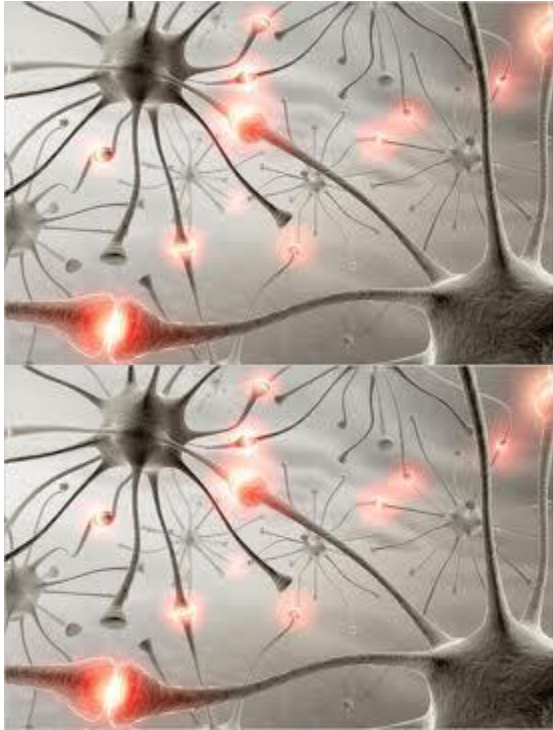


The Neuroscience of Changing Toxic Thinking Patterns (1 of 2)

By [Athena Staik, Ph.D.](#)



Your brain is wired to produce change, a constant in the brain, as it is in life.

Change involves learning, and all learning generates change in the brain. When you seek to replace a behavior, such as a toxic thinking pattern, your actions produce neurochemical and molecular changes in cells known as neurons.

As messengers, neurons communicate by transmitting electrical signals between them, and these signals are activated by the exchange of chemicals in the synapses.

Your brain and body is a sophisticated communication network. Your subconscious mind, the mind of your body, manages all of the systemic processes that you do not have to think about – as well as all of your personal requests, wants or commands – both conscious and subconscious.

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

This vast and complex network manages the flow of information that, quite literally, shapes your behaviors and in many ways your life. These electrical impulses, you may say, consist of molecules of emotion that are designed to “control” the overall direction of your life, arguably, to produce optimal outcomes in the highest interest of your health and wellbeing.

Who or what controls this flow of information is a fascinating question to explore, do you think? In this post and the next, we’ll explore a few possibilities ... conscious and subconscious.

What sparks these electrical-chemical processes?

Here’s some “truth with a capital T”: Thoughts spark emotion-driven action.

Your thoughts create inner standards or rules that spark neurochemical dynamic processes, which selectively govern your choices and actions with precision.

It takes a thought to spark an emotion, or drive a decision to take an action or to take no action at all. And emotions give meaning to thoughts; they are the spark. In the words of neuroscientist Antonio Damasio, are “a telltale sign of consciousness.”

Toxic thinking is self-perpetuating. It not only stimulates the body’s reward or learning centers with pseudo feel-good feelings, it also activates the body’s fear response, which further increases the likelihood that the defensive behaviors it triggers will be repeated.

Unless you set an intention to make conscious changes, more often, change that occurs at subconscious levels tends to be self-perpetuating.

In other words, if you do not have the life and relationships that you want, you likely do not have the thinking patterns you need to create the optimal emotional states, and thus actions, that would sustain your momentum in the overall direction of your aspirations.

What informs these changes?

Two types of information inform these changes: *hard-wired* and *soft-wired*.

- **Hard-wired information.**

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

This information tells your subconscious *how your mind and body work*. Hard-wired information is nonverbal. As the body's operating system, your subconscious came equipped with the knowledge and know-how to operate the billions of cells of your body. For obvious reasons, it does not depend on language to instruct it.

Not unlike your computer's operating system, for example, that knows whether it's operating a Mac versus a PC, the subconscious knows you are a human being, and that it must operate certain processes outside of your awareness, for example, your respiratory or cardiovascular systems, or its directives to ensure you survive and thrive.

