



Hope, Healing and Transformation

## **Happily EVEN After**

Using the Principles of Positive Psychology and Post Traumatic Growth research to help heal broken hearts.

Maureen Tarquini  
Maureen@maureentarquini.com  
April 2016

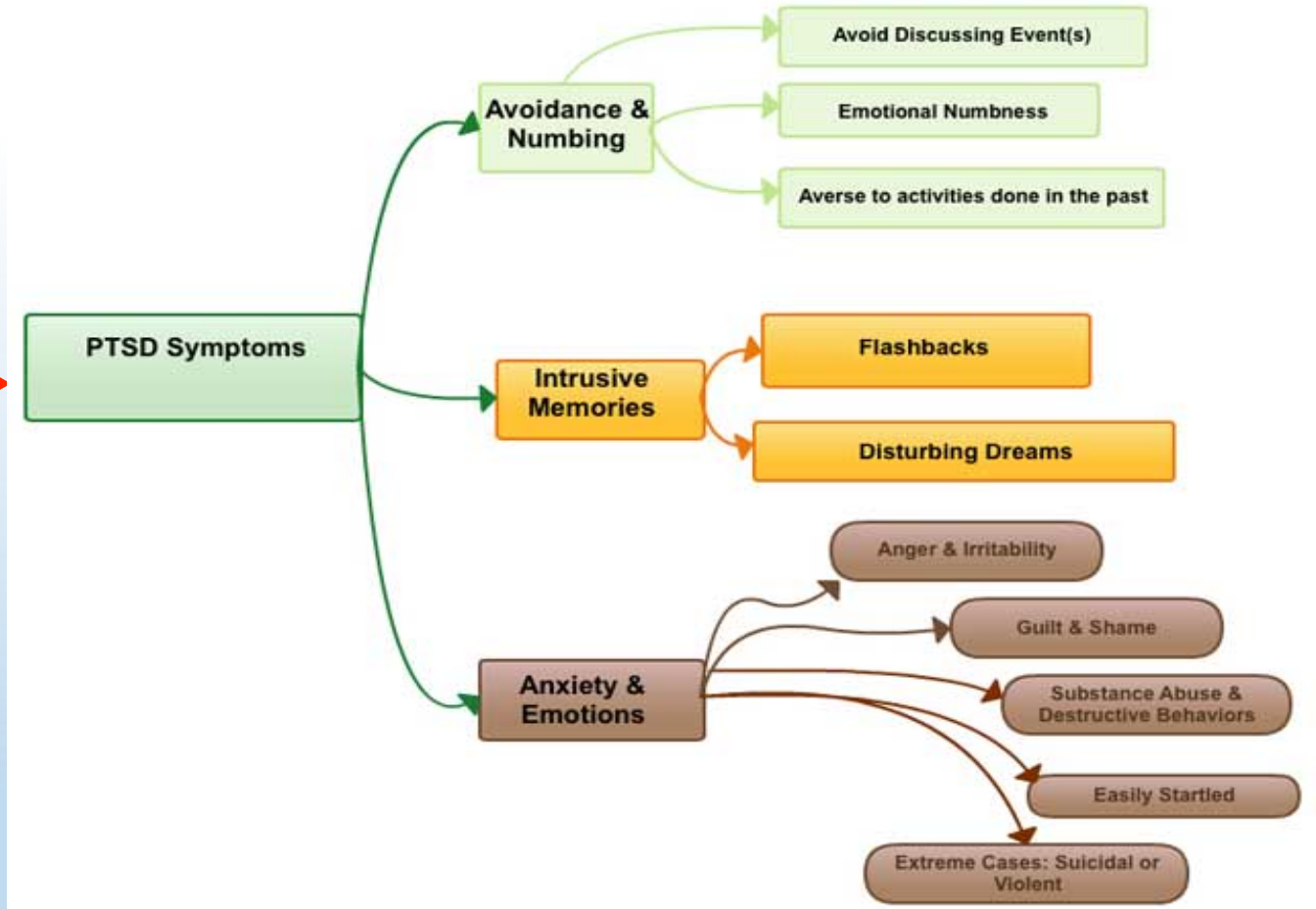
## *WHY Happily EVEN After....*

- Divorce is COMMON – 50% of all marriages end in Divorce.
- Divorce is rated the second most stressful life event and people often struggle to heal and move on
- The principles of Positive Psychology can help!

