

# On Love and Death

**Rodney Sharkey**



كلية طب وايل كورنيل في قطر  
Weill Cornell Medical College in Qatar

## DISCLOSURE STATEMENT

**I , Rodney Sharkey,**

- Have no relevant financial relationships to disclose
- Will not be discussing off-label or investigational use of products

I do have a conflict of  
interests

The most elementary definition of ideology is probably the well-known phrase from Marx's *Capital*: “Sie wissen das nicht, aber sie tun es”

“They do not know it, but they are doing it.”



I know but I don't want to know that I know, so I don't know.

Žižek, *Violence*, 46.

The bourgeoisie cannot exist without constantly revolutionizing the instruments of production ... and with them the whole relations of society... All fixed, fast frozen relations, with their train of ancient and venerable prejudices and opinions are swept away ... All that is solid melts into air.

Marx, *The Communist Manifesto*, 1888.

SAINT

VALENTIN







Just had to send  
a special friend  
a wish for love  
and laughter





#501

LEVI'S 501® BUTTON FLY JEAN

Levi's®









Instagram



madonna

4m

If you set out to be liked, you would be prepared to compromise on anything at any time, and you would achieve nothing.



1963 likes

madonna Thank you Margaret Thatcher!  
#unapologetic ❤️ #rebelheart

# MANCHESTER UNITED



"MANCHESTER ♦ MANCHESTER UNITED  
A BUNCH OF BOUNCING BUSBY BABES,  
THEY DESERVE TO BE KNIGHTED ♦ IF  
EVER THEY'RE PLAYING IN YOUR TOWN  
♦ YOU MUST GET TO THAT FOOTBALL  
GROUND ♦ TAKE A LESSON COME TO  
SEE FOOTBALL TAUGHT BY MATT BUSBY"



THEY PLAY ON IN OUR MEMORIES AIG





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**Phil Jones** ✓  
@PhilJones4



Never forget [#flowersofmanchester](#) [#BusbyBabes](#) [pic.twitter.com/4hiLGqrORG](http://pic.twitter.com/4hiLGqrORG)

2:51 AM - 6 Feb 2016



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Twitter

By: Phil Jones @PhilJones4

1,252 RETWEETS 1,658 LIKES



THE  
END OF  
HISTORY  
AND THE  
LAST MAN

THE  
NEW YORK  
TIMES  
BESTSELLER

FRANCIS  
FUKUYAMA

WITH A NEW AFTERWORD

"Awesome . . . a landmark . . .  
profoundly realistic and important . . .  
supremely timely and cogent . . . the first book  
to fully fathom the depth and range of the  
changes now sweeping through the world."  
—George Gilder, *The Washington Post Book World*

# Two Solutions

Narrative Medicine

Embrace the Abnormal



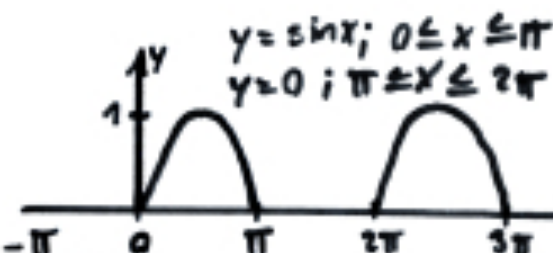
$$\sqrt{t} e^{-at} \rightarrow \frac{\sqrt{\pi}}{2} (a^2 + \omega^2)^{-3/4} \cos\left(\frac{3}{2} \arctan\left(\frac{\omega}{a}\right)\right)$$

$$t^{v-1} e^{-at} \rightarrow \Gamma(v) (a^2 + \omega^2)^{-v/2} \cos\left(v \arctan\left(\frac{\omega}{a}\right)\right)$$

$$\int_0^1 (1 + 2x \cos a + x^2)^{-1} \cdot dx = \frac{a}{2 \sin a} \quad (0 < a < \frac{\pi}{2})$$

$$\int_0^1 x^\alpha (1-x)^\beta dx = 2 \int_0^1 x^{2\alpha+1} (1-x^2)^\beta dx = \frac{\Gamma(\alpha+1) \Gamma(\beta+1)}{\Gamma(\alpha+\beta+2)} = \frac{\beta!}{(\alpha+\beta)!}$$

