

# **This is Your Brain on Therapy**

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## **Part One**

What really happens to your brain when you go to a therapist? Hey, be kind!

Let's start from the very beginning (a very good place to start). In the beginning, our brains have a lot of "hardware," estimated at one hundred billion brain cells, but they have very little "software." We only have "programs" that let us do things like cry, sleep, poop, suck, poop again (and did I mention poop? Oh, and cry too).

As we grow up, our brains act like little organic computers that program themselves by creating or undoing connections between brain cells, estimated at about 10,000 connections per cell, or about one quadrillion (that's a one with 15 zeroes after it) possible connections in all. That's a lot!

The connections we can make in our brain reflect the "genetic potential" we receive from our parents. It's like your parents each had a deck of cards and threw in some of them to give you your hand. So, you play with the cards you were dealt, so to speak. If both your parents throw in a "smart" card, then you have a good chance at being smart. The same holds true of height, eye color, hair color, temperament, attention deficit, bipolar disorder, alcoholism, and so on. You would have the "potential" (possibility) for those but may or may not "realize" (acquire or fulfill) that potential.

The connections we do make in our brain reflect how we use (realize) this deck of cards (potentials) to deal with our environment as we grow up. If Person A has an easy, pleasant, nurturing childhood, their brain will get "wired up" or "programmed" to process that kind of input. If Person B has a rough, abusive, lonely childhood, their brain gets programmed to deal in some creative manner (sometimes called "a defense mechanism") with that kind of life.

Person A can readily deal with nice, pleasant, friendly people, but may have difficulty knowing what to do with a mean, unpleasant, abusive person because they have no program to process input from that kind of person. They may assume the mean person is just having a bad day (or life) and will change sometime in the future. This assumption may get them into trouble.

Likewise, Person B can deal in some way with abusive, mean people, but may have difficulty knowing what to do with a healthier person. They have no program to process input from a healthy person. To them, abusive behavior seems "normal" and they feel in some way comfortable, or at least familiar, with it. Person B may even find they are attracted to abusive others again and again because that's the kind of person their brain (thus far) can deal with.

What kind of picture forms in your mind right now? Do you recognize any of this in yourself or others you know?

Both Person A and Person B can benefit from going to therapy (therapy is not just for crazy people any more). Person B has probably suffered through a string of bad relationships, not knowing why, or unable to figure out, how to establish or keep a healthy relationship. Person B's brain does not "do" healthy. Person A, on the other hand, may have stumbled across a relationship that doesn't make sense or may even have traumatized them, since Person A's brain doesn't "do" unhealthy.

Enter therapy. Please! (Apologies to Henny Youngman.) So let's say Person B seeks relief by entering therapy with a relatively healthy therapist (not guaranteed, by the way, but that's a whole other "Oprah"). At first, Person B may feel uncomfortable with the therapist because his or her brain doesn't process input from the healthy therapist. Luckily, however, Person B's brain has "plasticity" (fancy word meaning it can change) and during every encounter with the therapist, Person B's brain gets slightly rewired or reprogrammed.

Almost regardless of what happens during these encounters, as long as the therapist behaves in a healthy manner, Person B's brain creatively adapts to deal more effectively with "healthy." Person B's brain cells slowly undo unhealthy connections and create healthy connections. After a while, Person B finds they too can act in healthy ways and they can enter and maintain healthy relationships (well, healthier, at least).

Person A can benefit from working with a healthy therapist, too. Possibly some brain-expanding education, role-playing, or other method provided in therapy will help add to the existing programs in Person A's brain that they can call upon when encountering unhealthy people.

So, your brain-on-therapy makes subtle shifts, disconnections, reconnections, new connections, and so on, leading to greater and greater health. One day you will wake up in the morning and realize your life feels much better.

This is the feeling of your brain after therapy.

## **Part Two**

In Part One, we looked at how therapy can change our brains regarding relationships. Now, let's look at how therapy can change our brain in another way.

Let's imagine our brain is a large (very large) collection of roads, ranging from dirt roads to superhighways (or freeways, depending on where you're from). These roads get built according to what we learn as we go through life. They allow the mind that emanates from our brain to locate information that the brain collects. In childhood, these roads get built and information gets collected at a frantic pace. Then things start to taper off in our late teens and early twenties. After that, our brains continue to collect and connect information, but more slowly.

Along the way, new roads get constructed. Old, unused roads get destroyed. Some small roads become larger. Some large roads become smaller. Highways acquire entrances and exits. All this happens in the service of more effective access to collected information.

Now, imagine a child whose brain is building roads like crazy connecting all the various things he (for sake of pronoun ease) learns. Some of what he learns comes from his father, say, in the form of insults, criticism, and outright neglect. The more the boy learns these negative “facts,” as the boy’s brain comes to treat them, the more roads his brain builds heading toward them and the larger those roads become. In the parlance of brain science, “the brain cells that fire together, wire together,” meaning the more a road gets used, the more substantial it becomes.

Sooner or later, the boy grows up to become a (chronological) adult. For better or worse, this man carries with him into adulthood all the facts his brain collected and all the roads his brain built between those facts while he was growing up.

Can you see where this story is headed?

Let’s say that within our hero’s brain lies a pile of information with the basic message, “I am worthless.” This information has formed into a “fact” as far as his brain knows. Along with the pile, there is a superhighway, with lots (billions?) of entrances, heading right into “Worthless Town.” Our hero’s sense of worthlessness gets “triggered” or “activated” constantly, as a result. You get the picture?

If our hero enters into therapy, the therapist helps our hero become aware of his “fact” of worthlessness and helps him change the roadway system. This might involve building exits off the highway. Some of the highway entrances (e.g., negative self-talk) might get identified and demolished. Maybe our hero will spend more time visiting Worthless Town and either start to feel more accepting of life there or develop the ability to leave whenever he wants to. This all happens due to the plasticity of our hero’s brain, its ability to change, re-wire itself, create and undo connections within it.

At some point, our hero either spends less time in Worthless Town, feels OK with being there, or never gets there in the first place. This feels wonderful to our intrepid hero and he gets to experience his brain after therapy.