# Divorce is the one of the most stressful life events that people face

## Holmes and Rahe stress scale

Life event	Life change units
Death of a spouse	100
<b>Divorce</b>	<b>73</b>
Marital separation	65
Imprisonment	63
Death of a close family member	63
Personal injury or illness	53
Marriage	50
Dismissal from work	47

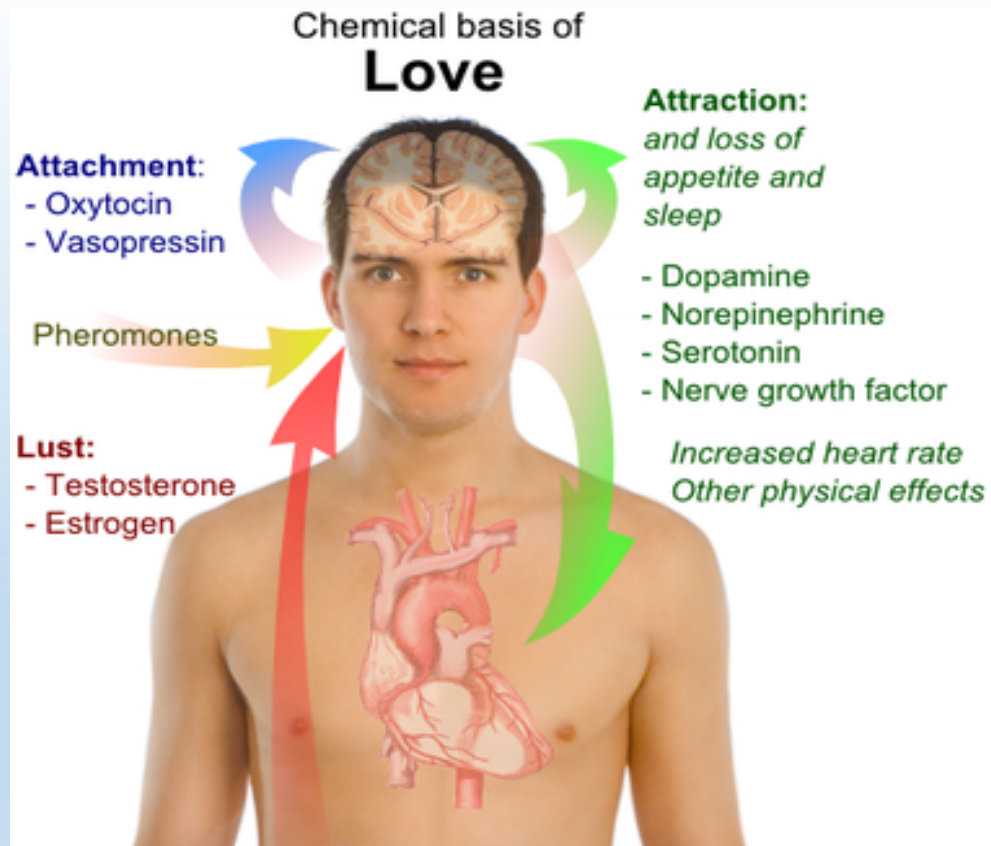


**Goal:** To discover new resources and approaches to *foster resilience and inner strength* and transform adversity into opportunities



# Your Brain in LOVE: A chemical volcano

**Oxytocin, the cuddle hormone**, is involved in the processes of human bonding specifically in the establishment and formation of human chemical bonds. Oxytocin floods your body with feelings of contentment and trust. This natural "love drug," produced by the hypothalamus, is responsible for human bonding in both platonic and intimate relationships **Decreases Stress**