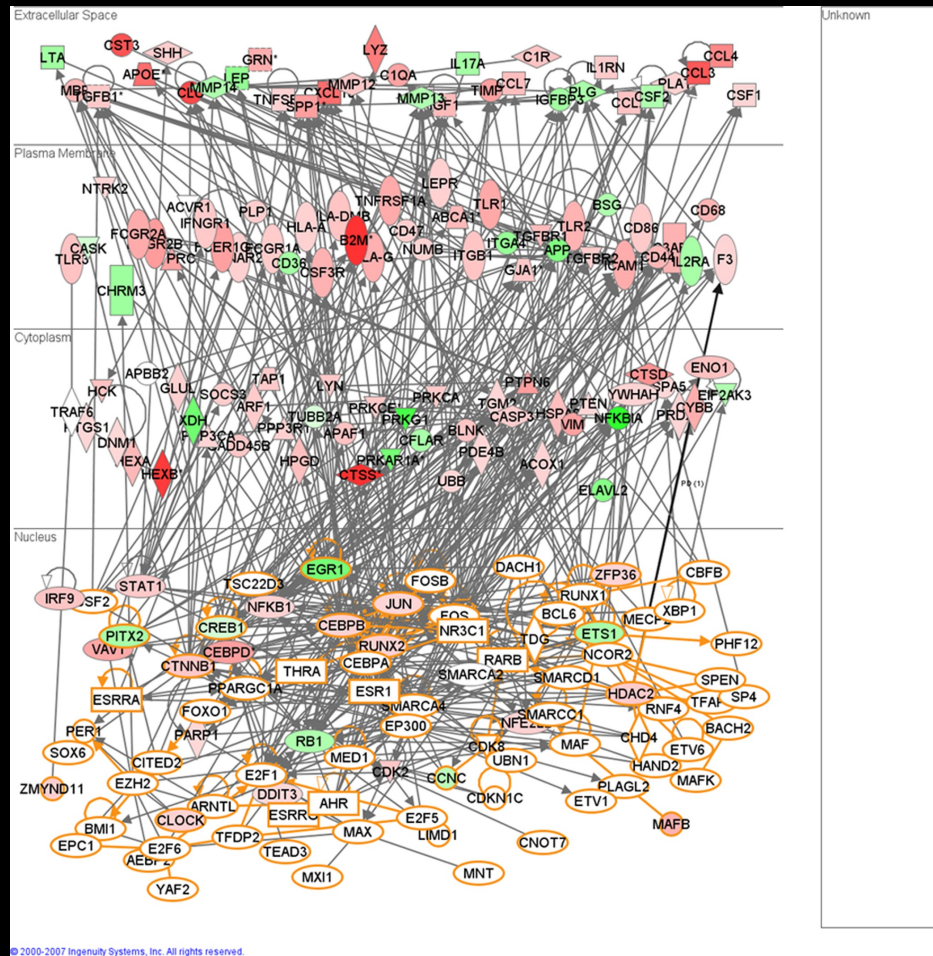
$$B(x, y) = \frac{\Gamma(x) \Gamma(y)}{\Gamma(x+y)} \quad \left| \quad \int \frac{dx}{y \sqrt{x}} = \begin{cases} \frac{2}{\sqrt{\Delta f}} \arctan \frac{\sqrt{x}}{\sqrt{\Delta f}} & ; \Delta f < 0 \\ \frac{1}{\sqrt{\Delta f}} \ln \frac{\sqrt{x} - \sqrt{\Delta f}}{\sqrt{x} + \sqrt{\Delta f}} & ; \Delta f > 0 \end{cases} \right.$$



