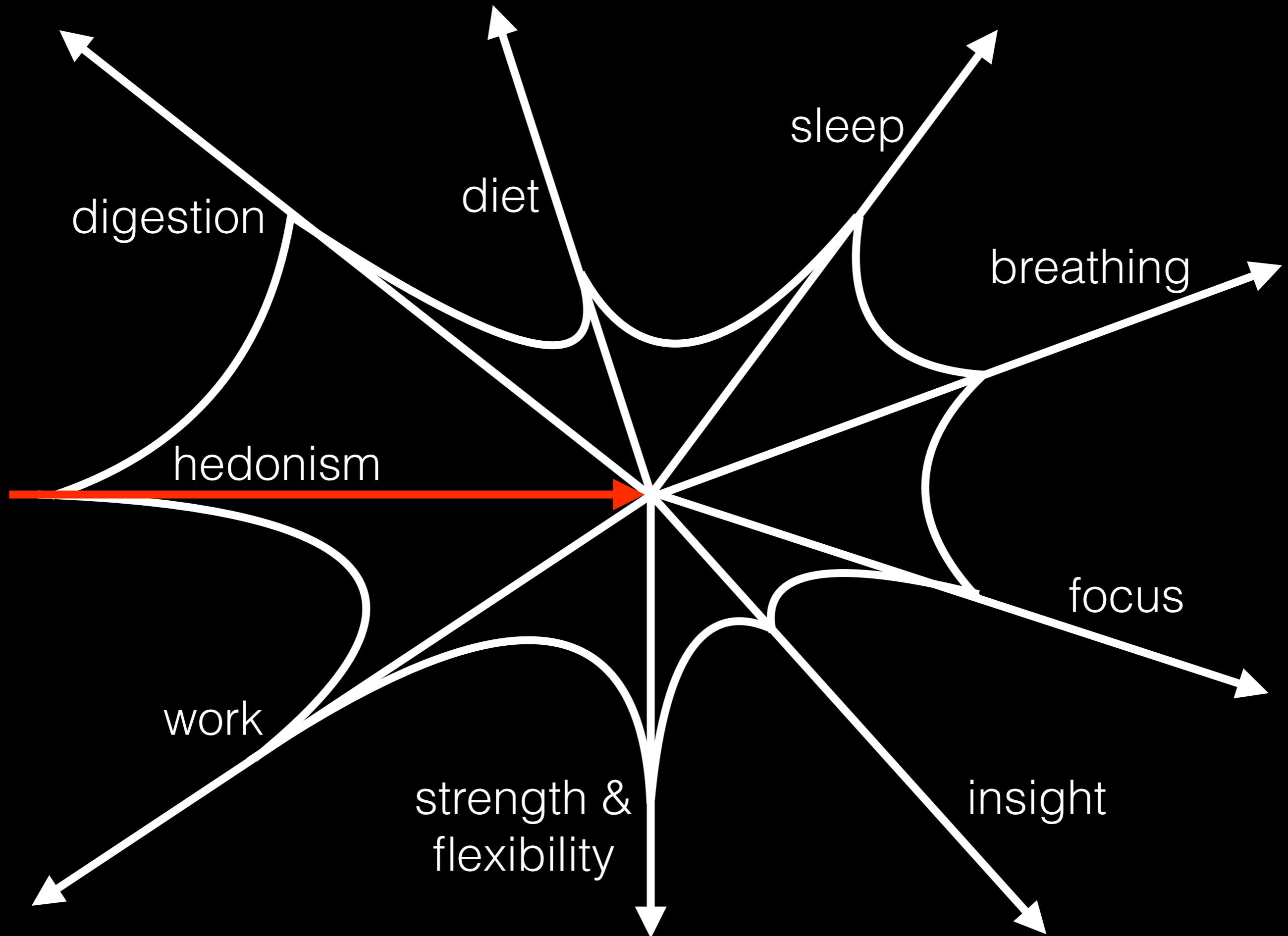
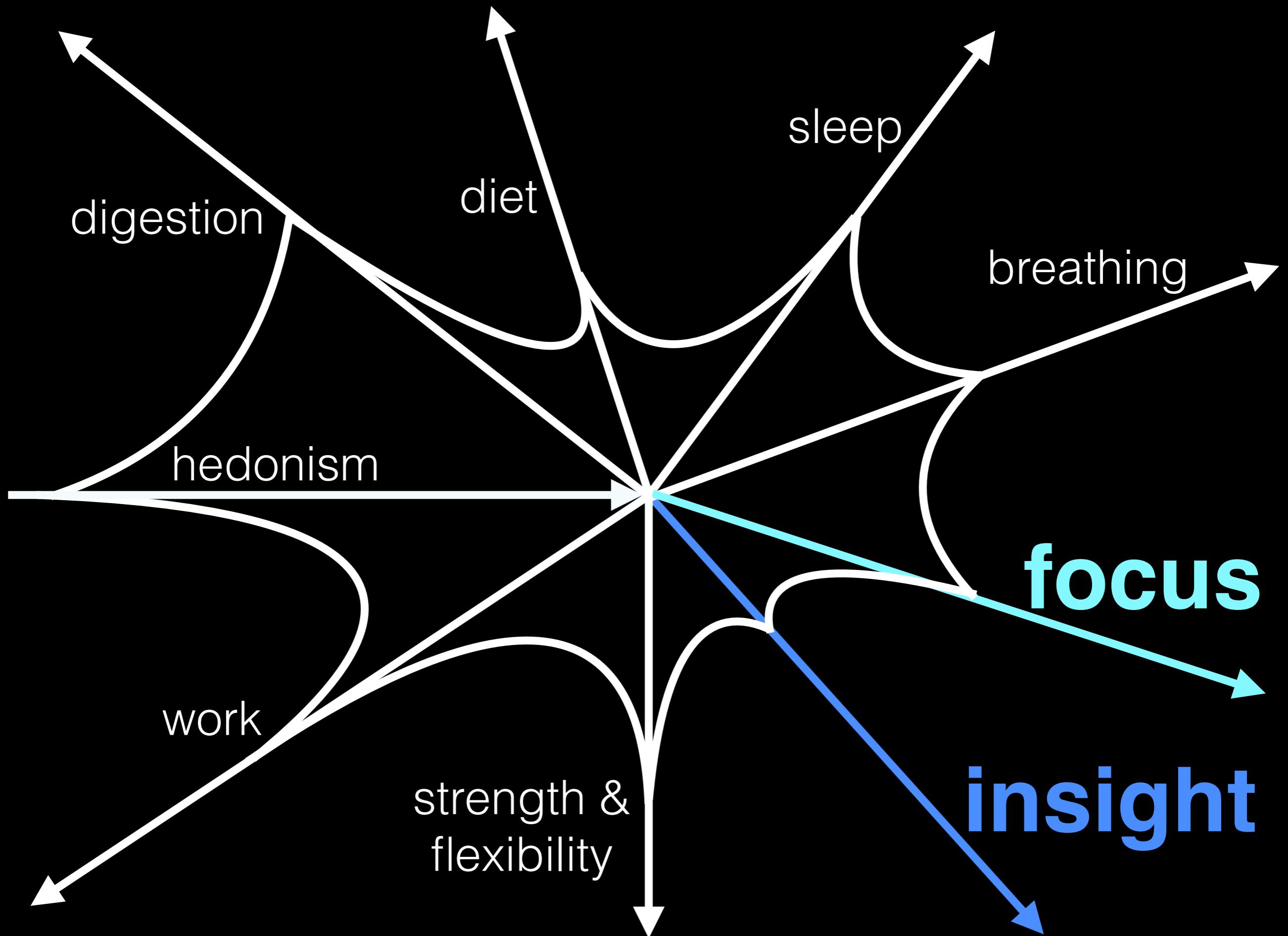


