

# Bettering the Human Condition

## A Neurobiological Approach

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# Work Like an Ant

## ✦ Problem:

Sleep is a waste of time and reduces productivity

Potential Applications:  
military, college students, etc.

## ✦ Solution:

- ✦ Control sleep cycles
- ✦ Long-term alterations (genetic modifications)
- ✦ Continuous chemical treatments

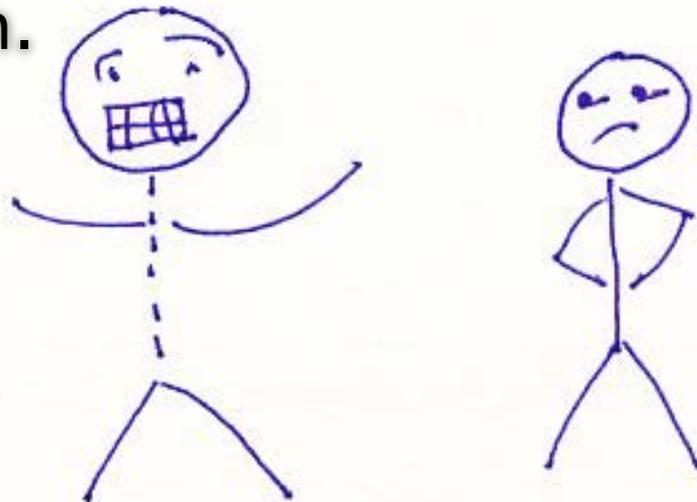
# Is it all in your head?

## ★ Problem:

Anorexia causes a skewed perception of one's self and can lead to physical self-destruction.

## ★ Solutions:

- ★ Alter pathways in the brain
- ★ Seek out potential chemical imbalances (treatments similar to depression)
- ★ Dual approach: social and biological treatments



# Forget Me Not

## ✦ Problem:

Memory loss associated with diseases such as Alzheimer's and senile dementia.

## ✦ Solutions:

- ✦ Reduce chemical imbalances (change diet)
- ✦ Target neurotransmitters and their brain pathways (Ach)
- ✦ Genetic screening to prevent/slow the onset of memory loss
- ✦ Target proteins in the brain

# Hunting For a Cure

## ✦ Problem:

Huntington's Disease causes mental and physical deterioration and usually has a late onset.

## ✦ Solutions:

- ✦ Increase genetic testing and counseling
- ✦ Genetic manipulation (including epigenetic silencing and control of nucleotide repetition)

# Drug Mail

## ✦ Problem:

How to target and deliver drugs, enzymes, etc to specific, long-lived cells.

## ✦ Solutions:

✦ Develop a delivery mechanism with the use of receptor-studded vesicles

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20.020 Introduction to Biological Engineering Design  
Spring 2009

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