

FOR IMMEDIATE RELEASE:

Contact: Andy Heidel
Assistant Director of Publicity
212-420-5849 • andy_heidel@hmco.com

**PROUST WAS A
NEUROSCIENTIST**
by Jonah Lehrer

**A sparkling and original blend of biography, criticism,
and first-rate science writing arguing that science is not the only path to knowledge.
In fact, where the brain is concerned, art got there first.**

While an undergraduate at Columbia University, 25-year-old Rhodes scholar Jonah Lehrer worked in a neuroscience lab, trying to figure out how the mind remembers. At the same time, he happened to be taking a course in twentieth-century French Literature, and began reading Proust. He would often bring his copy of *Swann's Way* to the lab, and read a few pages while waiting for an experiment to finish. All he expected from Proust was a little entertainment, but he began to see a surprising convergence. Proust's narrator recovers his childhood memories when he bites into the madeleine, revealing crucial things about memory that neuroscientists didn't uncover until 2001: first, that memory is uniquely tied to taste and smell. And, second, as Proust so thoroughly examines, memory is fallible. This led Lehrer to start thinking about other artists who anticipated modern neuroscience, and he realized that there was a whole group of artists that had discovered truths about the human mind – real, tangible truths – that science is only now re-discovering.

In **PROUST WAS A NEUROSCIENTIST (Houghton Mifflin, November 2007)** Lehrer argues that science is not the only path to knowledge. In fact, where the brain is concerned, art got there first. Taking a group of artists – a painter, a poet, a chef, a composer, and a handful of novelists – Lehrer shows how each one discovered essential truths about the human mind. We learn how Proust first revealed the fallibility of memory; how George Eliot discovered brain plasticity; how the French chef Escoffier discovered umami (the fifth taste); how Cezanne worked out the subtleties of vision; and

how Gertrude Stein exposed the deep structure of language – a full half-century before Chomsky. Lehrer reveals that the newfangled facts of science provide a whole new way to appreciate our fictions. And, he helps us revisit the classics and see them through a new and fascinating prism.

Also, Lehrer notes, scientists describe our brain in terms of its physical details; they say we are nothing but a loom of electrical cells and synaptic spaces. But, what science forgets is that this isn't how we experience the world. (We feel like the ghost in the machine, not like the machine itself.) It is ironic, but true: the one reality science cannot reduce is the only reality we will ever know. This is why we need art.



Author Jonah Lehrer, 25, is editor at large for *SEED* magazine. A graduate of Columbia University and a Rhodes scholar, Lehrer has worked in the lab of Nobel Prizewinning neuroscientist Eric Kandel and studied with Hermione Lee at Oxford. He's also written for *Nature*, NPR and NOVA ScienceNow. He even worked as a line cook for three years in Los Angeles and NYC at Le Cirque 2000 and Le Bernardin, which inspired his chapter on Escoffier. Lehrer writes a well-trafficked blog, 'The Frontal Cortex': <http://scienceblogs.com/cortex/>. This is his first book.

Title: Proust Was a Neuroscientist

Author: Jonah Lehrer

Publication Date: November, 2007

\$24.00, 224 pages, 5 1/2 x 8 1/4, ISBN: 0618620109, ISBN-13: 9780618620104

Jacket scans and press materials are available at www.houtonmifflinbooks.com

For more information, please contact:

Andy Heidel, 212.420.5849 or andy_heidel@hmco.com

***The Five Writers, a Painter, a Composer, and a Chef
Who Discovered the Truth About the Mind***

Marcel Proust, on memory: Proust anticipated important truths about memory: the sense of taste and smell are uniquely sentimental, memories are dishonest and do not faithfully reproduce the past, and memories are able to persist – even if we never think about them.

Walt Whitman, on feeling: Contradicting the science of his time, Whitman believed that the body and mind were profoundly connected, and that the flesh was the source of feelings. (“Behold the body includes and is the meaning, the main/Concern, and includes and is the soul,” he wrote.) Modern neuroscience now concurs, and has discovered that emotions often have a bodily source.

George Eliot, on thinking: In her time, scientists believed that people were prisoners of their genes. But, Eliot’s art consistently argued that our mind was “not cut in marble.” She believed that the most essential element of human nature was its malleability, the way we can “will ourselves to change.” She anticipated the discovery of neural plasticity.

Auguste Escoffier, on taste: Escoffier’s kitchen articulated biological truths of the tongue and his seminal recipes anticipated basic truths about the sensation of taste. He also realized that the taste of most flavors is actually a smell.