**Dopamine**, is the "desire molecule" or neurotransmitter levels increase as passion levels increase; elevated levels are associated with romantic love. Is responsible for the pursuit of any pleasure **-without it, a person will feel no joy, anticipation, enthusiasm, excitement, or exuberance. It is the common denominator of most addictions.**

When two people fall in love the body will release a plethora of **endorphins**, the body's natural morphine (a heroine like substance), and that this accounts for the pleasurable feelings of being in love;



\* And many many other neurotransmitters/brain chemicals are impacted: Norepinephrine, Serotonin, DHEA, PEA, Testosterone, Vasopressin, etc

# *The Impact of Heartbreak - withdrawal*

Just as love at its best is explained by MRI scans, so, too, is love at its worst. In 2010 the team who first used MRI scanning to connect love and the caudate nucleus set out to observe the brain when anger and hurt feelings enter the mix. They gathered a group of individuals who were in the first stages of a **breakup**

*As far as the midbrain reward system is concerned, they were still “in love.”* Just because the “reward” is delayed in coming (or, more to the point, not coming at all), that *doesn’t mean the neurons that are expecting “reward” shut down.* Even though cognitively they knew that their relationships were over, part of each participant’s brain was still in motivation mode



*They were still addicted.* As they viewed images of their rejecters, regions of the brain were activated that typically fire in individuals craving and addicted to drugs. Again, ***no different from someone addicted to—and attempting a withdrawal from—nicotine or cocaine.***

# The Impacts of Heartbreak

## Physical Pain

MRI studies confirm that the brain experiences rejection as physical pain

### Social rejection shares somatosensory representations with physical pain

Ethan Kross<sup>a,1</sup>, Marc G. Berman<sup>a</sup>, Walter Mischel<sup>b</sup>, Edward E. Smith<sup>b,c,1</sup>, and Tor D. Wager<sup>d</sup>

<sup>a</sup>Department of Psychology, University of Michigan, Ann Arbor, MI 48109; <sup>b</sup>Department of Psychology, Columbia University, New York, NY 10027; <sup>c</sup>New York State Psychiatric Institute, New York, NY 10032; and <sup>d</sup>Department of Psychology, University of Colorado, Boulder, CO 80309-0345

Contributed by Edward E. Smith, February 22, 2011 (sent for review October 05, 2010)

How similar are the experiences of social rejection and physical pain? Extant research suggests that a network of brain regions that support the affective but not the sensory components of physical pain underlie both experiences. Here we demonstrate that when rejection is powerfully elicited—by having people who recently experienced an unwanted break-up view a photograph of their ex-partner as they think about being rejected—areas that support the sensory components of physical pain (secondary somatosensory cortex; dorsal posterior insula) become active. We demonstrate the overlap between social rejection and physical pain in these areas by comparing both conditions in the same individuals using functional MRI. We further demonstrate the specificity of the secondary somatosensory cortex and dorsal posterior insula activity to physical pain by comparing activated locations in our study with a database of over 500 published studies. Activation in these regions was highly diagnostic of physical pain, with positive predictive values up to 88%. These results give new meaning to the idea that rejection “hurts.” They demonstrate that rejection and physical pain are similar not only in that they are both distressing—they share a common somatosensory representation as well.

brain regions that support the somatic representation of physical pain in response to rejection is not surprising.

As plausible as this rationale is, here we suggest an alternative: that the neural overlap between social rejection and physical pain is more extensive than current findings suggest. Specifically, we propose that experiences of social rejection, when elicited powerfully enough, recruit brain regions involved in both the affective and sensory components of physical pain.

This prediction is motivated by research indicating that the brain regions that support the sensory components of physical pain are more likely to become active in response to intensely painful stimuli (4–6, cf 7). This finding is noteworthy because extant fMRI research has induced feelings of rejection that may not be particularly intense. (One exception is ref. 8, which we mention in the *Discussion*.) For example, such studies have excluded participants from a computerized ball-tossing game called “Cyberball” (e.g., refs. 9–11), exposed them to rejection-themed paintings (12), or provided them with anonymous feedback that a stranger does not like them (13). Although these manipulations elicit distress, few would attribute to them the same level of intensity as the pain surrounding an unwanted romantic relationship breakup (14–16). Thus, it is possible that social rejection activates brain regions specific for somatic processes, but only

emotion | social pain | affective neuroscience | neuroimaging | psychological distress