Intro Self





**meditation**  
(direct observation)

**meditative**

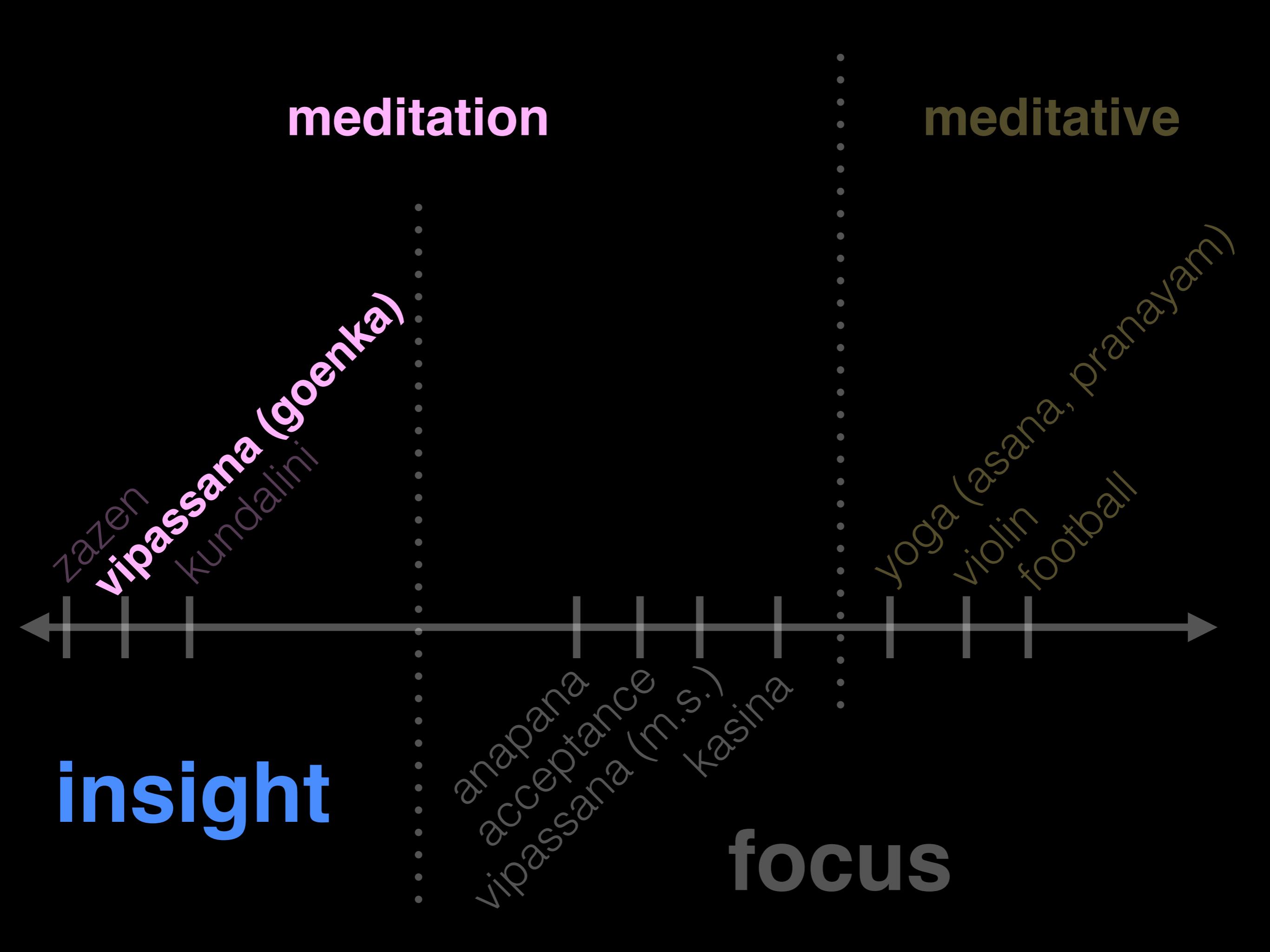
zazen  
vipassana  
kundalini (goenka)

yoga (asana, pranayam)  
violin  
football

**insight**  
(nervous system)

**focus**

anapana  
acceptance  
vipassana (m.s.)  
kasina



# Vipassana for Hackers

# Structure of this talk

- **RadioLab: “Where am I?”**
- Why this talk?
- Caveats
- What we’re leaving out
- The Hacker Mentality
- Suspending disbelief
- Virtual Reality, The Matrix Paradox, Attention
- Practicing focus (anapana meditation)
- Mutually recursive consciousness I/O (vipassana meditation)
- Examples
- Outcomes

# “Where am I?”

“A look at how brains and bodies communicate. It’s not an easy relationship between your brain and your body. There’s a lot of confusion. *Deception*, even. That’s what new research shows.”