Paul Cezanne, on seeing: Though criticized as overly abstract, he wasn’t interested in pure abstraction, and always made sure that his surreal brushstrokes could be translated into real objects. With just enough information, the brain can decipher his paintings. If he left some details out, and canvas blank, it was to show what the visual cortex puts in.

Igor Stravinsky, on listening: He knew that a symphony was nothing but a collection of acoustic patterns that the brain had learned how to hear. Further, what makes music pleasurable is the tension between the melodic patterns expected and the patterns actually heard. He forced the audience to learn an entirely new set of patterns, and though this newness caused a riot at the time, he knew that the brain would adapt. He was right: he’s now considered by many to be the most influential composer of 20th-century music.

Gertrude Stein, on language: Stein exposed the “deep structure” of language, and observed “Everybody said the same thing over and over again with infinite variations but over and over again.” Stein, in anticipation of Noam Chomsky, saw the source of this sameness, to cut our words until their structure showed through.

Virginia Woolf, on consciousness: She realized that the stream of consciousness “was very erratic, very undependable.” At any given moment, her mind seemed to be scattered in a million little pieces. And yet, something bound those fleeting sensations together. Woolf’s revelation was that we emerge from our own subjective interpretations. When we sense something, we naturally invent a subject for our sensation. The self is simply this subject; it is the story we tell ourselves about our own experience. As Woolf wrote in her unfinished memoir, “We are the words; we are the music; we are the thing itself.”

Talking with Jonah Lehrer
Author of
PROUST WAS A NEUROSCIENTIST

Q: Where did you get the idea for *Proust Was A Neuroscientist*?

A: It was pure serendipity. At the time, I was working in the lab of Nobel Prize laureate Eric Kandel, investigating the molecular basis of memory. I was also studying French Literature. (I double-majored in English and Neuroscience as an undergraduate.) There was a lot of down time in the lab, so I would often read novels while waiting for an experiment to finish. One day, I found myself engrossed in *Swann's Way*. As I read this epic novel about one man's memory, I had an epiphany. I realized that Proust and modern neuroscience shared a vision of how our memory works. If you listened closely, they were actually saying the same thing.

Q: How did you select the other artists in the book?

A: It was a fun process. After I realized that Proust had anticipated these scientific theories, I suddenly started re-reading all my favorite novelists, poets and artists. What did Virginia Woolf intuit about consciousness? Why was Walt Whitman so obsessed with his "body electric"? Why did Cezanne paint in such an abstract style? Once I started asking these strange questions, I saw all sorts of connections. I realized that there was a whole group of artists that had discovered truths about the human mind—real, tangible truths—that science is only now re-discovering. Of course, I don't intend my list to be exhaustive. These aren't the only artists who were interested in the mind, or anticipated important facts about the mind. I hope that this book inspires other people to look at their favorite artists through the prism of neuroscience. The newfangled facts of science provide us with a whole new way to appreciate our fictions.

Q: How do you think these artists would feel about your book? Would Proust be happy that he intuited some scientific truths?

A: Proust would be thrilled. But he wouldn't be surprised. Proust was confident that every reader, once they read his novel, would "recognize in his own self what the book says...This will be the proof of its veracity." And Proust wasn't the only artist who was convinced that his art was full of truth. George Eliot famously said that her art was "simply a set of experiments in life." Virginia Woolf, before she wrote *Mrs. Dalloway*, said that in her new novel the "psychology should be done very realistically." Whitman thought he was expressing deep "truths about the body and soul" that the science of his time had yet to understand. In other words, all of these artists believed that their art was capable of being literally true, just like science.

Q: How did these artists come up with so much truth?

A: Each artist had his or her own peculiar method. (And some of them, like Proust, were very peculiar.) But one thing these artists all shared was an obsession with our

experience. They wanted their art to express what it was like to be alive, to be conscious, to feel, to remember, to taste, to see. They turned themselves into empiricists of ordinary life. That's where their wisdom came from.

Q: Escoffier seems like the odd man out. After all, he's not generally seen as an artist. Why did you decide to include a chef?

A: Escoffier defined cooking as “equal parts art and science,” and I tend to agree with him. (I also tend to agree with Brillat-Savarin, who declared that “The discovery of a new dish does more for the happiness of the human race than the discovery of a new star.”) Furthermore, I think that Escoffier demonstrates one of the larger themes of the book, which is that we can discover truths about ourselves just by paying attention to our subjective experience. After all, it's not like Escoffier understood the molecular mechanisms behind our taste receptors. He just wanted his food to taste good, and that led him to invent recipes that accurately reflected the anatomy of our tongue.