$$y = \frac{1}{\pi} + \frac{1}{2} \sin x - \frac{2}{\pi} \left( \frac{\cos 2x}{1 \cdot 3} + \frac{\cos 4x}{3 \cdot 5} + \frac{\cos 6x}{5 \cdot 7} + \frac{\cos 8x}{7 \cdot 9} + \frac{\cos 10x}{9 \cdot 11} + \frac{\cos 12x}{11 \cdot 13} \right)$$

$$\int_a^b f(x) dx = F(x) \Big|_a^b = F(b) - F(a); F(x) = \int f(x) dx + C; F'(x) = f(x)$$

$$\int_a^b f(x) dx = (b-a) f(\xi); (a < \xi < b) \quad \left( \int_0^{2\pi} \sin x dx = -\cos x \Big|_0^{2\pi} = -\cos 2\pi = -\cos 0 = -1 \right)$$



“What is the Word,” in Samuel Beckett: Collected Poems (London: John Calder, 1989)

folly -

folly for to -

for to -

what is the word -

folly from this -

all this -

folly from all this -

folly seeing all this -

this -

what is the word -

this this -

this this here -

all this this here -

folly given all this -

seeing -

folly seeing all this this here -



afaint -  
afaint afar away over there what -  
what -  
what is the word -  
seeing all this -  
all this this -  
all this this here -  
folly for to see what -  
glimpse -  
seem to glimpse -  
need to seem to glimpse -  
afaint afar away over there what -  
folly for to need to seem to glimpse afaint afar away over there what -  
what -  
what is the word -

what is the word

Post-traumatic stress disorder (PTSD) is a mental health condition that is triggered by a terrifying event — either experiencing it or witnessing it. Symptoms may include flashbacks, nightmares and severe anxiety, as well as uncontrollable thoughts about the event.

[www.mayoclinic.org](http://www.mayoclinic.org), accessed 2/11/16.

Reliving the event

(also called 're-experiencing symptoms')

Memories of the traumatic event can come back at any time. You may feel the same fear and horror you did when the event took place. For example, you may have nightmares.

The way you think about yourself and others changes because of the trauma.

This symptom has many aspects, including the following:

You may not have positive or loving feelings toward other people and may stay away from relationships.

Feeling keyed up  
(also called 'hyper arousal')

You may think the world is completely dangerous, and no one can be trusted.

You may forget about parts of the traumatic event or not be able to talk about them.

[http://www.ptsd.va.gov/public/PTSD-overview/basics/symptoms\\_of\\_ptsd.asp](http://www.ptsd.va.gov/public/PTSD-overview/basics/symptoms_of_ptsd.asp),  
accessed 2/11/16

# Four Causes

The sudden exposure to  
and commensurate understanding  
of the reality of combat.











Shock at the expression of  
irrational actions

The suffocating nature  
of a return to  
“normality.”

The worst thing to hear from people is that you are different. No one wants to hear that. It's upsetting and makes you want to deny it even more. But deep inside you can't fool yourself. We've changed and will always be different.

Marine 22, US Marine Corps.  
Anderson, "A Soldiers' Story."

I'm an outcast in society. I was asked to speak at a college in front of students. They had no idea what to make of me. I showed them pictures and clips of us being in Afghanistan. They just gave me a blank stare. One student even tried to have me relate what I did to a video game. Seriously I know I'm not normal from going to war. It has left its mark on me and now that the war is through with me I feel like I don't have a place.

Sniper, 25, US Marine Corps.

Anderson, "A Soldiers' Story."



There is a widespread public perception that veterans are likely to be physically, mentally or emotionally damaged by their time in the armed forces. This in itself constitutes an unnecessary extra hurdle for service leavers, restricting their opportunities by lowering expectations of who they are.

Michael Ashcroft, *The Guardian*, Sunday May 11 2014

# The Loss of Moral Identity

The public has no idea what we have done or gone through.