# “Where am I?”

“There is a second route, that bypasses all that *visual cortex* stuff. .... Before I consciously know that Tommy is dead, my *body already knows.*”

William James and the bear.

# “Where am I?”

“Honey, don’t forget what  
the half-life is on the  
autonomic nervous system.”

- RadioLab: “Where am I?”
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# Introduction

- Vipassana is a meditation technique brought from Burma to India, which has expanded to 163 centres and 121 non-centres in 102 countries:
  - Africa: 20
  - Americas: 24
  - Asia: 24
  - Europe: 30
  - Oceania: 4

# Introduction

- Cost? Free.
- Financing? Donations: from old students only.

# Introduction

- Day 1 - 3 is spent staring at your nose
- Day 4 - 10 move a nostril-sized circle of attention around (and through) your body

# Why this talk?

- Most descriptions of Vipassana focus on two, largely irrelevant, aspects:
  1. “zOMG, you can’t **talk** for 10 days?!” - people who haven’t attended a course.
  2. “You guys, **my** Vipassana experience was so crazy and intense.” - people who have attended 1 course.

# Caveat #0

I have only attended four (10-day) courses.

# Caveat #1

**“When the student is ready,  
the teacher will appear.”**

- beginners.

# Caveat #2

**I am not teaching you  
Vipassana.**

(Nor could this talk be a workshop.)

# Caveat #3

IANANS

# So... why this talk?

To pique curiosity by explaining the biological mechanics of Vipassana, as I understand them.

(Course #2: “hacking” vipassana)

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# What this talk is not:

- A discussion on “spirituality”
- A description of the administrative details of the course
- Specifics of past experiences
- A comparison with other meditation techniques



# “Take it out.”

- “Spirituality” for any sense or definition
- Siddhartha Gautama (Buddha)
- Enlightenment
- Religion / Buddhism
- Predicting the future
- Telepathy / ESP
- Kalapas
- Reincarnation
- “Energies”
- Metta / Morality
- Sankharas / “Impurity”

# Morality

- Killing
- Stealing
- Sexual misconduct
- **Lying - important within meditation**
- Drugs

# Sankharas (= habits)

- We will disregard the notion of “impurity”
- Instead, we will address specifically the **habits of the brain & nervous system**

# No phones?!

...or books, or talking, or looking people in the eye,  
or touching, or making sounds, or, or, or...?!

No. And this is to help you focus, but...

# Don't worry about it.

Eat, sleep, poop, bath, meditate (10 hours/day).

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© Carl Hutzler Photography

# The Hacker Mentality: Reason and Rationality

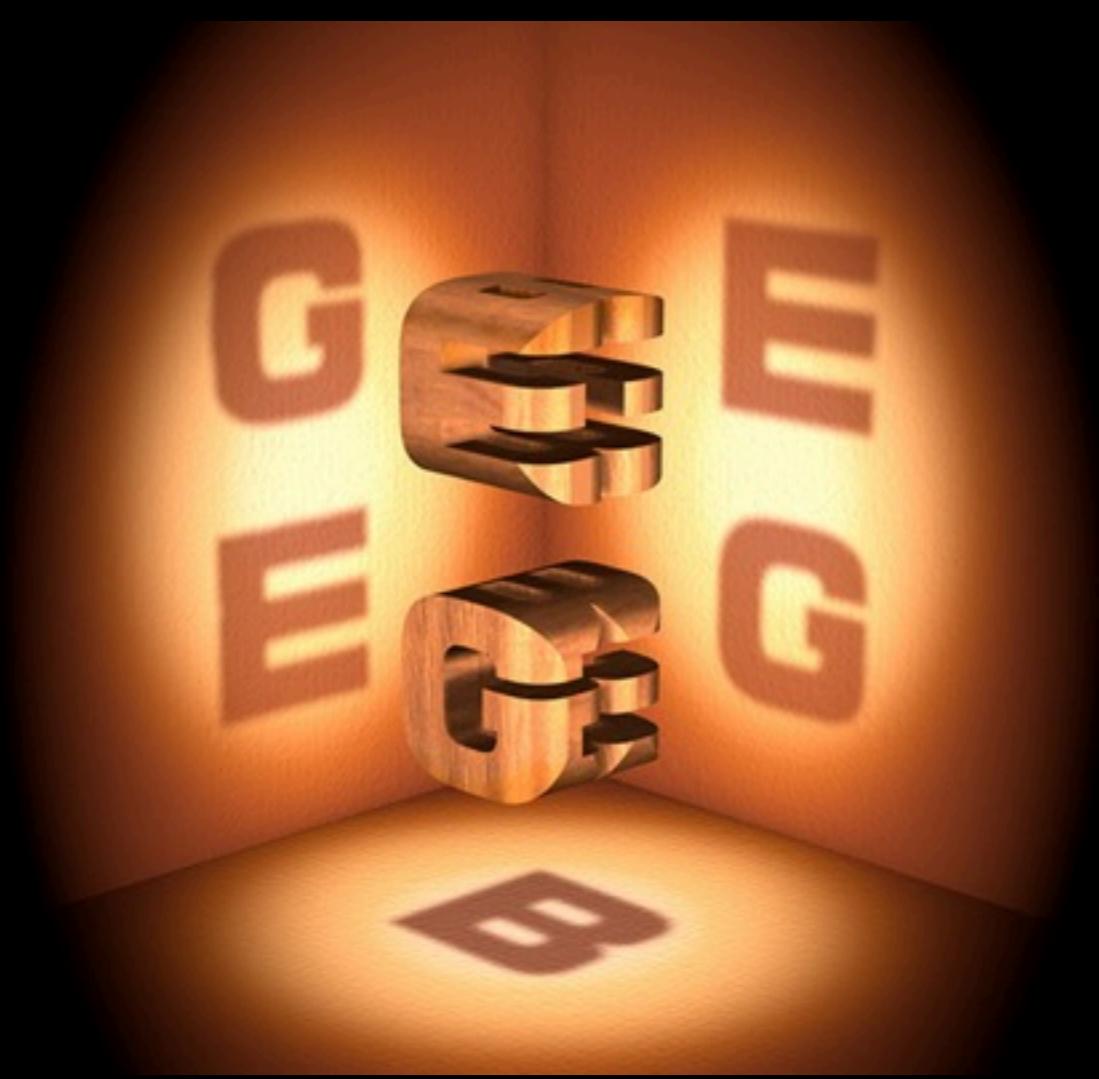
Carpentry, painting,  
gardening, genetics,  
baking bread, philosophy,  
electronics, bicycles...

