Concepts and methods are needed in order to study it from the population perspective as a condition in its own right." This text complements *The Epidemiology of Pain* by the International Association for the Study of Pain (IASP), which provides in-depth chapters on specific pain conditions. Although *Chronic Pain Epidemiology* does not cover these conditions to the same extent, a future edition might integrate more of this material as the IASP text becomes outdated. Hopefully, *Chronic Pain Epidemiology* will encourage epidemiology training programmes to help prepare researchers to study the causes and control of chronic pain conditions.

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Chronic Pain Epidemiology: From Aetiology to Public Health
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Exhibition

A beginner's guide to brain science

I am in total darkness save for tiny flashes of light that dart back and forth across what appears to be thousands of feet of jumbled electrical wire adorning the walls and ceiling. Walking into the entrance hall of *Brain: The Inside Story* is like entering a nightclub, except for the family-based clientele.

It is also about as busy as a nightclub. Outside, it is a crisp, sunny winter's day, and across the road is New York's Central Park, snow-covered, with its ice-skating rink and horse-drawn carriage rides. But apparently New Yorkers are forgoing these and other charms of the city to come in droves to learn about the brain—a testament to our fascination with this mysterious organ.

Continuing through the dark entrance hall, I learn about the brain's basic components: the 100 billion neurons—represented by the wires. Each neuron, I am told, has 1000 or so connections to other neurons, which amounts to 100 trillion connections in all. The flashes of light across the wires represent the neurons' electrical communication signals, which travel at speeds of up to 250 mph.

Next, a video introduces me to the different regions of the brain and what they do. The star of the video is Lea the ballerina, who is auditioning to join New York's Juilliard Dance School. Her limbic system, I learn, controls her emotions and her memory of the dance routine. Her cerebellum controls her coordination and balance. Her auditory cortex hears the music. And so on.

After the basic components and functional compartmentalisation of the brain, the rest of the exhibition is organised into five zones—senses, emotions, thinking, development and ageing, and 21st century brain technologies. With so many subjects covered and so much factual information included, the curators have done a pretty good job of keeping things interesting. This success is partly achieved by including plenty of games and brain-teasers along the way.

For example, in the section on memory in the thinking zone, I can compare my memory skills to those of a London cab driver. Apparently, London cabbies have larger hippocampi as a result of spending 3 years learning The Knowledge—all the routes through central London. My task is to see how quickly I can learn the route from Belgrave Square to Ye Olde Cheshire Cheese Pub on the Strand (not that quickly). Other games have me improving my reaction times, memorising numbers, and decoding Braille.

The games certainly keep younger exhibition-goers happy, but the biggest bonus comes right at the end of the exhibition. I'm not talking about the gift shop (although that is pretty good: Bucket-O-Brains gummy sweets and cuddly pet neurons are a must)—I'm talking about the 21st century technologies zone.

This last zone has the wow factor. "What we wanted to do there was to give the visitor the payoff", says Robert DeSalle, researcher at the American Museum of Natural History and lead curator of the exhibition. "It's like, you've learned all this new stuff about your brain...and, here you go, these are some of the things that are happening now. The gateway to the frontier is open."

There is information on brain imaging such as MRI and PET. Procedures such as transcranial magnetic stimulation and deep brain stimulation are discussed with mention of their current and potential uses. The concept of brain–computer interfaces is introduced, including a description of bionic eyes and how mapping brain waves by electrocorticography is providing a means to control computer commands, communication devices, and even prosthetic limbs, as well as a means to monitor brain activity in patients with epilepsy.

It is all fascinating stuff. My only criticism of the exhibition, in fact, is that the technologies zone could have been much longer, and perhaps the other four zones a little shorter. I am maybe a little impatient, but for me the big payoff was a little too delayed. I felt like I had read four chapters of a basic neuroscience textbook—albeit a great fun textbook—before getting to the fifth and final juicy chapter.

That said, the first four zones do provide an extremely comprehensive and well put-together overview, and, given the breadth of their content, even students of neuroscience might discover some new or long-forgotten facts. All in all, for a 90-min wander through the inner workings of the brain, *The Inside Story* certainly gets you thinking and, of course, teaches you a little about how that thinking happens.

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http://www.amnh.org/exhibitions/brain/