As magnificent as the conscious mind is, it has nowhere near the capacity to perform these functions. In truth, it would probably take you all day just to type one word on the keyboard *if you had to consciously direct* all the mind and body processes that make this possible (that is, *if you could figure it out*)!

The hard-wired directives for you to both survive and thrive are particularly noteworthy. Together, they form the *motivational drives* that, conceivably, shape your every behavior. The brain is always in one of two modes; it is either in "protective mode" (to survive) or in "learning mode" (to thrive). For the purpose of survival, for example, the subconscious knows you need food, water and oxygen, etc., to survive; thus, it breathes you, and makes you thirsty or hungry so that you can attend to the needs and care of your body.

It also knows your physical survival is connected in intricate ways to your emotional survival. For example:

- It knows that as a small child you could not have survived physically without a series of felt sensations of safety in the form of emotions of love and human touch; thus, you did some heroic things as a child (subconsciously) to protect yourself and ensure you get the love you needed to survive. (See blog post on early survival-love map.)
- It knows that, even as an adult, perhaps more than physical sustenance, you continue to *need* (not merely want) meaningful emotional, intellectual and artistic (spiritual?) stimulation.
- Thus, it prompts you to continually take care of your needs for positive physical and emotional nourishment, knowing the happier you are, the healthier you are, physically, mentally, the more likely you are to survive.

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

It's safe to say that, for the purpose of thriving, the mind of your body — your subconscious — knows that you are a relationship being, that you are wired with caring circuitry to empathically connect, and that you are, at heart, wired to be a meaning-making being on a relentless quest to find purpose in contributing to life around you with your unique attributes, gifts, talents, etc.

More specifically:

- It knows you are wired to (consciously, at will) activate optimal emotional states, such as happiness, and that your physical health depends on *learning how to create healthy emotional states*, and *to do so regardless the circumstances*.
- It knows your brain can spark optimal states in other brains around you — or spark fear-based states (!) — thanks to the mirror neurons in our brain that are continuously at work.
- It knows that the happier you are, the healthier you are, and the more likely you are to energize optimal states in yourself and others, and form healthy *meaningful* connections.

Thus, whether you understand its messages or not, your subconscious continually communicates with you through emotion-based action-signals *to let you know where you are in relation to where you want to be*. It prompts you, at various times throughout your life, to meaningfully relate, contribute, self-actualize, etc., to keep stretching your capacity to wholeheartedly give — and receive — and learn do so primarily *out of love and joy* (not fear and dread!).

And, some of its most useful action signals (brace yourself, you're probably not going to like this...) are: in the form of painful emotions.

Conceivably, that's because, more often than not, human beings only change these early survival-love maps when the pain of not changing gets greater than the pain of changing. (It doesn't *have to be* this way, however!)

Upsetting emotions are fears in the form of disappointment, unmet expectations, hurt, etc., all of which provide essential albeit painful feedback. They are also action signals. They let you know, for example, that you are wired with high standards and want *to do and to feel* better (and that you are trying to figure out *how!*). Similarly, feelings of sadness, loneliness, detachment, etc., put you in touch with your strivings to meaningfully connect and contribute, hoping you take some action to make this happen.

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

Painful emotions, you may say, are reminders that, even though you're never going to achieve perfection (we've all tried, right?), nevertheless, you are wired to continue striving to learn how to live an optimally fulfilling, meaningful life.

(Upsetting emotions also may be telling you that you've picked up some toxic thinking along the way, and that this will *not* take you where your heart yearns to go. More on this in the next section.)

- **Soft-wired information.**

This information tells your subconscious *how you personally interpret* your world at any given time – in relation to fulfilling your inner strivings to both survive and thrive. Soft-wired information is both verbal and nonverbal.

It consists of language-based thoughts, words, belief systems, etc., that are inseparable from the nonverbal emotions and feeling sensations they spark.

