

QUANTIFYING MENTAL HEALTH

A Simple Synopsis



What's a Mental Illness?

A mental health condition that has a negative effect on the way an individual...



thinks

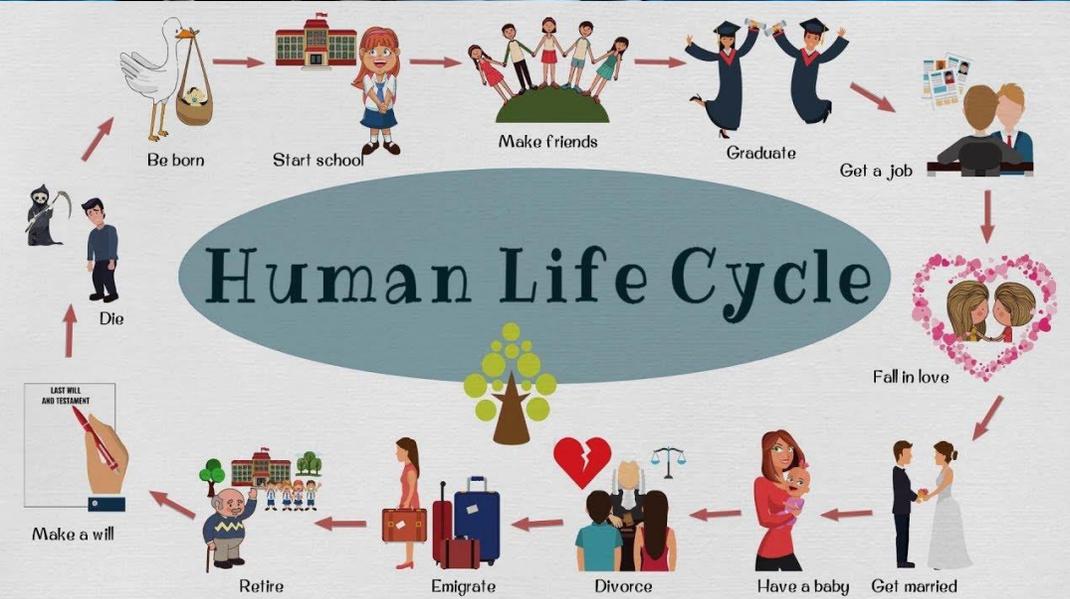


feels



and behaves

THE HUMAN LIFE SPAN IS NOT FIXED



וַיֹּאמֶר יְהוָה לֹא־יָדוֹן רוּחִי
 spirit my rule shall Not : Jehovah said And

בְּאָדָם לְעֹלָם בְּשָׁגָם הוּא בָּשָׂר וְהָיָה
 be shall and ;flesh [is] he [since] ,erring their in ever for man in

יָמָיו מֵאָה וְעֶשְׂרִים שָׁנָה :
 .years twenty and hundred a days his



FROM THE
 VERY BEGINNING,
 MOODS
 DO START TO WORK IN OUR
 LIVING BODY.

