Kings of the Memory Palace

By: Kerry Connell

What did you have for breakfast yesterday? Last week? How about the last day of summer vacation when you were 12? It seems that some people can recall every little detail of their lives, but for most of us this skill diminishes with time. Important information sticks around, but inconsequential tidbits are jettisoned to make way for more useful or timely knowledge.

There are those individuals, however, who can recall long strings of meaningless data. They are called “memory athletes,” and their skills are astounding—on par with those of the best athletes in more traditional competitive pursuits.

Let the Mind Games Begin
At the world’s first Extreme Memory Tournament, or XMT, 16 competitors came together to see who would be crowned champion of the world of recall. The tournament, sponsored by Dart NeuroScience and Washington University in St. Louis, took place on April 26, 2014 at Dart NeuroScience’s offices in San Diego. The competition took the form of a World Cup-style elimination, with a grand prize of $20,000. The two eventual finalists, both from Germany, hold some mind-boggling world records: Simon Reinhard, 35, is the fastest in card order memorization, having committed to memory a deck of cards in just 21.19 seconds. Johannes Mallow, 32, holds the record for memorizing digits—501 in five minutes. The men are friends as well as competitors; Reinhard ended up winning.

Dart NeuroScience sponsored the tournament because scientists there are working to develop drugs for improved cognition. Academic researchers from the psychology department of Washington University were present to conduct cognitive tests in an attempt to determine whether there really is some factor that is responsible for the memory athletes’ superior skills. The psychological researchers did discover something surprising—memory athletes tend to have better attention skills than the rest of the population. Although this is not a direct measure of memory, it does explain why the standouts are able to commit items to memory so quickly. They are able to tune everything else out.

Building the Memory Palace
In addition to attentional control and high intelligence, the memory athletes have in common a classic memory-building technique. Known as the Memory Palace, each one uses it in his or her own way. The technique involves associating the items to be memorized with images that the thinker already knows by heart.

For instance, a memory athlete may picture the nine of hearts on the mantel of his childhood home, the ace of spades in the fireplace, the queen of clubs on the piano, and so forth. Another may assign the items to different houses on a street he has traveled for years. It’s simple, and it works.

Simonides of Ceos, a Greek poet, was the first to describe the Memory Palace method in the fifth century B.C. It has been the subject of many popular books ever since. Because it is easy to learn and, with practice, master, some teachers use it to boost their students’ memorization skills when there are lessons that simply must be committed to memory. Kids tend to choose devices like sports teams and superheroes, but regardless of who is living there, these Memory Palaces serve as useful tools.

A Clean Slate
And what happens when the memory competition is over? Doesn’t the Memory Palace get cluttered? The answer is no. Memory athletes score high on tests of working memory—that is, the things we need to remember just for now, like shopping lists or errands to run. Being able to hold information in working memory necessitates the ability to wipe the slate clean when the information is no longer needed, to make room for the next batch of data. Memory athletes simply possess a much higher capacity for working memory and, when the competition is over, the information simply goes away.

One test of working memory capacity involves the solving of a list of simple equations, such as $4+5=x$, $6+7=y$, and so forth, while keeping the middle number of each equation in mind for later recall. The average college student can retain about two of the digits; the average memory athlete stores seven or more. A test of attentional control, known as the Stroop test, presents words for colors in a variety of colors—the word “red” may appear in blue, or it may appear in red. Memory athletes score higher on this test as well, because they’re able to focus only on the word and not the color in which it is shown.

As researchers continue their work on memory, we may learn more—but for now, attempting to direct our attention and constructing our own Memory Palaces is the best we have.