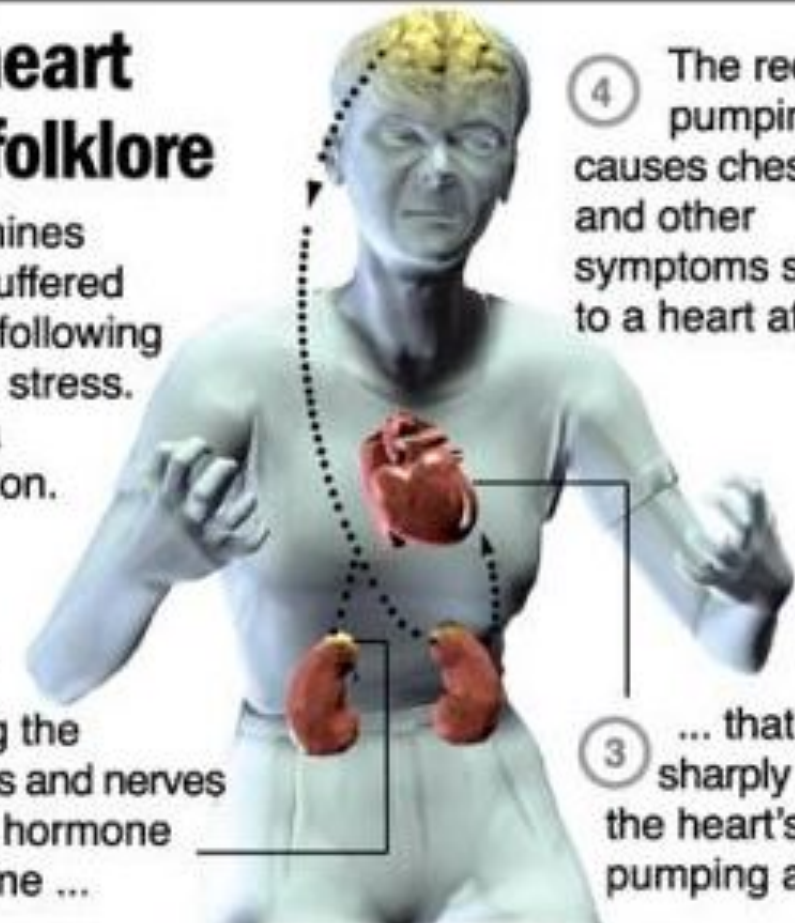
# The Impacts of Heartbreak

## Physical Pain

**Takotsubo cardiomyopathy** is informally known as 'broken heart syndrome' because it often occurs due to an emotional or physical shock.

**A broken heart is not just folklore**

A new study examines 19 patients who suffered cardiac problems following sudden emotional stress. The study offers a possible explanation.



- ① Grief or fear is experienced ...
- ② ... stimulating the adrenal glands and nerves to produce stress hormone including adrenaline ...
- ③ ... that can sharply lower the heart's pumping ability
- ④ The reduced pumping causes chest pain and other symptoms similar to a heart attack

SOURCE: New England Journal of Medicine AP



# Some of the unhealthy ways we respond to breakups

Bury your feelings and get *busy* - or find a new love interest immediately.

BUT You need to FEEL and process the pain



It's *normal* to visit "CRAZY TOWN"



# Other unhealthy ways to respond to breakups

## Ruminate (Nurse, Curse, AND Rehearse)

*Reliving the experience and telling the same story over and over and over again*



Neurons that fire together wire together



It's *normal* to visit "CRAZY TOWN"  
But you don't want to build a house there!