America's not at war, America is at the mall.

Enlisted marine, 26, US Marine corps.  
Anderson, "A Soldiers' Story."

## Four Causes

The sudden exposure to and commensurate understanding of the reality of combat.


Shock at the expression of irrational actions.

The suffocating nature of a return to “normality.”

The Loss of Moral Identity.

I'm a warrior who goes out to fight and protect the freedoms of a peaceful country. And when I return that the country is peaceful and has no place for a warrior like me is the object of the exercise. It means we have succeeded.

Officer, 32, British army.

The background of the slide features a large, light gray circle centered behind the text. Surrounding this circle are various white silhouettes of people in different poses and activities, such as walking, standing, and interacting, creating a sense of a busy, diverse crowd.

# QATAR CLINICAL NEUROSCIENCE CONFERENCE

*15th - 17th March 2014, Four Seasons Hotel, Doha*

The Qatar Clinical Neuroscience Conference focused on two broadly defined categories of brain disorder.

Track 1: Affective Disorders focused on disorders resulting from an intrinsic or chronic dysfunction of the brain, either within the cells or in their connectivity

clinical trials [are] offering promise of a new era of precision medicine tailored to specific diagnoses and symptoms.

fear extinction.



40-50% of adolescents affected by anxiety don't improve with CBT.

“Val66Met,” a single nucleotide polymorphism, is present in more than 25% of humans. It's a meth allele, and it functions as a rogue element. It prunes synaptic pathways.

Francis Lee, “Genetic Mouse Models of Anxiety Disorders.”

Met carriers have a smaller hippocampus volume, relative to controls and perform more poorly than controls on memory tasks.

L Zhang, *Molecular Psychiatry* (2014) 19, 8–10; doi:10.1038/mp.2012.180; published online 15 January 2013

A common single-nucleotide polymorphism in the BDNF gene (Val66Met) influences hippocampal volume, memory and appears related to susceptibility to a variety of neuropsychiatric disorders, including post traumatic stress disorder (PTSD).

L. Zhang, *Molecular Psychiatry* (2014) **19**, 8–10; doi:10.1038/mp.2012.180; published online 15 January 2013

a complete understanding of neurobiology is unlikely to elucidate the complex interactions between genes and the environment that lie at the heart of many mental disorders. Anyone who thinks otherwise should remember the 'Decade of the Brain,' which ended 15 years ago without yielding a significant clue about the underlying causes of psychiatric illnesses.

"Psychiatry's Identity Crisis," Richard A. Friedman *New York Times*, July 17 2015

# in the hippocampal subfields CA3, dentate gyrus, and subiculum

Martin H. Teicher<sup>a,b,1,2</sup>, Carl M. Anderson<sup>a,b,c,1</sup>, and Ann Polcari<sup>a,b,d</sup>

[Author Affiliations](#) 

