HOW OUR BRAINS BUILD OUR AUTOBIOGRAPHIES

Antonio Damasio | Big Think | 8/26/10

How do our brains construct coherent personal narratives out of our memories of experiences?

Damasio: We do it in very interesting ways. The first way is by taking the story as it happens. Our biographies happened one part at a time. There is a sequence of events in our lives, and so there's a temporal aspect to our experience that brings, by itself, sense into the story. In other words, you were not walking before you were born and you were not doing X and Y before you did something else first. So there is a sequencing of events that imposes a certain structure on the story.

Then there is something that intervenes and is very important which has to do with value—value in the true, biological sense—which is contrary to what many people seem to think, taken at face value (sorry for the pun). We do not give the same amount of emotional significance to every event. So there are things in our lives that take up an enormous importance and that become very dominant effects in our biography. And that comes out of a variety of reasons, but fundamentally it comes out of how that particular experience connects with your affective systems of response.

So if something produces an undue amount of pleasure or undue amount of displeasure it's going to be judged differently, and it's going to be introduced into your narrative with a different size, with a different development.

And so that is the next element to superimpose on the sequencing element. And in fact that element [value] is so powerful that very often it can trump the sequencing event—the sequencing aspect. So something may have happened before, but this thing is so important that you don't even know about the thing that happened before. And when you tell your story to yourself or to someone else it's going to be told not necessarily based on the time course but rather on the basis of how it was valued by you.

And that value, by the way, does not need to be conscious. You're not deciding *Ha ha, this is very good: X value.* No, you're assigning value naturally as life unfolds. And that's a very important element for the construction of one's narrative.

And the other thing that is very important is that narratives are not fixed. We change our narratives. We change our narratives for ourselves, and we change them not necessarily deliberately. Some people do. Some people will constantly reconstruct their biography for external purposes. It's a very interesting political ploy. But whether we want to do it because we want people to have a different idea of who we are or not, we do it naturally.

So the way we construct our narrative today is different from the way we constructed it a year ago. The difference may be very small or it may be huge. And they're constantly changing as a result of events that happen in your life. You're not the same after say an incredible love affair that went very well or a love affair that went bad. Or something that happens to your health or something that happened to somebody else's health that is close to you. Or something that happens professionally. All of those things sort of rearrange the way your story gets constructed.

Does constructing these stories change our brains?

Damasio: Well, of course, it happens first of all in the brain, and it's affecting the brain because it sort of changes the weights with which memories are recalled. We had a chance of talking on another occasion about the architecture of convergence and divergence. All of that is constantly operating when you not only learn, but when you recall. But as you recall in a different light, the weights with which something is more probably going to be or not be recalled in the next instance will change.

So you're constantly changing the way, for instance, synapses are going to fire very easily or not so easily. There's that effect that is very physical, very down there, at the synaptic level, which really means microscopic, cellular level, but also molecular level because all of those structures are operating on an electrochemical basis, and so the changes there are very important.