Recording from the frontal brain area of a 45-day-old fetus

Brain death



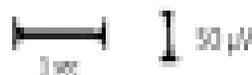
Normal rhythm



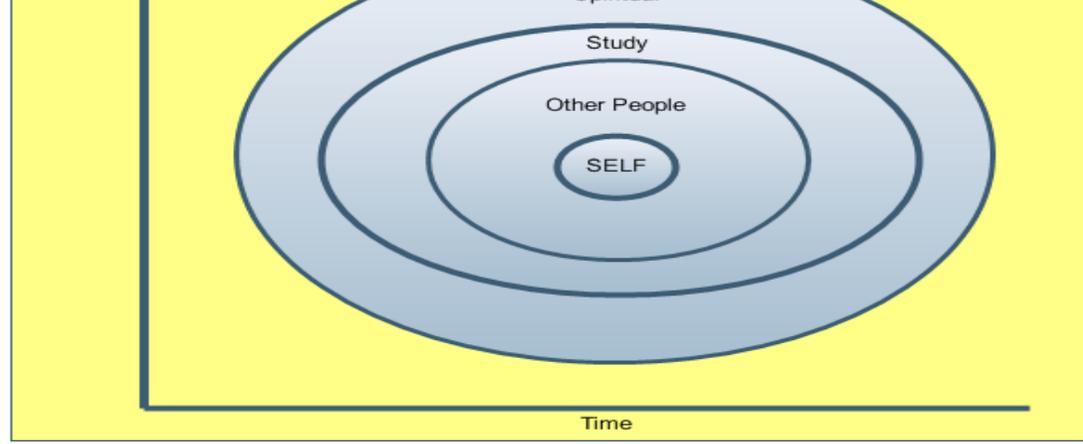
Sleep spindle



Adapted from Borkowski and Bernatino, 1955



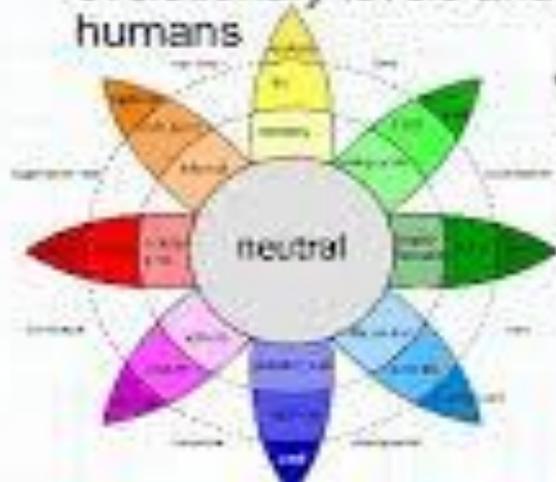
MOOD SCIENCE



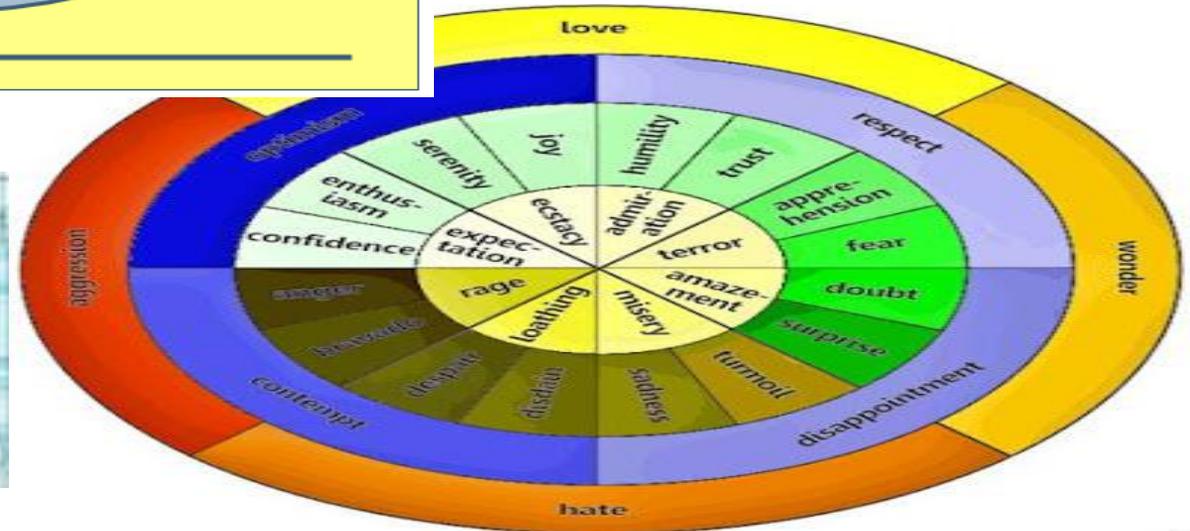
The Key to Mental Health

The Plutchik Wheel of Emotions

- A Psychoevolutionary theory by Robert Plutchik (Plutchik and Kellerman 1986)
- The concept of emotion is applicable to all evolutionary levels and apply to animals and humans



- It defines 8 basic emotions grouped on 4 pairs
 - Joy vs Sadness
 - Fear vs Anger
 - Trust vs Disgust
 - Surprise vs Anticipation



Body

Mind

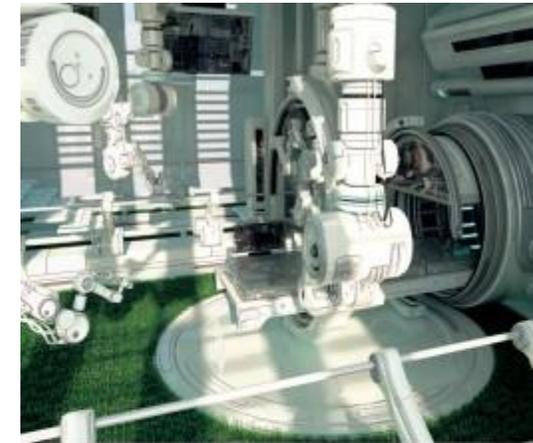
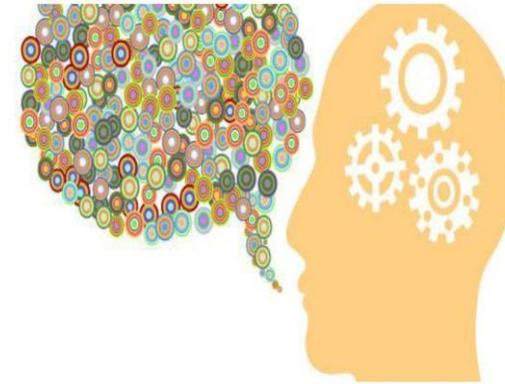