*How do we heal??*

**Borrowing from the Principles of Positive Psychology and Post-Traumatic Growth**



# New Thinking: Post Traumatic Growth

- Richard Tedeschi and Lawrence Calhoun, (researchers at the University of North Carolina at Charlotte) coined the term **Post-Traumatic Growth** based on their intensive work with trauma survivors. Again and again, people shared a perplexing insight: While they were not happy about what had happened to them, they felt they had learned valuable lessons from the experience and these lessons eventually changed their lives for the better.
- The term **PTG** gave experts the language to express, and recognize, something that was hiding in plain sight: **trauma's potential to transform us in positive ways.**
- “Mental health professionals have a long history of looking only at what’s wrong with human functioning,” says psychologist Anna A. Berardi, Ph.D., who directs the Trauma Response Institute at George Fox University in Portland, OR. “But if you ask people, “Have you been through something difficult and come out the other side stronger, wiser and more compassionate?” the majority of us would answer yes. That’s powerful proof that as humans we’re wired to grow as a result of hardship.”

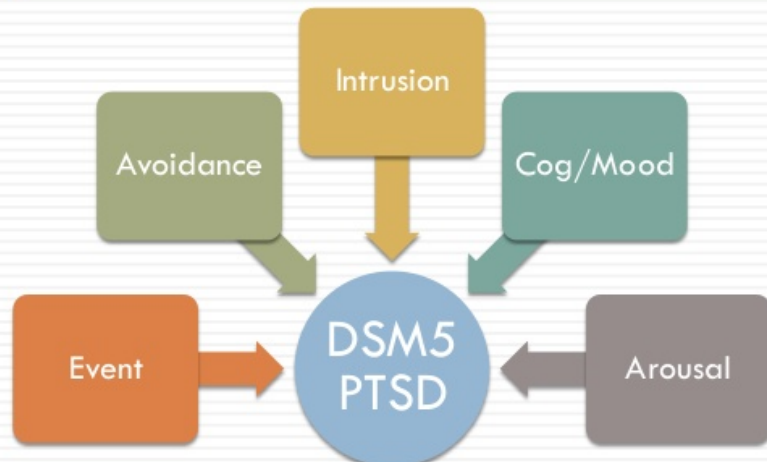
## IN FACT, Experiencing growth after trauma is far more common than PTSD:

- According to statistics from the Department of Veteran Affairs, more than 50 percent of Americans will report at least one traumatic event during the course of a given year. However, only a fraction (estimated 3.6 percent) will experience PTSD.
- As many as **ninety percent** of survivors report at least *one* aspect of post traumatic growth, such as a **renewed appreciation for life** or a **deeper connection to their heart's purpose**.

Trauma is not in the event.

It is in the reaction to the event.

Post-Traumatic Stress



*“A small percentage of people cannot return to their previous level of functioning after a traumatic event, but most people emerge from a trauma wiser, with a deeper appreciation of life.”*

- psychologist Anna A. Berardi, Ph.D., Trauma Response Institute at George Fox University

# The fundamental question is not whether we encounter suffering —because we all do.

*“It is how we work with suffering so that it leads to awakening the heart and going beyond the habitual views and actions that perpetuate suffering, **How do we actually use suffering so that it transforms our being** and that of those with who we come in contact? How can we stop running from pain and reacting against it in ways that destroy us as well as others?”*

- **Buddhist teacher Pema Chodron**

*“Between stimulus and response there is a space. In that space is our power to choose our response. **In our response lies our growth and our freedom.**”*

*“When we are no longer able to change a situation - we are challenged to change ourselves.”*

- **Viktor Frankl, Man’s Search For Meaning**

# The Superhero Within Us

The wisdom contained in this idea is ancient: The writings of the ancients have promised the possibility of finding blessings in bad breaks. The American scholar **Joseph Campbell** identified the **Hero's Journey** as a pattern of narrative that describes the typical adventure of the archetype known as The Hero, the person who goes out and achieves great deeds on behalf of the group, tribe, or civilization. In *all of these stories, a common theme is the necessity of overcoming hardships* in order for them to become the savior to heal themselves and their people: Moses had to ascend the mountain, Jesus sacrificed himself, the Buddha left his palace. It's the basis of our superheroes:

- **Batman's** caped crusade against crime was inspired from the witnessing of his parents' murder.
- **Spiderman** ignores the chance to stop a fleeing thief, and his indifference ironically catches up with him when the same criminal later robs and kills his Uncle Ben.