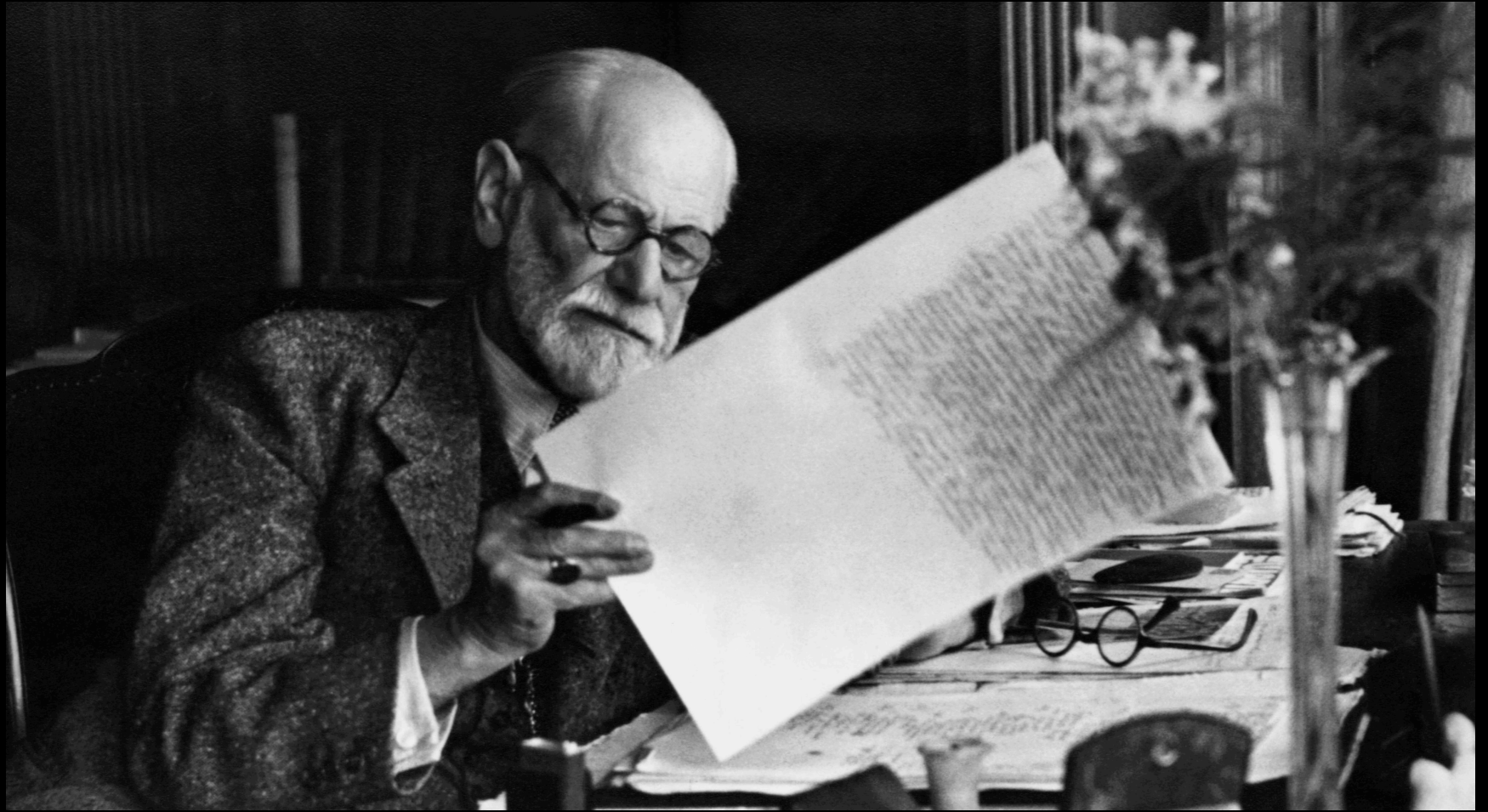
Edited by Bruce S. McEwen, The Rockefeller University, New York, NY, and approved December 28, 2011 (received for review September 19, 2011)

[Abstract](#) [Full Text](#) [Authors & Info](#) [Figures](#) [SI](#) [Metrics](#) [Related Content](#) [PDF](#) [PDF + SI](#)