This chapter also grew out of my own experience as a line cook. I've been lucky enough to work in the kitchens of some nice restaurants (Le Cirque 2000, Melisse, Le Bernardin), and I was always struck by how much chefs know about the sensation of taste, even if they aren't familiar with the underlying cellular mechanisms. Watching a chef concoct a new dish is a lot like watching a science experiment: they put some stuff together, then taste it, then add some more stuff, then taste again, and so on. But the whole process is really empirical. A good chef is constantly testing

Q: How did these artists interact with the science of their time?

A: They were extremely engaged with their contemporary science. While the artists I discuss often disagreed with the science of their time, they always used it as a springboard. Long before C.P. Snow mourned the separation of our two cultures, Whitman was busy studying brain anatomy textbooks and watching gruesome surgeries, George Eliot was reading Darwin and James Clerk Maxwell, Stein was conducting psychology experiments in William James' lab, and Woolf was learning about the biology of mental illness. It is impossible to understand their art without taking into account its relationship to science.

Q: Why don't you include any modern artists?

A: I end the book by discussing Ian McEwan's *Saturday*, a novel about a neurosurgeon that embodies many of the themes I discuss throughout *Proust Was A Neuroscientist*. And there are many modern artists who I could have easily written about. (For example, I think Richard Powers' recent novel *The Echo Maker* is a particularly eloquent meditation on the limits of neuroscience. And I could have used McEwan's *Atonement* to make many of the same points about memory that I discuss in my chapter on Proust.) But I decided that the best way to demonstrate the connections between art and neuroscience was to focus on cases where artists had anticipated scientific discoveries. Perhaps in a

few decades I'll get to write a sequel to *Proust Was A Neuroscientist*, in which I describe how artists like McEwan and Powers anticipated the neuroscience of the 21st century.

Q: What do you want people to take away from *Proust Was A Neuroscientist*?

A: First of all, I hope this book compels people to look at art in a new way. I think that we've diminished the importance of art. We think of art as just a collection of entertaining stories and pretty paintings. But Proust and Whitman and Woolf saw themselves as truth-tellers. I hope this book compels people to think about the potential of art, to reimagine what the imagination is capable of.

Of course, in order for a novel or poem to be "true" we need to redefine what the "truth" is. Our current culture subscribes to a very narrow definition of truth. If something can't be quantified or calculated, then it can't be true. Because this strict scientific approach has explained so much, we assume that it can explain everything. But every method, even the experimental method, has limits. Take the human mind. Scientists describe our brain in terms of its physical details; they say we are nothing but a loom of electrical cells and synaptic spaces. What science forgets is that this isn't how we experience the world. (We feel like the ghost, not like the machine.) It is ironic, but true: the one reality science cannot reduce is the only reality we will ever know. This is why we need art.

Title: Proust Was A Neuroscientist

Author: Jonah Lehrer

Publication Date: November, 2007

\$24.00, 224 pages, 5 1/2 x 8 1/4, ISBN: 0618620109, ISBN-13: 9780618620104

Jacket scans and press materials are available at www.houtonmifflinbooks.com

For more information, please contact:

Andy Heidel, 212.420.5849 or andy_heidel@hmco.com

Book Tour for Jonah Lehrer,
Proust was a Neuroscientist

New Hampshire:

November 1, 7:00pm: Gibson's Bookstore
27 South Main Street, Concord NH (603-224-0562)

November 17, 2:00pm: Borders
4 Astor Place, New York NY (212-420-1322)

New York:

November 7, 7:00 pm: Barnes & Noble, Upper West Side
2289 Broadway, at 82nd St, New York NY (212-362-8835)

San Francisco:

November 8, 7:30 pm: Kepler's
1010 El Camino Real, Menlo Park CA (650-324-4321)

San Diego:

November 10, 7:00 pm: The Book Works
2670 Via De La Valle, Suite A230, Del Mar CA (858-755-3735)

Los Angeles:

November 12, 7:00 pm: Dutton's Brentwood
11975 San Vicente Blvd, Los Angeles CA (310-476-6263)

Seattle:

November 13, 7:30 pm: University Bookstore Science Series
Town Hall, 1119 8th Ave, Seattle WA (800-335-READ)

Boston:

November 14, 7:00 pm: Harvard Bookstore
1256 Massachusetts Ave, Cambridge MA (800-542-READ)

Vermont:

December 8, 7:00 pm: Northshire Bookstore
4869 Main Street, Manchester Center VT (802-362-2200)