MARKERS & INDICATORS

Clinical Assessment

- Medical history
- Physical exam
- Neurological exam
- Mental status tests

Language as a Marker of Cognitive and Physiological Change



Measuring Mental Disorders

Edited by Philippe Le Moigne

Psychiatry, S



A CLINICIAN'S GUIDE TO
Statistics
Epidemiology
in Mental Health

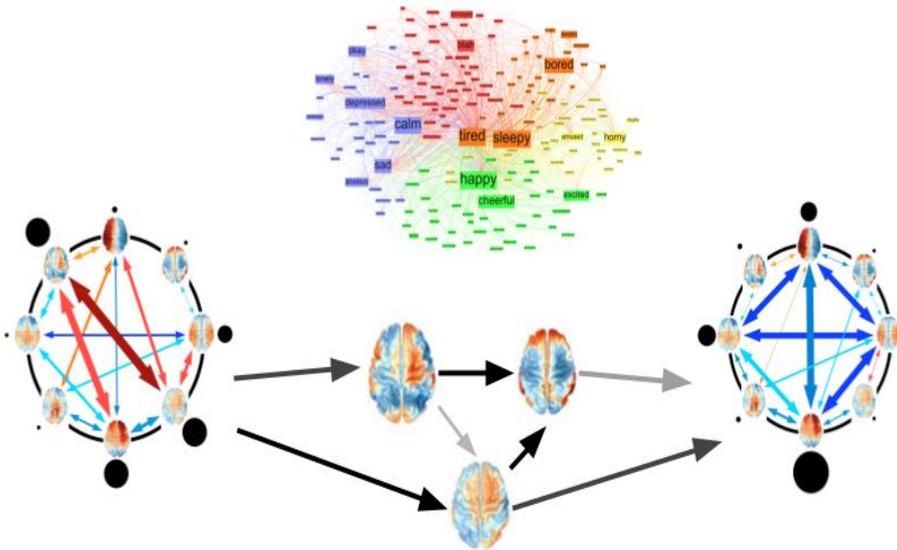
MEASURING
TRUTH AND
UNCERTAINTY

S. NASSIR GHANEM

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The Future of Mental Health: Personalized Harmonic Re-Tuning