## Abstract

Childhood maltreatment or abuse is a major risk factor for mood, anxiety, substance abuse, psychotic, and personality disorders, and it is associated with reduced adult hippocampal volume, particularly on the left side. Translational studies show that the key consequences of stress exposure on the hippocampus are suppression of neurogenesis in the dentate gyrus (DG) and dendritic remodeling in the cornu ammonis (CA), particularly the CA3 subfield. The hypothesis that maltreatment is associated with volume reductions in 3-T MRI subfields containing the DG and CA3 was assessed and made practical by newly released automatic segmentation routines for FreeSurfer. The sample consisted of 193 unmedicated right-handed subjects (38% male,  $21.9 \pm 2.1$  y of age) selected from the community. Maltreatment was quantified using the Adverse Childhood Experience study and Childhood Trauma Questionnaire scores. The strongest associations between maltreatment and volume were observed in the left CA2-CA3 and CA4-DG subfields, and were not mediated by histories of major depression or posttraumatic stress disorder. Comparing subjects with high vs. low scores on the Childhood Trauma Questionnaire and Adverse Childhood Experience study showed an average volume reduction of 6.3% and 6.1% in the left CA2-CA3 and CA4-DG, respectively. Volume reductions in the CA1 and fimbria were 44% and 60% smaller than in the CA2-CA3. Interestingly, maltreatment was associated with 4.2% and 4.3% reductions in the left presubiculum and subiculum, respectively. These findings support the hypothesis that exposure to early stress in humans, as in other animals, affects hippocampal subfield development.





a whole series of psychological experiences are revived, but as applying to the person of the physician at the present moment.

Sigmund Freud, "Case Histories 1 – Dora and Little Hans", *The Penguin Freud Library*, Volume 8, 1990, p. 77



1) The “Acting Out” of the event which is compulsive

Alternatively there is

2) “Working Through.”

working through trauma is not compulsive: it is, instead, a process that leads to a rethinking of historicity and temporality in terms of various modes of repetition with change.





**Vienna City of Science Symposium**  
**Friday, February 19, 2016 2:30-5:30pm**  
**Weill Auditorium 1300 York Avenue, New York, NY**

Hosted by **Laurie H. Glimcher, MD**  
Stephen and Suzanne Weiss Dean Weill Cornell Medicine (WCM)

And

**Costantino Iadecola, MD**  
Director, Brain and Mind Research Institute (WCM)

***The Age of Insight, the Quest to Understand the Unconscious in Art, Mind and Brain from Vienna 1900 to the Present***

Presented by: **Eric Kandel, MD**

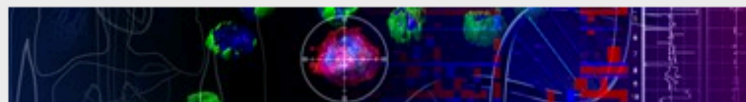
Fred Kavli Professor and Director, Kavli Institute for Brain Science  
Co-Director, Mortimer B. Zuckerman Mind Brain Behavior Institute at Columbia University  
Senior investigator at the Howard Hughes Medical Institute  
Recipient of the 2000 Nobel Prize in Physiology or Medicine

What I see is that neuroscience by itself is not competent to solve these problems. Psychoanalysis has a much broader vision, a deep understanding of the human mind.

Eric Kandel, *New York Times Magazine* June 18 2015.



## Academy Events



### Quantitative Biology: From Molecules to Man

Thursday, June 18, 2015 | 8:00 AM - 5:30 PM  
The New York Academy of Sciences

Presented by [The University of Southern California](#) and the New York Academy of Sciences

Registration Closed

► [Meeting Program](#)



Description

Agenda

Speakers

Sponsors

Abstracts

Travel & Lodging

*Quantitative Biology: From Molecules to Man* will bring together professionals in science, medicine, and engineering to articulate a vision for the future of improving patient health outcomes. Convergence science provides for a data-driven understanding of intricate biological processes across spatial and temporal scales. Achieving breakthroughs in healthcare requires a specific progression of steps from molecular-level experiments to manipulations and observations in model systems to human-scale investigations, all followed by major

We now know that these clocks are composed at the molecular level of complex feedback loops in transcription and posttranslational regulation, generating timing information at the cellular level. For example, more than 20% of the transcriptome in any cell type cycles on a 24 hour basis.

Steve Kay, "Time for Change: Circadian Rhythms in Health and Disease."



Many studies are now demonstrating clear links between disruption of clocks that can occur through shift work and other stresses, and the development of diseases such as diabetes or breast cancer.

