

Adapting to Stress and Trauma: Lessons from the Resilient

Steven Southwick

Yale University School of Medicine
VA Connecticut Healthcare System
National Center for PTSD

Disclosures

- Two books published by Cambridge University Press
- Resilience: The Science of Mastering Life's Greatest Challenges; Cambridge University Press, 2012
- Resilience and Mental Health: Challenges Across the Lifespan; Cambridge University Press, 2011



Work Stress



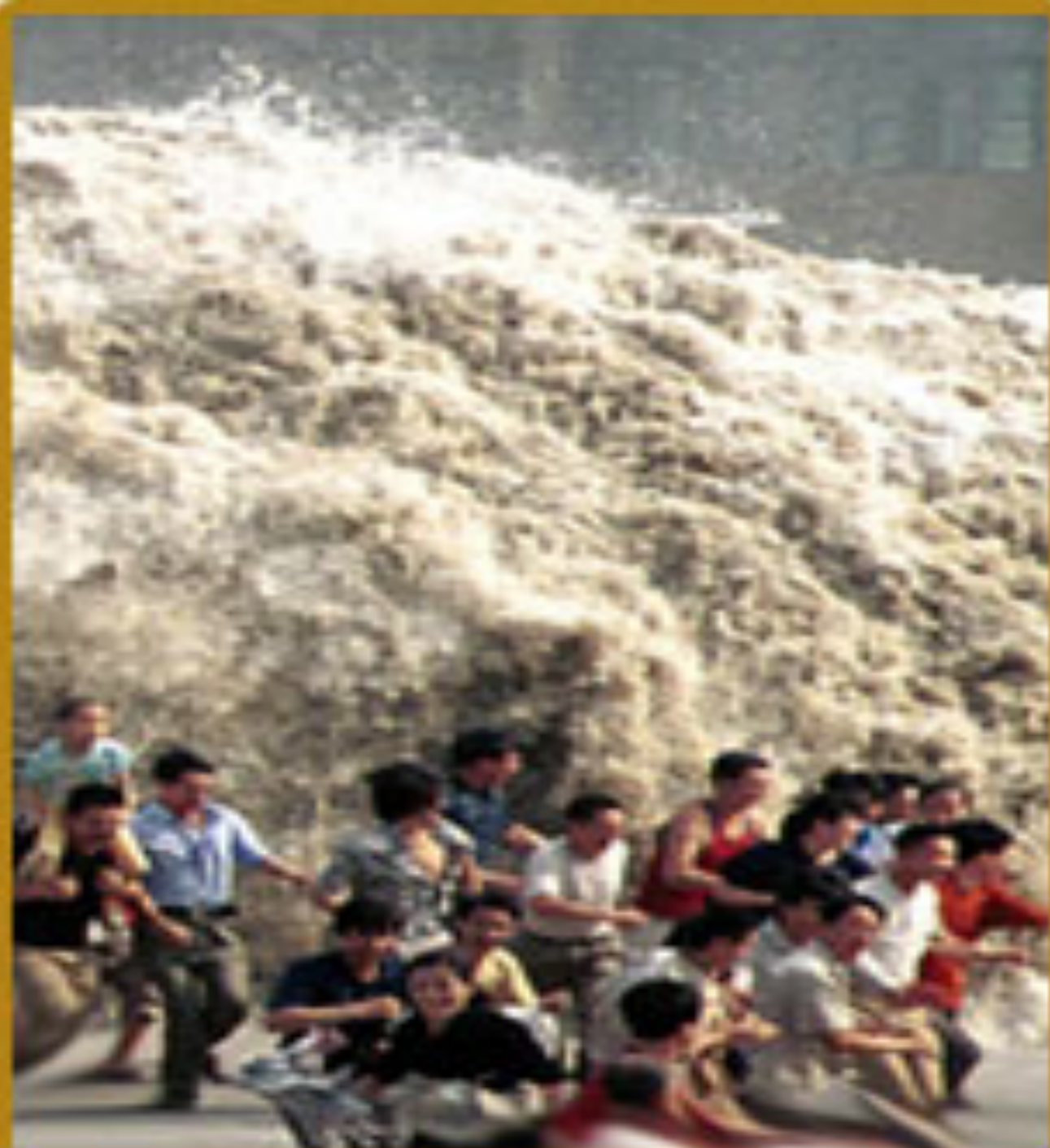


Global Warming



Natural Disasters





Stress-War



David Leeson - Dallas Morning News / Reuters

Terrorism









Consequences of Stress

When stress is **uncontrollable** and overwhelming it can be destructive and cause or exacerbate:

1. Burnout
2. Posttraumatic Stress Disorder
3. Depression/ Anxiety
4. Physical disorders (e.g. cardiac, GI)

Definition of Resilience

- Resilience is the ability to **bend** but not break, to bounce back and sometimes even to grow when faced with adversity.