To interpret the world is to extract meaning. Emotions give meaning to life. Without them, your brain cannot think.

When you experience certain emotions and physical sensations at any given time, it means your subconscious mind (body) is letting you know how you currently *interpret* (think about), and thus, *feel* about one or all of the following:

- The data your five senses are picking up from life around you: visual (sight), auditory (hearing), tactile (touch), olfactory (smell) and gustatory (taste).
- The thoughts you are thinking in the moment, your “self-talk” – which may be focused on past, present or current experience, or a combination of these.
- The current beliefs or belief systems your subconscious mind holds up as perception filters to interpret any incoming data, as well as what is going on inside you, i.e., thoughts, feelings, physical sensations, wants, inborn strivings, etc.

The point is that these cells, under the management of the subconscious mind, are hard-wired to act like an inner genie of sorts. To the best of its ability, in response to your thoughts, beliefs and values, your subconscious says, “Your wish is my command!”

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

The cells of your body's "mind" are constantly eavesdropping on the conversations, or "self-talk," you have with yourself inside. This is a 24/7 mission.

Your subconscious is wired to dutifully follow your commands. Your self-talk comprises thoughts and beliefs that form the perception filters that your subconscious mind totally depends on to interpret the events you experience in and around you.

Most of your perceptions are soft-wired, that is, they're not hard-wired directives in your nature. They were learned and therefore can be unlearned, changed or replaced.

So, who's in control, conscious or subconscious you?

Your subconscious wears many hats. It has served and serves you as a protector, teacher and guide, as well as a manager, a loyal fan and even a dedicated genie.

Ultimately, however, your subconscious mind knows that it is in your highest interest to *take the helm as captain* of the ship called your life.

- It's not wired to act primarily as an alarm (what a waste!) that keeps coming to your rescue, to save and protect you.
- Like an overprotective parent, this blocks you from growing your capacity to handle your fears without activating your body's fear response.

So who's in control?

In protective mode, unquestionably, your subconscious mind is. Whenever your subconscious thinks you cannot handle your fears, it automatically activates the body's sympathetic nervous system.

How does it "know" you "cannot handle" your fears? Your thoughts and beliefs are saying so!

Toxic thinking causes unhealthy levels of anxiety. Based on anxious thoughts (which are mostly a misinterpretation of what poses a threat or danger to you), the survival response performs a coup d'état of the body, literally, usurping the energies of all its systems, such as digestion, learning, memory, etc. This also virtually cuts off communication with higher thinking parts of the brain, by switching "learning mode" off and "protective mode" on.

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

When are you in control? You are in control to the extent that you know how keep your brain in “learning mode” *in moments when you get triggered*. This means knowing how to consciously use language to calm your mind and body, which allows your logic and emotions to work cooperatively, rather than in opposition to one another.

How do toxic beliefs block this?

Toxic beliefs, in one way or another, cause you to hate, run away from or demean the part of you (or others) that feels emotions of vulnerability. This produces reactive behaviors designed to avoid, numb or eliminate painful emotions.

Naturally, this won't work.

You are wired to struggle with your fears and vulnerabilities. It's how you grow your courage, which you need in order to stretch to love yourself and life, and others, with your whole heart.

Accepting the role of captain of your life thus necessitates conscious work to produce conscious change. It means identifying toxic thinking patterns as they surface and replacing them with life enriching ones.

Deep breathing, meditation, yoga, and learning to process your feelings and thoughts in present moments, are all methods proven scientifically to help you heal and transform your fears into assets. Modifications in how you think or act have the power to rework your brain and body's communication system.

Here are several areas to practice conscious change:

1. Develop your connection to your body.

Emotions and felt sensations – are intimate messages from your body to you. You are wired to be in intimate connection to your body, in close communication with each other. Your inner life is your school, a connection that teaches you about life around you. Practice feeling your feelings with presence, calm and full acceptance; get to know the location of your feelings in your body; observe the shifts of energy inside. If you do not already, regularly dance, sing, move, stretch, exercise, and do this with joy and nonjudgment. Your body is a masterpiece, and so are you.