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Ralph Waldo Emerson

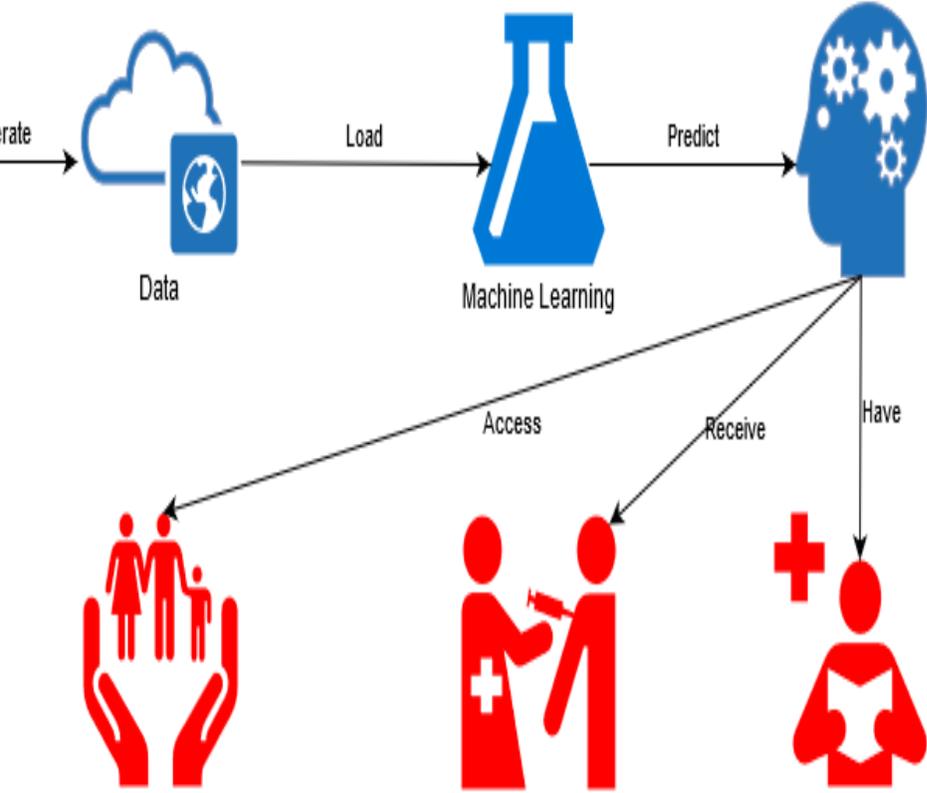
© 2013



Cues to Mental Illness

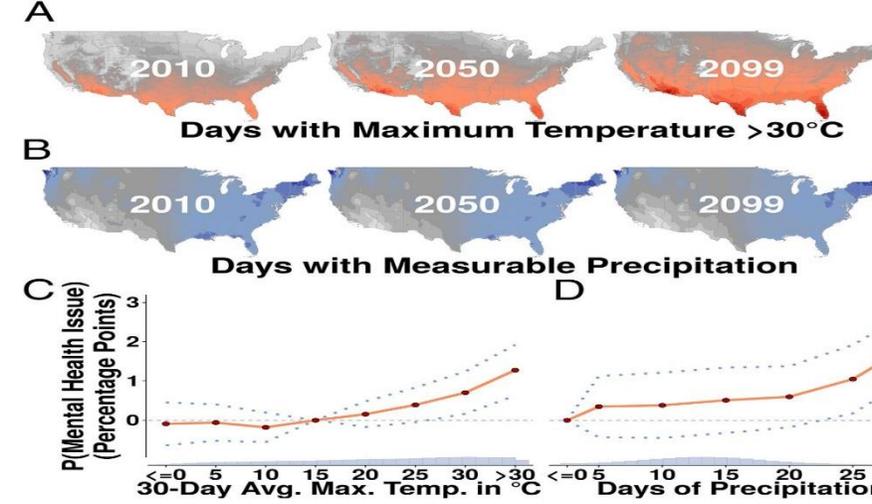
- Depression
- Schizophrenia
- Dementia – Alzheimer’s Disease
- Ethics

Mental Health



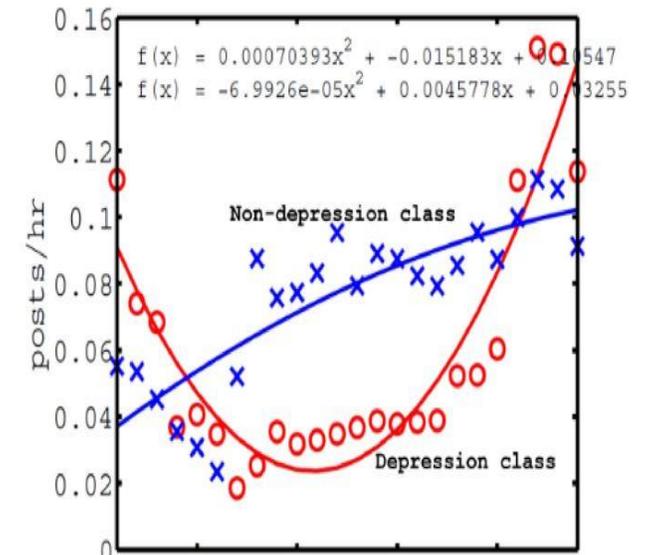
Quantifying Mental Health Signals in Twitter (Coppersmith et al., 2014)

- Mental health research lacks large amounts of quantifiable data
- Collect surveys and gain access to social media for respondents
 - Automatically identify self-expressions of mental illness diagnoses (e.g. “I was diagnosed with ...”)
 - Leverage these to construct a labeled corpus
 - But...limited by # of respondents and diagnostic information that might be available on line