Kay, "Time for Change: Circadian Rhythms in Health and Disease."

as well as their failure under disease states.  
Examples will be used including Post-traumatic  
Stress Disorder, Diabetes, and Circadian  
Rhythms.

Francis J. Doyle III, "Networks and Control in Systems Biology."

## The Body Full of Clocks

Heart like a metronome  
Different branch of cryptochrome  
Sleep wake cycle  
But don't drive  
For long days in Steven's lab turn sleep into a system.  
So come to a control community  
Gardens of Monsanto grass  
Where Arabidopsis smoke sisha and reach for the sky from diagrammed pathways  
And nurses work nights on cancer wards  
Their clocks unwind  
by the science of big business.  
Circadian Rhythm is a body crock.  
Let this be the poetic transcripthome  
It's rapier point of words. . . uncloned.  
And so it is  
that in the black of night  
the rhythm writes back  
Writes right.

NEW YORK



**AUBURN PRISON**  
**ERECTION COMMENCED 1816**  
**FIRST PRISONERS 1817**  
**ASSISTED IN CONSTRUCTION**  
**FIRST ELECTROCUTION**  
**IN THE WORLD 1890**

STATE EDUCATION  
DEPARTMENT 1932



PTSD, once referred to as "shell shock" or battle fatigue, was first brought to public attention by war veterans, but it can result from any number of traumatic incidents. These include kidnapping, serious accidents such as car or train wrecks, natural disasters such as floods or earthquakes, violent attacks such as a mugging, rape, or torture, **or being held captive.**

DSM-5 extended definition

Could we all be prisoners of  
the Norm?