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

The meeting point of your conscious mind and emotions is a genius connection, a very special opening to inner wisdom. It is here that your physical and emotional attributes come together to make you and your life a unique contribution to the beautiful tapestry of life.

2. Cultivate healthy relationships with yourself and life.

Change may be a constant in life, yet so are relationships. Your brain is a relationship organ; you are a relationship being. Life is also all about relationships, not only with other persons, but also with what nourishes you, the foods you eat, the liquids you take in or the money that flows in and out of your life. Even your belongings, your car, house, clothes, etc. It nearly always comes down to how you relate, and the quality of caring or not caring expressed in your responses.

Communication plays a special role in all your relationships; it is the life tool with which you create (or tear down) your relationships. The purpose of all communications, in a sense, is to enhance and enrich your knowledge, empathic connection and understanding of yourself and others so that you may cultivate healthier, more vibrant relationships. Arguably, the most vital relationship, as an adult, is the one you have with yourself, and all parts of yourself, your mind, body, emotions, and so on.

3. Grow awareness of your thoughts and the words you use.

Since words spark emotional states, it helps to grow your capacity to consciously calm your mind and body with your words and thoughts. This directly supports your mind and body to work together cooperatively. Identify any toxic thinking patterns or limiting beliefs you hold, and consciously observe the impact of different words on your own and others' emotional states. Become aware of your triggers, and how certain words or thoughts activate your body's fear-response.

Inspire yourself to change toxic patterns by reminding yourself that they produce several unhealthy physical, mental and emotional conditions, for example, they: rob you of your power to manage the energies of your body; activate old subconscious programmed behaviors and emotional states; and they block the formation of emotional intimacy in your relationships with self and other.

4. Befriend your subconscious mind.

To make changes, you need your subconscious mind on your side. It is in charge of the formation and breaking of habits. Your behaviors—especially unwanted ones—are shaped by what is going on deep inside of you, more specifically, by processes managed by the subconscious mind. Literally, your beliefs trick the subconscious into thinking you need certain defensive strategies, i.e., a reactive set of thoughts, feelings, actions, etc., to help you “deal” with what upsets or triggers you. The mind

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

of your body has learned to rely on these quick-fix habituated solutions to reduce your anxiety at a given moment.

The subconscious is responsible for ensuring your survival, thus, if you have any limiting fears or beliefs operating subconsciously, either because you are unaware of them or purposefully avoid them, it will likely stand in the way. It is the storehouse for your attitudes, values and beliefs as well as your habits, fears, and past experiences. Without “befriending” this part of your mind, attempts to make changes in our behaviors can be frustrating at best.

It’s up to *conscious* you.

How you think and relate to events and life around you spark molecular changes in your brain. They are your own unique responses to the events or persons in your life.

In most situations, you can choose how sad or happy you are to be. You can consciously choose your responses to events, and in this way, wire new associations in your brain. It’s not easy, and yes in many cases, the support of a professional may be necessary.

By practicing methods of *conscious* relating to yourself, your breath, your mind, your emotions, your body, your thoughts, you can alter the way your brain cells communicate.

Why not let your brain work for you with optimal efficiency by discovering the power of making conscious changes and living an overall conscious life?

RESOURCES:

Begley, Sharon (2007). *Train Your Mind Change Your Brain: How a New Science Reveals Our Extraordinary Potential to Transform Ourselves*. NY: Ballantine Books.

Bloom, Paul (2010). *How Pleasure Works: The New Science of Why We Like What We Like*. NY: W. W. Norton.

Damasio, Antonio (2010). *Self Comes to Mind: Constructing the Conscious Brain*. NY: Pantheon Books.

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2

http://blogs.psychcentral.com/relationships/2011/08/the-neuroscience-of-changing-toxic-thinking-or-behavior-patterns/#at_pco=tst-1.0&at_si=5538f51ed7084413&at_ab=per-2&at_pos=0&at_tot=2