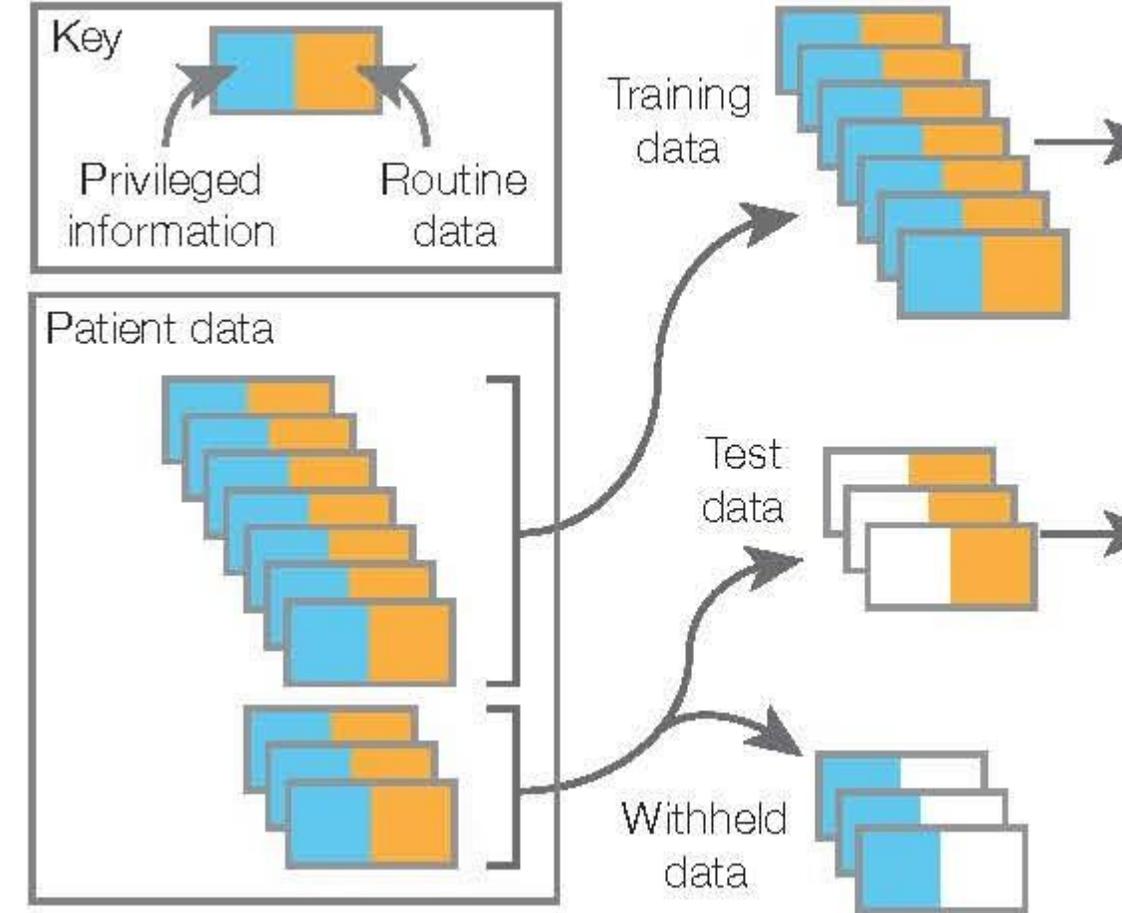
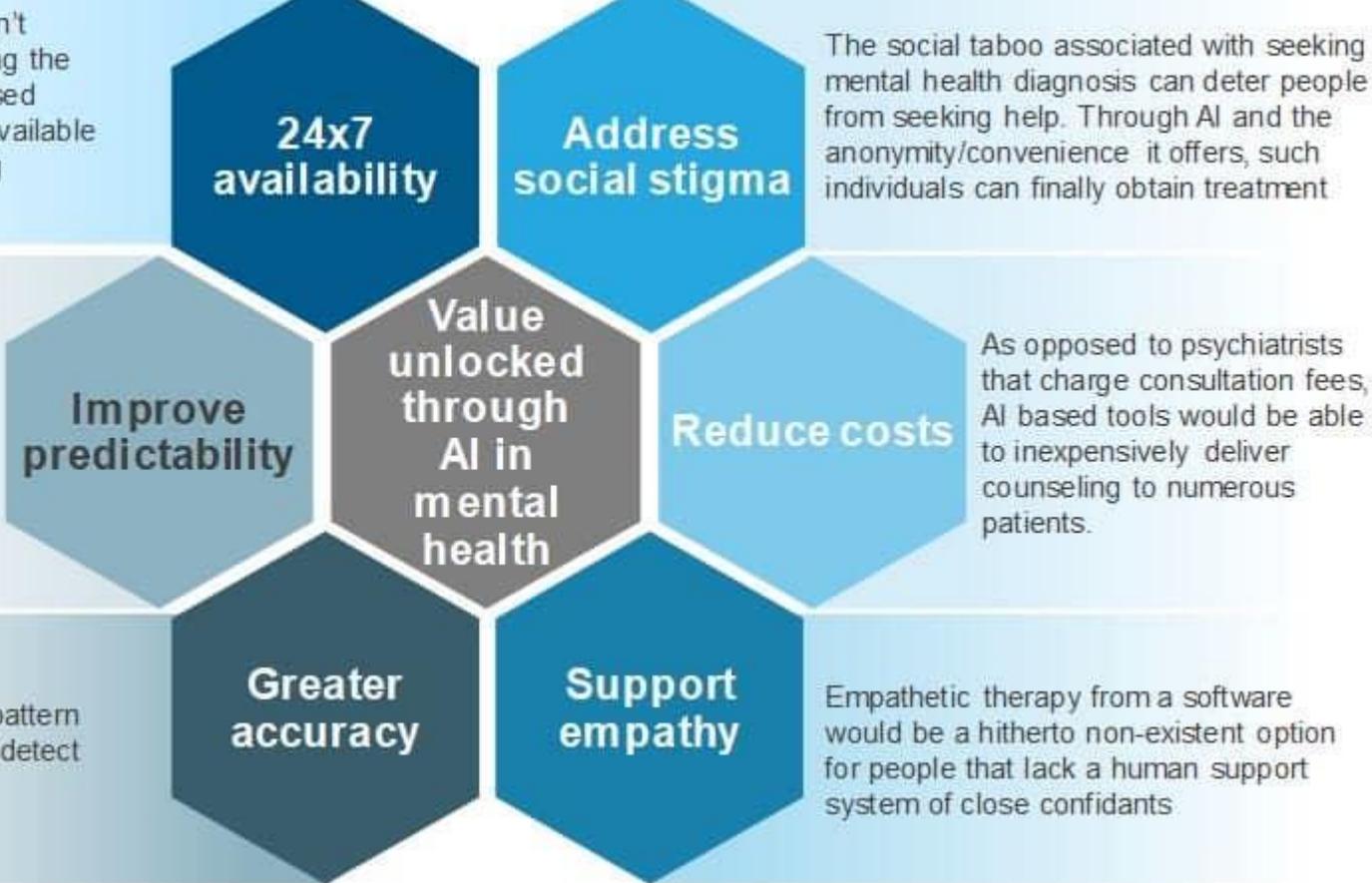