We love to take apart our stereos  
and GPSes and computers and  
operating systems... why not  
ourselves?

# Homunculus Fallacy:

We *do* love to talk.





# Hofstadter's StrangeLoop Keynote

open source mailing list trolls

joining a community garden but not  
doing any of the work

reading one book about genetics and  
deciding I'm a peer to a geneticist

“LISP is worth learning for a different reason — the profound enlightenment experience you will have when you finally get it. That experience will make you a better programmer for the rest of your days, even if you never actually use LISP itself a lot.”

<http://www.catb.org/esr/faqs/hacker-howto.html>

# LISP

- Homoiconicity
- Metaprogramming
- Self-mutation and self-replication
- Turtles all the way *up*
- Recursion and trampolining
- Immutability, concurrency, and mastering time (Clojure/Fortress)



Vipassana is, or would appear to be, *turtles all the way down* in the same way lisp is *turtles all the way up.*

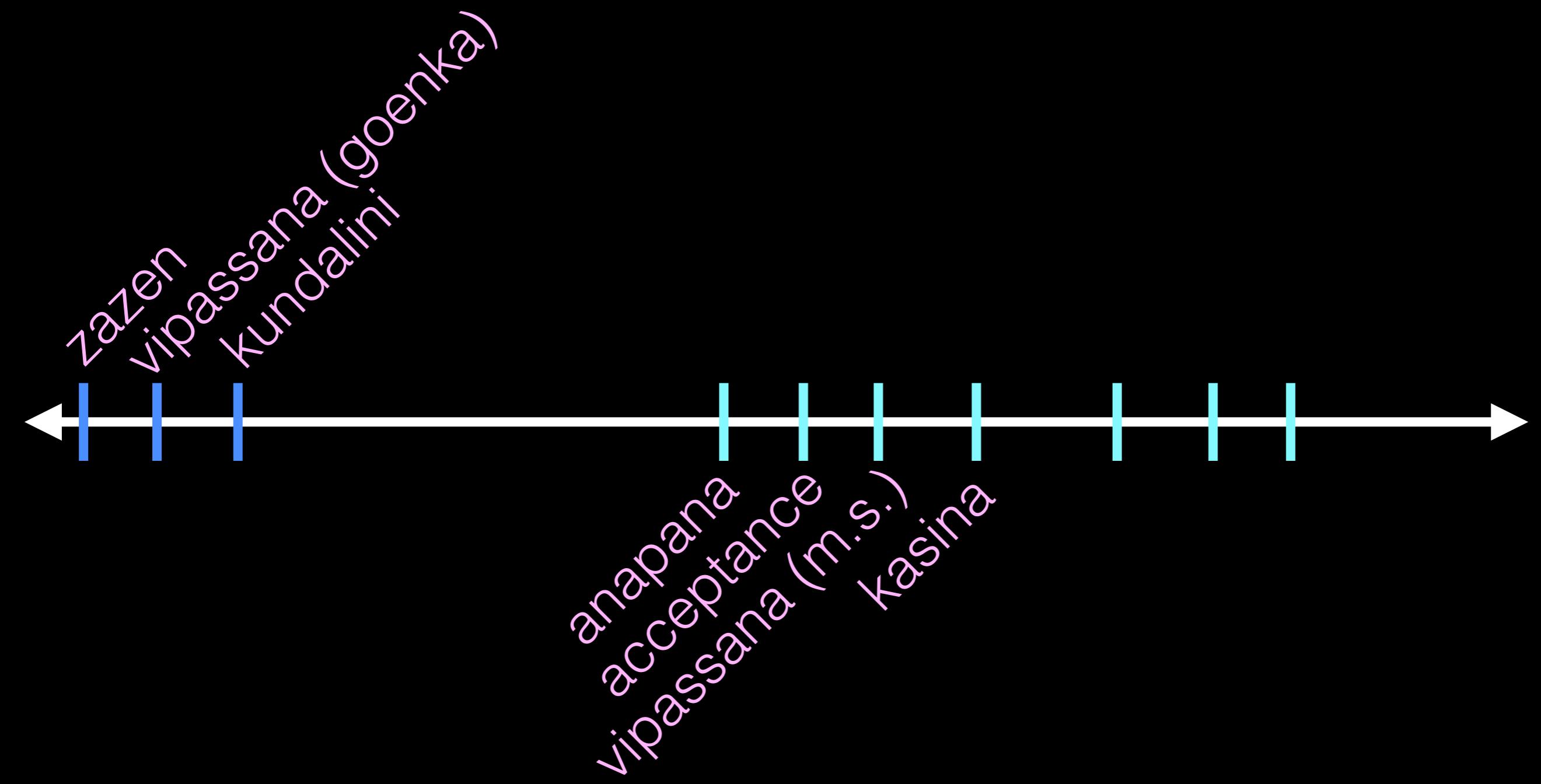
- RadioLab: “Where am I?”
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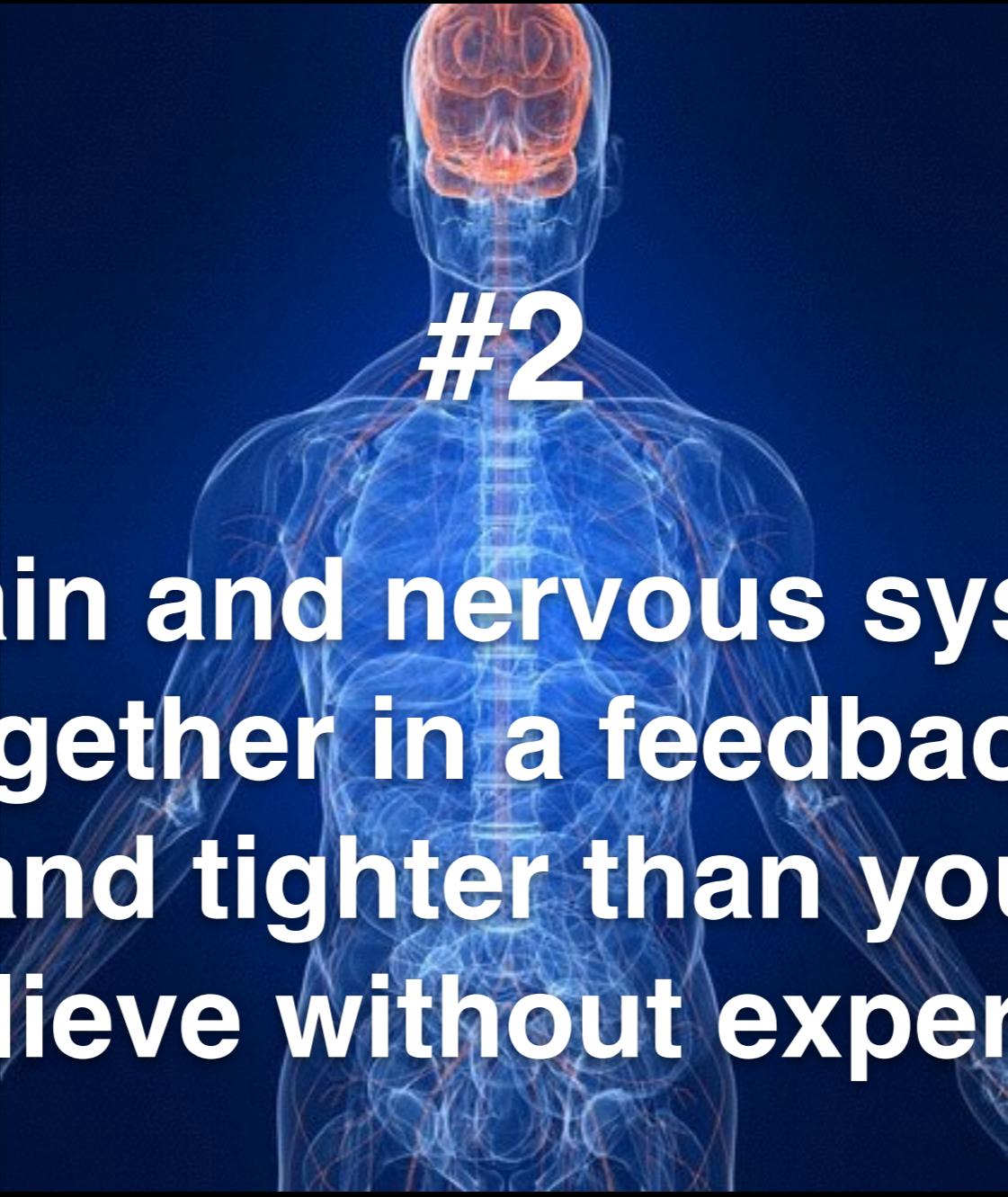
#1

