

Blogs

Ulterior Motives

How goals, both seen and unseen, drive behavior
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Educating mind and body I: Body affects memory

Your mind is not a brain in a box.



School is back in session in Texas and many other parts of the country, and kids all over are flocking back to the classroom. The setup of a typical classroom is pretty similar to what it has been for 100 years. The teacher sits in the front of the room. The students are in desks in rows.

Setting up a classroom in this way assumes that the purpose of school is to train the minds of students. And as far as it goes, that is probably right. The problem is that we also assume that training the mind is something separate from the body.

Now, I don't mean that we believe that the mind is not a physical thing (like Rene Descartes did). I'm pretty sure that most of us believe that the [brain](#) is the thing that allows us to think, and that the brain is a part of our body. But we do often treat the brain as if it is somehow separate from the rest of the body, and so we can train it while ignoring what the rest of the body is doing.

I think that is a mistake, and over the next few posts I'll talk about why.

There is a growing recognition within Psychology that thinking is affected by what the body is doing. The way you think about things is influenced by what your body is doing at any given moment, and it is also influenced by what you have done in the past. The body even affects the mind when it is not obvious that movements of the body are not really that relevant to the thinking being done.

As an example, consider studies by Shu-Ju Yang, David Gallo, and Sian Beilock in the September, 2009 issue of the *Journal of Experimental Psychology: Learning, Memory, and Cognition*. They had people sit in front of a computer with the keyboard hidden under a platform. They saw pairs of letters on the

screen and rated how much they liked them. Later, they were shown a number of pairs of letters and asked whether they had seen them in the first part of the experiment.

So, what does this have to do with the body?

Some of the people in the study were skilled typists, and others were unskilled typists. The letter pairs were all pairs that would be typed with the middle and index fingers if they were typed (though the people in the study did not have to do any typing). Some of those pairs (like BK) were ones that would be easy to type, because they require typing one letter with each hand. Others were pairs that would be harder to type because they would be typed with the same finger (like FV).



Both the skilled and unskilled typists were pretty good at recognizing letter pairs that they saw during the first part of the study. Where they differed was in the items that were presented for the first time when they were being tested. The skilled typists more likely to mistakenly say that they had seen a letter pair when they had not if that letter pair was one that would be typed with different hands than when that letter pair was one that would be typed with the same finger. The unskilled typists, who had little or no experience typing these letter pairs showed no difference between pairs that would be typed with the different hands or with the same finger.

I realize this is a pretty simple demonstration, but the ability to recognize things you have seen before is an important part of the learning process. Results like this make clear that experience performing actions affects your ability to separate those things you remember from those things you do not.

I'll talk more about connections between mind and body in the next post.