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Tweet Activity Timing and Depression



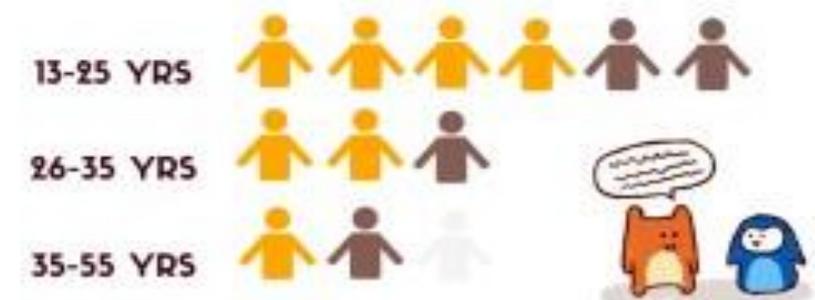
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countries
and India

70% of users are women

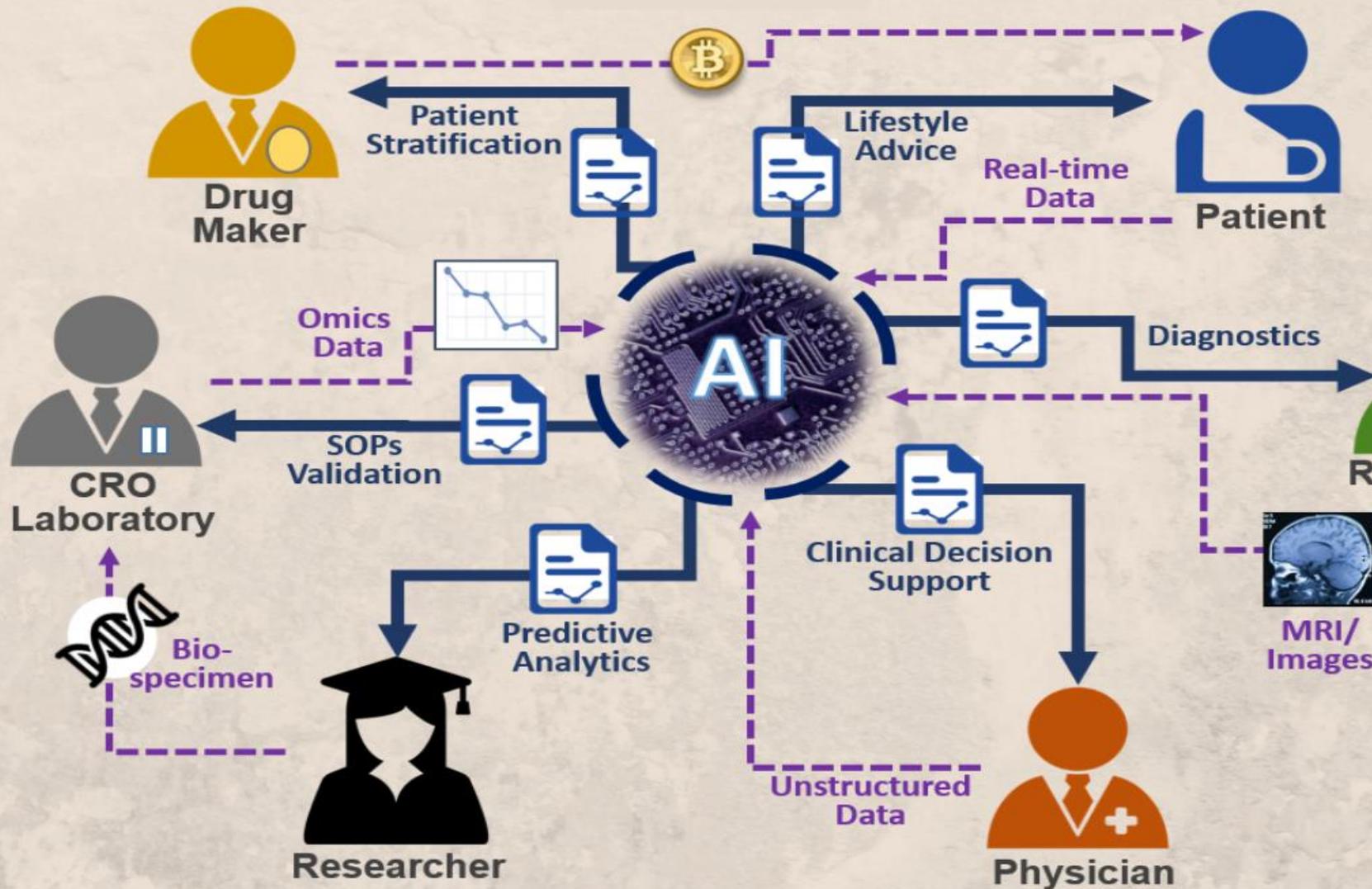
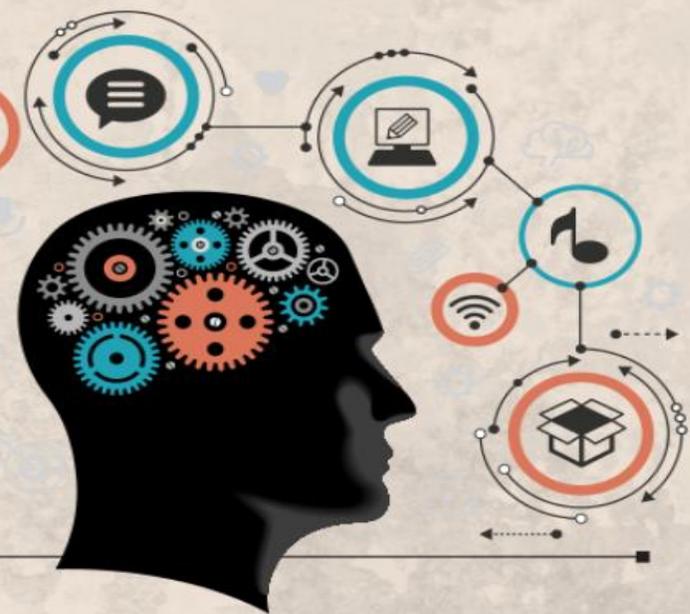
000,000+
conversations



