coverage or how to read your own life. *New Literary History* 13:69-88.

Otis L (1999) S. Weir Mitchell: Identity as resistance. In *Membranes: Metaphors of invasion in nineteenth century literature, science, and politics*. pp. 37-63. Baltimore, MD: Johns Hopkins University Press.

Rossiter MW (1982) *Women scientists in America: Struggles and strategies to 1940*. Baltimore, MD: Johns Hopkins University Press.

Dr. Harrington is the Tippit Professor of Life Sciences at Smith College and the incoming FUN president. Her research investigates circadian rhythms and she teaches courses in experimental neuroscience and biological rhythms. She recently authored the text *The Design of Experiments in Neuroscience*. Email: mharrington@email.smith.edu

Copyright © 2006 Faculty for Undergraduate Neuroscience
www.funjournal.org