Meditation is a thing.

# meditation

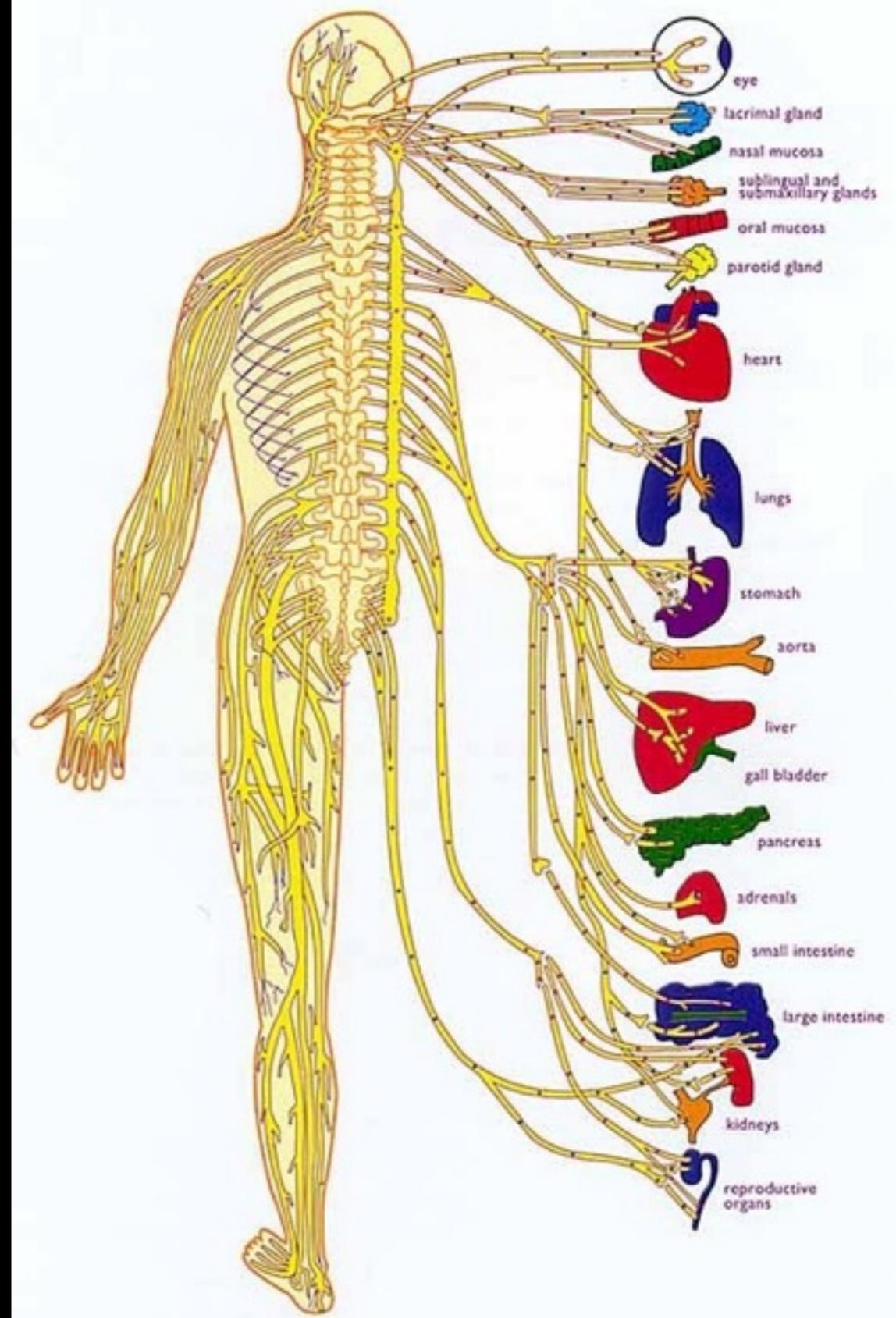
(direct observation)