9 MINS
pent per day



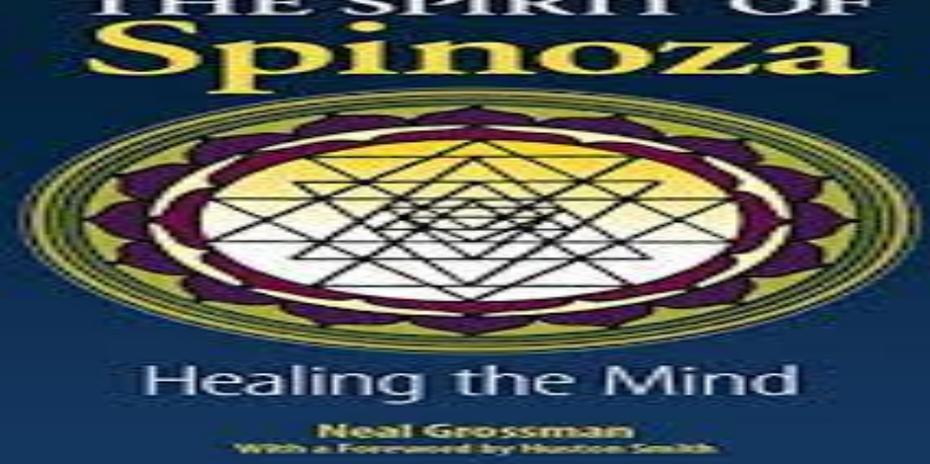
Artificial Intelligence



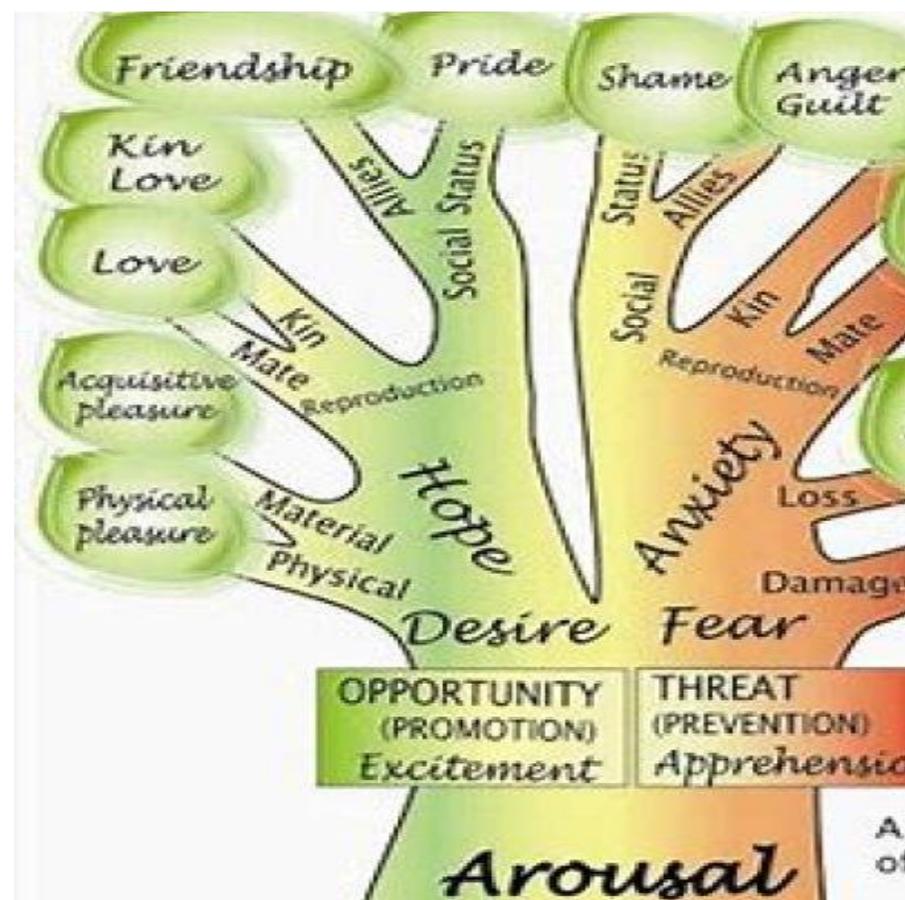
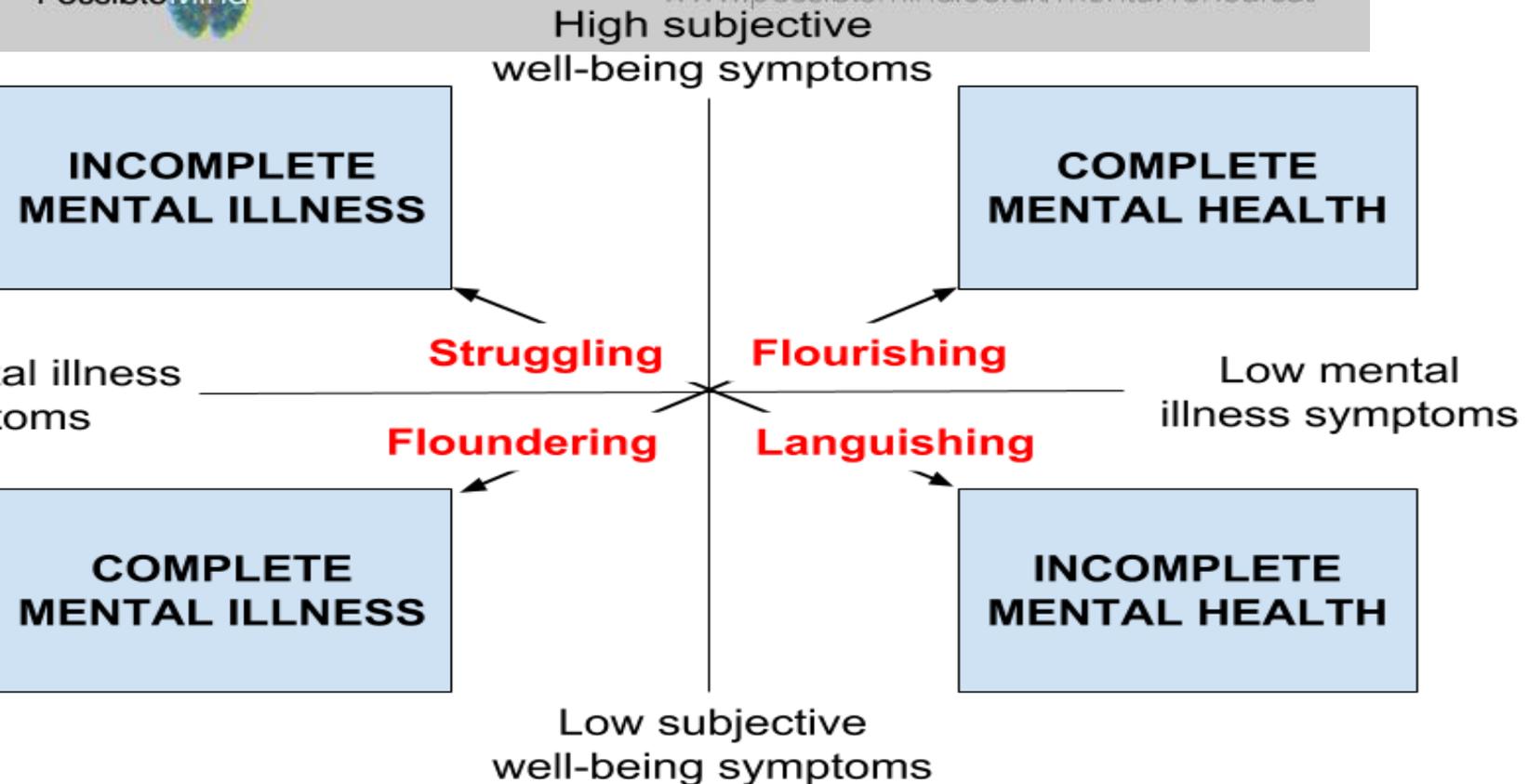
Artificial Intelligence Impacts HealthCare Space and helps you enrich your mental wellbeing

"The key is a technique called mental rehearsal, where you imagine a desired outcome in such a way that you make your inner thoughts more real than your outer environment."

Dr. Joe Dispenza



www.possiblemind.co.uk/mental-rehearsal/





AND PEACE CAN BE ACHIEVED BY
RESISTING INTERNAL AND EXTERNAL PRESSURES

harmony®
PRENATAL TEST



MÜTTERLICHER
BLUTKREISLAUF