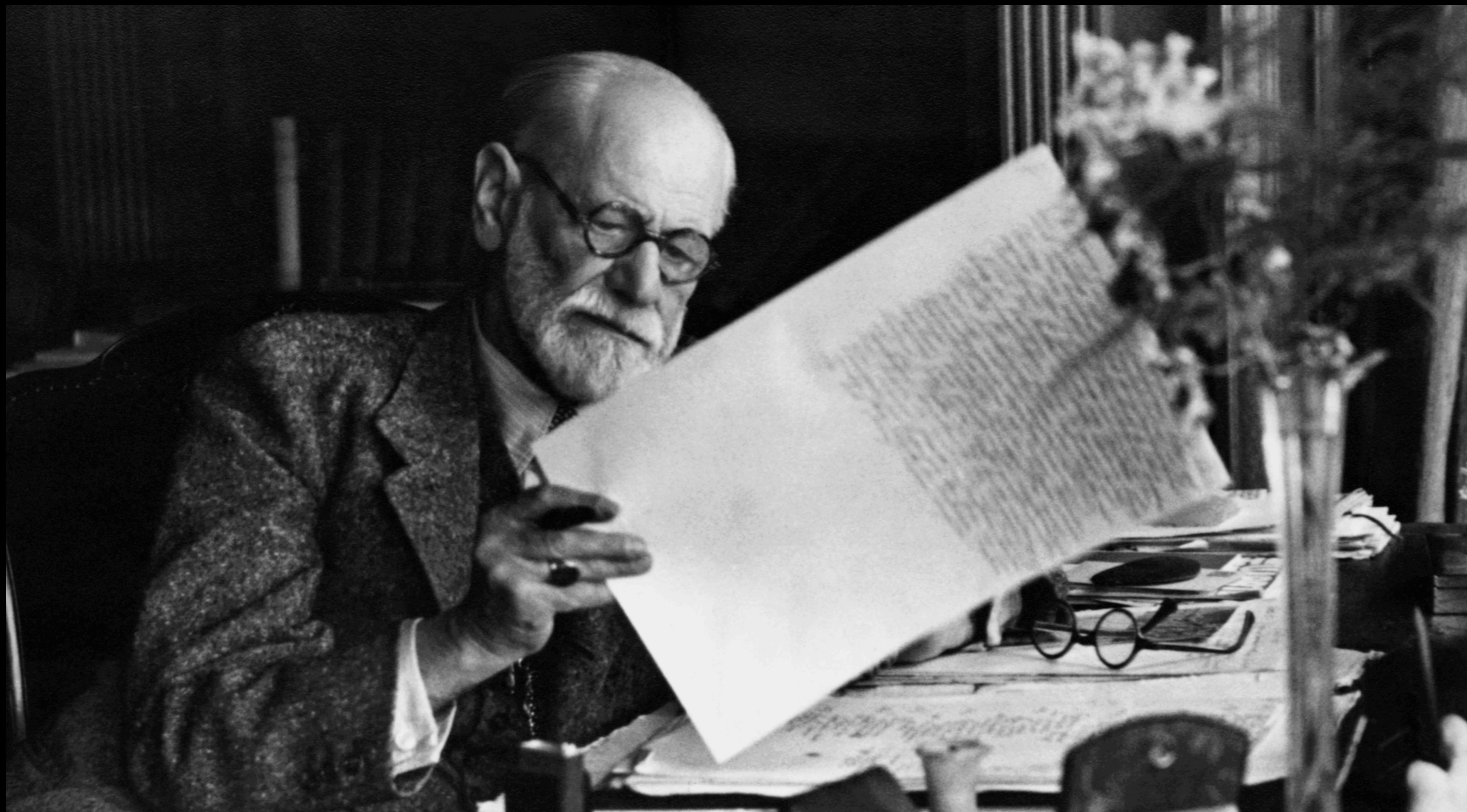
# Solution

We need to recognise

STSD: Social Traumatic Stress Disorder

It is widespread.





afaint -  
afaint afar away over there what -  
what -  
what is the word -  
seeing all this -  
all this this -  
all this this here -  
folly for to see what -  
glimpse -  
seem to glimpse -  
need to seem to glimpse -  
afaint afar away over there what -  
folly for to need to seem to glimpse afaint afar away over there what -  
what -  
what is the word -

what is the word



## New study claims to find genetic link between creativity and mental illness

Results imply creative people are 25% more likely to carry genes that raise risk of bipolar disorder and schizophrenia. But others argue the evidence is flimsy

**Ian Sample** Science editor

Monday 8 June 2015 18.04 BST

The ancient Greeks were first to make the point. Shakespeare raised the prospect too. But Lord Byron was, perhaps, the most direct of them all: "We of the craft are all crazy," he told the Countess of Blessington, casting a wary eye over his fellow poets.

The notion of the tortured artist is a stubborn meme. Creativity, it states, is fuelled by the demons that artists wrestle in their darkest hours. The idea is fanciful to many scientists. But a new study claims the link may be well-founded after all, and written into the twisted molecules of our DNA.

In a large study published on Monday, scientists in Iceland report that genetic factors that raise the risk of bipolar disorder and schizophrenia are found more often in people in creative professions. Painters, musicians, writers and dancers were, on average, 25% more likely to carry the gene variants than professions the scientists judged to be less creative, among which were farmers, manual labourers and salespeople.

Kari Stefansson, founder and CEO of deCODE, a genetics company based in Reykjavik, said the findings, described in the journal *Nature Neuroscience*, point to a common biology for some mental disorders and creativity. "To be creative, you have to think differently," he told the Guardian. "And when we are different, we have a tendency to be labelled strange, crazy and even insane."

The scientists drew on genetic and medical information from 86,000 Icelanders to find genetic variants that doubled the average risk of schizophrenia, and raised the risk of bipolar disorder by more than a third. When they looked at how common these variants were in members of national arts societies, they found a 17% increase compared with non-members.

The researchers went on to check their findings in large medical databases held in the Netherlands and Sweden. Among these 35,000 people, those deemed to be creative (by profession or through answers to a questionnaire) were nearly 25% more likely to carry the mental disorder variants.



# Weill-Cornell Medicine Abnormal Day

Come.

Celebrate.

Change Perceptions.

THANK YOU

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