# The Real life Superheroes Amongst Us

- When Christopher Reeve, the actor who played Superman, was left a quadriplegic by an equestrian accident, he briefly considered suicide. Instead, with Superman-like resolve, he became a powerful advocate for people with spinal-cord injuries. The Christopher & Dana Reeve Foundation, which outlived him and his wife, has awarded more than **\$81 million to researchers working on a cure for paralysis.**
- Mothers against Drunk Driving (MADD) was founded in 1980 by **Candy Lightner** after her 13 year old daughter was killed by a hit and run driver who was a repeat DWI offender. Statistics from MADD show that **drunk driving has been cut in half since their founding**
- In a 2005 Stanford University commencement address, **Steven Jobs** described getting fired in a public and humiliating way from the company that he had helped found: ***“I didn’t see it then, but it turned out that getting fired from Apple was the best thing that could ever have happened to me. The heaviness of being successful was replaced by the lightness of being a beginner again, less sure about everything, it freed me to enter one of the most creative periods of my life.”***



# Five Main Areas of Post Traumatic Growth\*

- 1. Sense of personal strength**
- 2. Deeper relationships with others**
- 3. New perspectives on life and a recognition of new possibilities**
- 4. Greater appreciation of life and a changed sense of priorities**
- 5. Increased spirituality**

\* Richard Tedeschi and Lawrence Calhoun

# Using the Principles of Positive Psychology/ Post-Traumatic Growth to Heal after a Divorce

1. Provide Community/Support
2. Self-Care – nutrition, exercise, rest
3. Mindfulness Practice
4. Acceptance/Letting Go/Forgiveness
5. Shifting Perspective – Gratitude, Benefit finding, Meaning and Purpose
6. Alchemy/Transformation - exercises to provide future focus.



*The past is past  
This moment is the only one you  
can control*



*The future is up to you*

**When life is sweet, say thank  
you and celebrate. When life is  
bitter, say thank you and grow.**

*Shauna Niequist*



HEART-CENTERED  
LEARNING

# Post Traumatic Growth



**kintsukuroi**

**(n.) (v.phr.) “to repair with gold”; the art of repairing pottery with gold or silver lacquer and understanding that the piece is more beautiful for having been broken.**

# Resources:

## Books:

- Ben-Shahar, T. D. [\*Being Happy: You Don't Have to Be Perfect to Lead a Richer, Happier Life\*](#). New York: McGraw-Hill, 2010. Print. Preface, Introduction, Chapters 2–4.
- Ben-Shahar, T. D. [\*Happier: Learn the Secrets to Daily Joy and Lasting Fulfillment\*](#)." New York: McGraw-Hill, 2007.
- Kabat-Zinn, J. [\*Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness\*](#)." New York: Dell Pub. Group, 1991. Print. Introduction, Chapters 1–16.
- Calhoun, L. G., & Tedeschi, R. G. (2013) [\*Posttraumatic growth in clinical practice\*](#). New York: Brunner Routledge.
- Viktor E. Frankl. [\*Man's Search for Meaning\*](#). Boston, MA: Beacon Press, 1959.
- Pema Chodron. [\*When Things Fall Apart\*](#). Shambhala Publications, 2002.
- Linda Graham. [\*Bouncing Back. Rewiring Your Brain for Maximum Resilience and Well-Being\*](#). New World Library, 2013.
- Bruce Fisher, Robert Alberti. [\*Rebuilding: When Your Relationship Ends\*](#), New York: Impact Publishers, 2005.
- Katherine Woodward Thomas. [\*Conscious Uncoupling, 5 Steps to Living Happily Even After\*](#), 2015,

## Websites:

- <https://ptgi.uncc.edu/> - Post-Traumatic Growth Research Group, *Department of Psychology, UNC-Charlotte*
- [http://greatergood.berkeley.edu/article/item/this\\_is\\_your\\_brain\\_on\\_heartbreak](http://greatergood.berkeley.edu/article/item/this_is_your_brain_on_heartbreak)