- APA: “The process of **adapting well** in the face of adversity, trauma, tragedy, threats or even significant sources of stress.”

Multidimensional Nature of Resilience

- Resilience is multidimensional
- May be competent during stress and adversity in one domain but not others
 - Academic
 - Social
 - Emotional
 - Interpersonal
 - Physical

Interaction with Environment

The individual's response to stress and trauma takes place in the context of other human beings, available resources, specific cultures and religions, organizations, communities and societies (each of which may be more or less resilient in their own right and more or less capable of supporting the individual).

Importance of Resilience

“More than education, more than experience, more than training, a person’s resilience will determine who succeeds and who fails. That’s true in the cancer ward, its true in the Olympics, its true in the boardroom.”

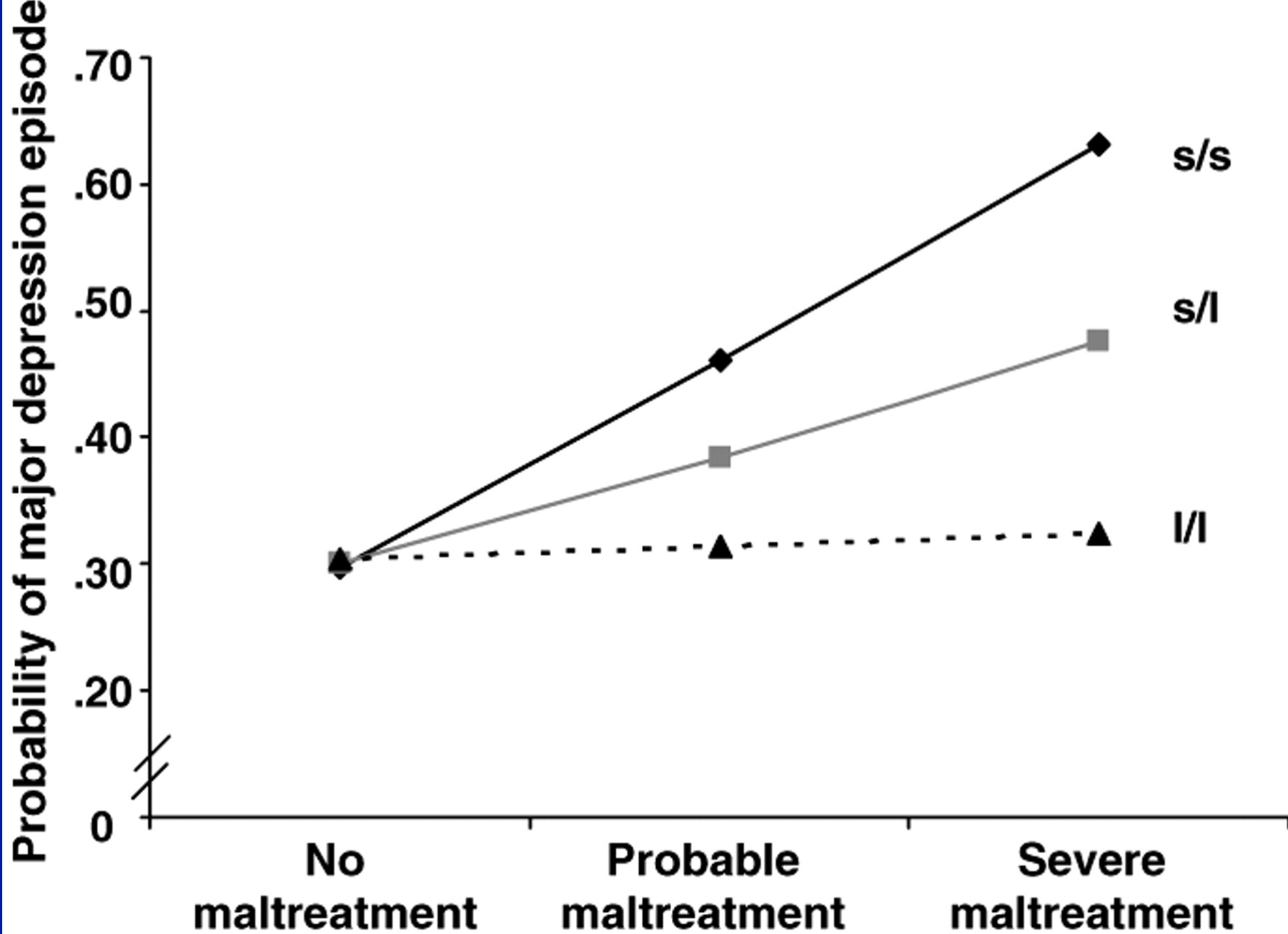
Diane Coutu: Harvard Business Review 2002