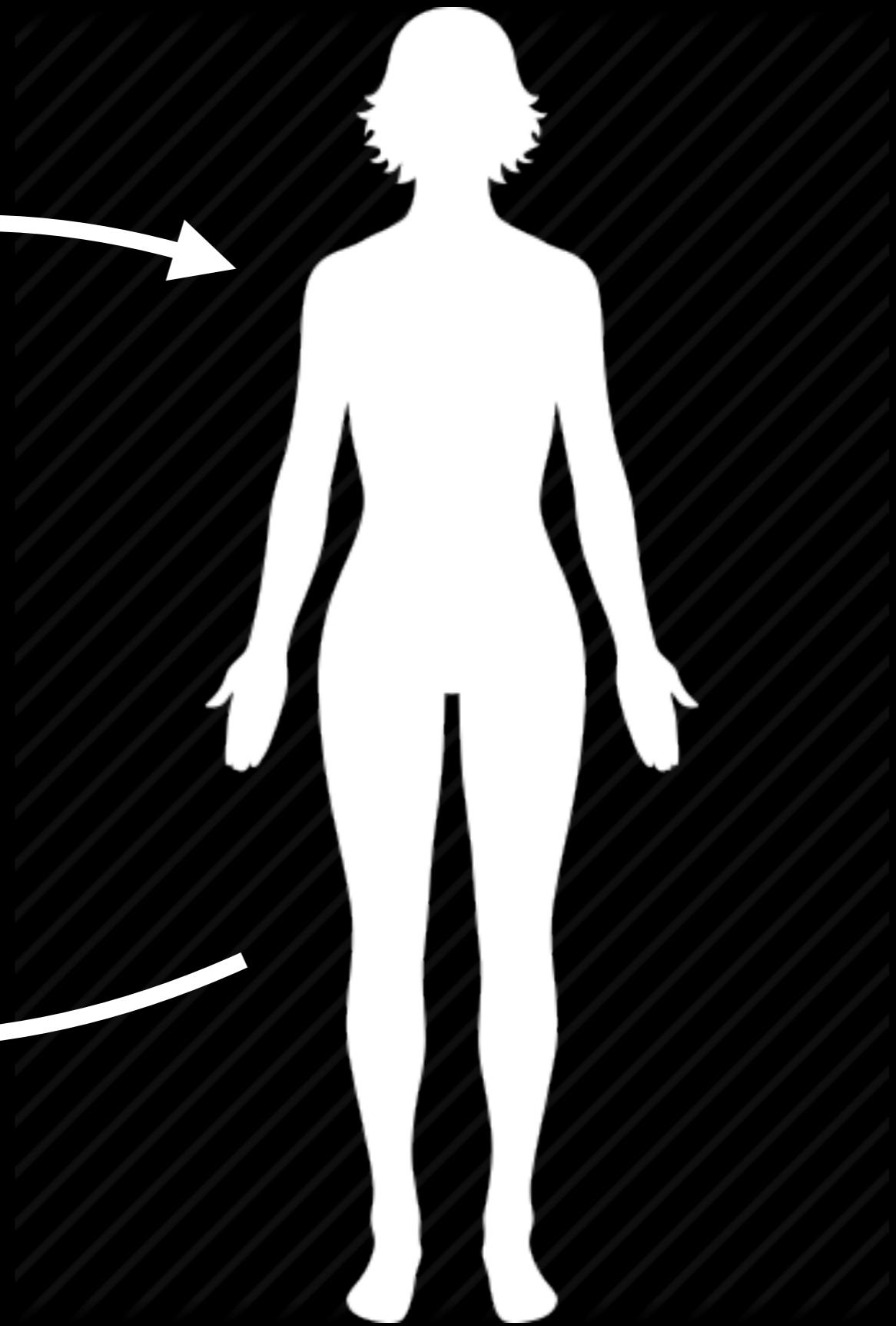




#2

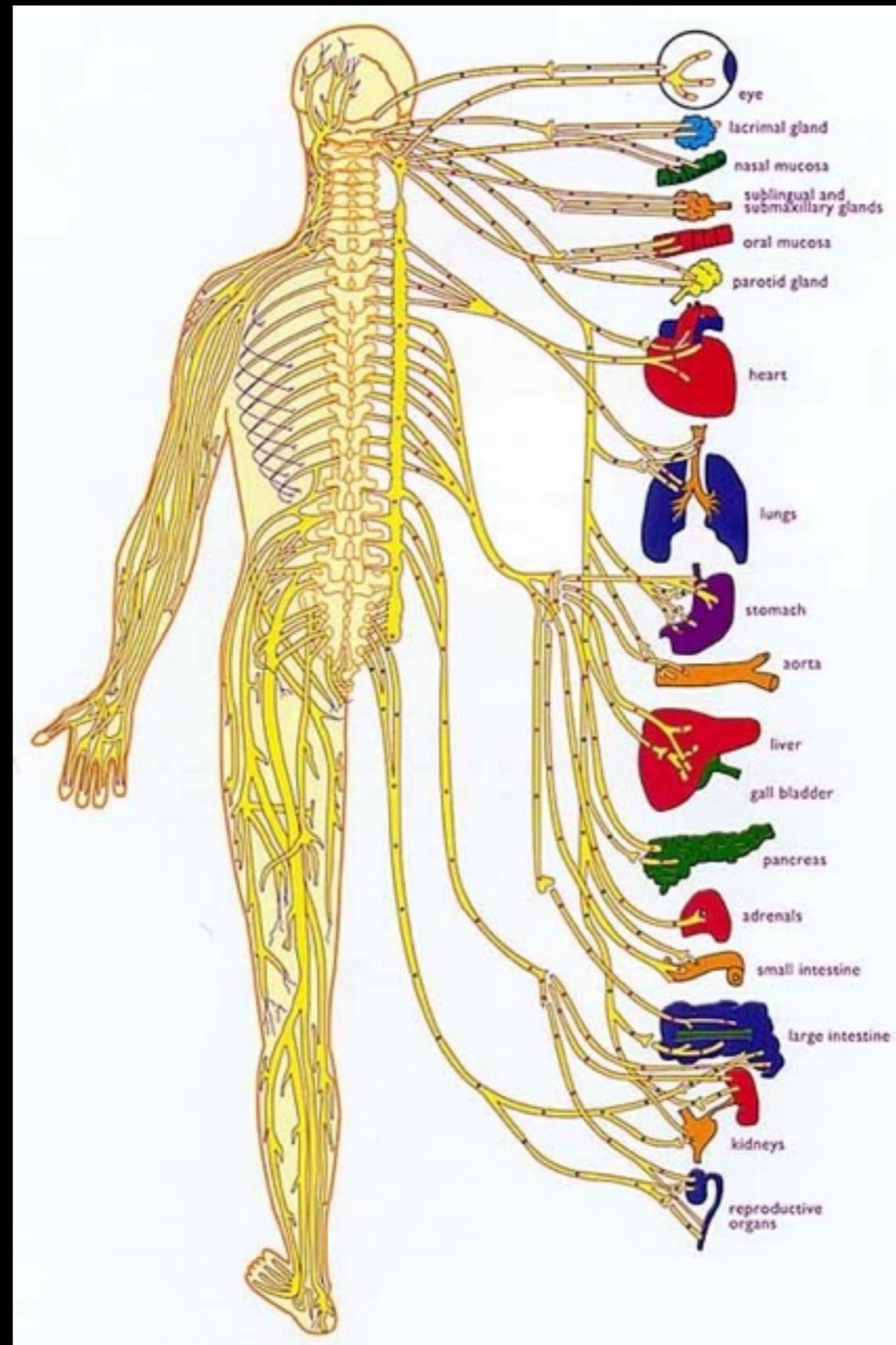
Your brain and nervous system are tied together in a feedback loop faster and tighter than you could ever believe without experiencing





#3

Dissolution of the body is a thing.



- RadioLab: “Where am I?”
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  - Suspending disbelief
- **Virtual Reality, The Matrix Paradox, Attention**
  - Practicing focus (anapana meditation)
  - Mutually recursive consciousness I/O (vipassana meditation)
  - Examples
  - Outcomes

sensors

signals

brain



(apologies to Michael Abrash)

the matrix paradox

sensors

signals

brain



(proprioception, nociception, hunger, etc.)

(the “mind”: thoughts and emotions)



# “Where am I?”

On lacking proprioception:

“We have words like ‘deaf’ and ‘blind’. We do not have words for being deaf or blind to one’s own body.”

You're doing Vipassana already!  
(You just suck at it.)

Where is your  
attention?

a bustling restaurant

- CANNERY PARK  
GARRETT 185  
- CANNERY CHASE  
05



sensors

signals

brain



a sensory deprivation  
tank...



FLOATPOD.COM  
INFINITE HUMAN POTENTIAL



sensors

signals

brain



an anechoic chamber



Orfield Labs  
Orfield in the

sensors

signals

brain



- RadioLab: “Where am I?”
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  - Mutually recursive consciousness I/O (vipassana meditation)
  - Examples
  - Outcomes

anapana meditation

samadhi (one-pointedness)







your brain likes  
distraction





(#1 “Meditation is a  
thing.”)

sensors

signals

brain



- RadioLab: “Where am I?”
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- **Mutually recursive consciousness I/O (vipassana meditation)**
- Examples
- Outcomes

vipassana meditation

(mutually recursive  
consciousness i/o)

Oddly enough, this is  
mostly about  
remaining calm.











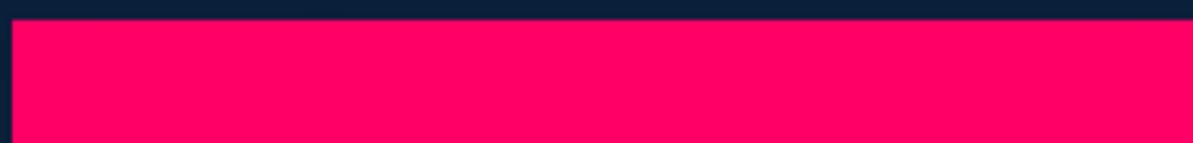




sensors

signals

brain





If you can't feel pain in your knees despite the fact that the pain is "real", you have effectively eliminated (some) sensory input.

This is possible for all sensory input.

“Thought” (not normal)  
becomes a new kind  
of distraction.