Paradigm Shift

- Primary focus in psychology and medicine: understanding, diagnosing and treating illness, pain and psychological distress.
- Shift toward promoting health and wellness:
 - learning how to build strengths
 - bounce back from adversity
 - flourish even in the face of challenge
 - live a life of meaning and purpose

Factors That Influence Resilience

- **Genetic** (e.g. serotonin transporter gene)
- **Developmental** (e.g. stress inoculation vs stress sensitization)
- **Neurobiological** (e.g. regulation of stress hormone responsiveness, neurocircuitry, conditionability)
- **Psychosocial** (e.g. social support)



Developmental Factors:

- **Sensitization:** Early unmanageable stress (e.g. child abuse, war) may lead to “learned helplessness” and exaggerated emotional, behavioral and nervous system responses to future stress.
- **Inoculation:** Exposure to early mild to moderate stress (manageable) can have a “steeling” or stress inoculating effect and lead to more adaptive responses to future stressors.

Examples of Neurobiological Resilience

- Adaptive modulation of the sympathetic nervous system (fight-flight system) under conditions of stress (NPY)

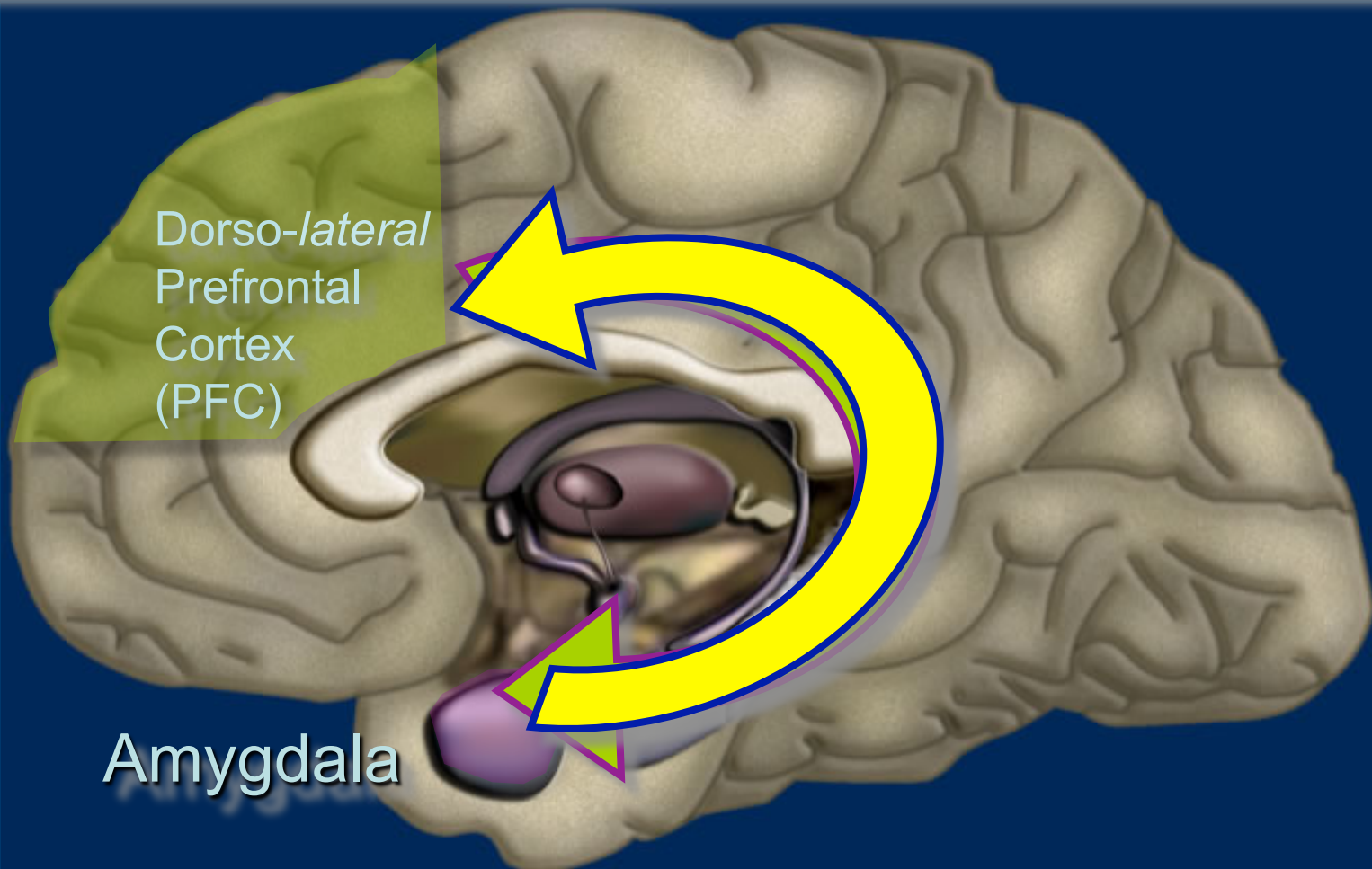
Resilience: Neurobiology

- Ability of the Prefrontal Cortex to Inhibit the Amygdala

Mastery vs. Failure (Yun et al. Brain Imaging Behav 2010)

Mastery: Prefrontal Cortex “Control Center” suppresses activation of amygdala “Emotion Center”

Failure: Amygdala “Emotion Center” suppresses PFC Control Center and IMPAIRS SUBSEQUENT PFC activation (I.e., Helplessness)



Strengthening PFC Modulation of Amygdala

- Psychoeducation
- Cognitive Behavioral Psychotherapy
- Cognitive Reappraisal
- Mindfulness

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Resilience

1. Learn to face fears
2. Cultivate positive emotions/
humor
3. Actively cope with stress
4. Solidify moral compass
5. Practice religion/ spirituality

Resilience

6. Seek/ attract social support
7. Cognitive flexibility: reappraisal, acceptance
8. Train: body and mind: exercise, nutrition, mindfulness, recovery
9. Find and imitate resilient role models
10. Extract purpose/ meaning from work and life

Regulating Emotions: Facing Fear