sensors

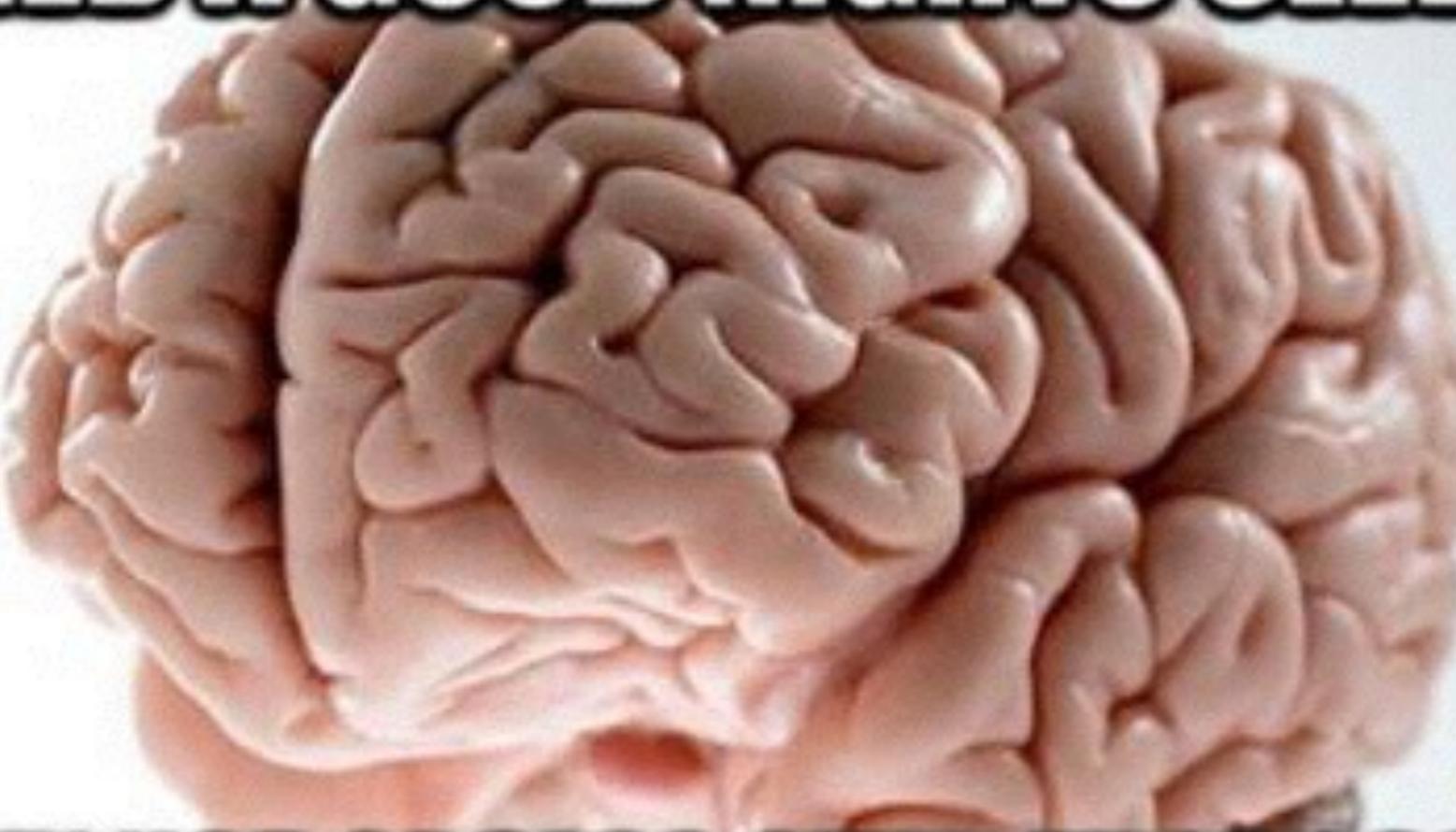
signals

brain



Your brain *really* likes  
distraction.

**NEED A GOOD NIGHTS SLEEP?**



**WHY NOT OBSESS OVER THAT SOCIAL  
MISTAKE YOU MADE IN GRADE 6**

This is normal.

(#2 “Brain <=> Nervous system.”)

...alternatively, brain <=> body.

...arguably, the same system.

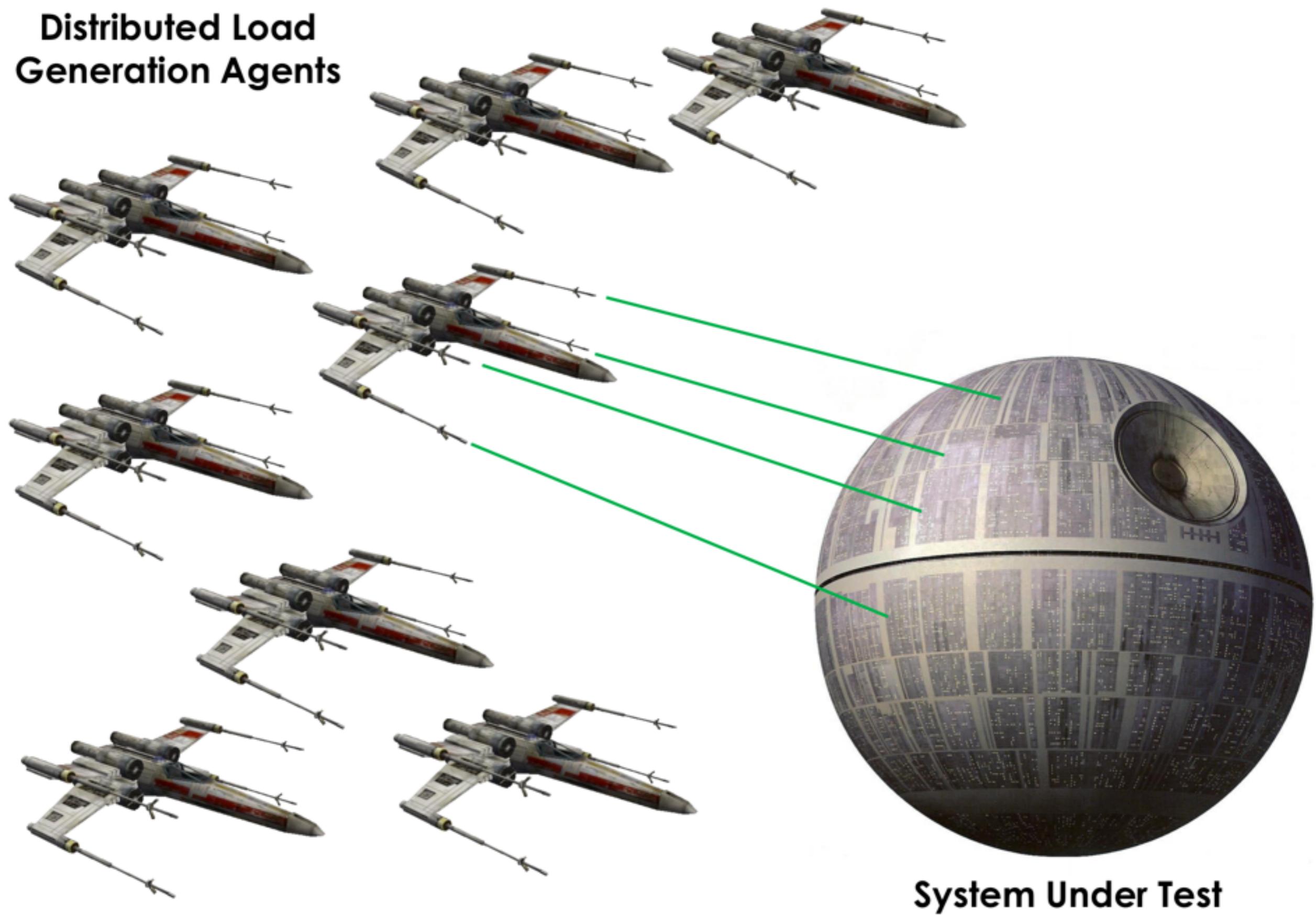
Brain/Body: “mutually recursive”?

Not existentially, but operationally

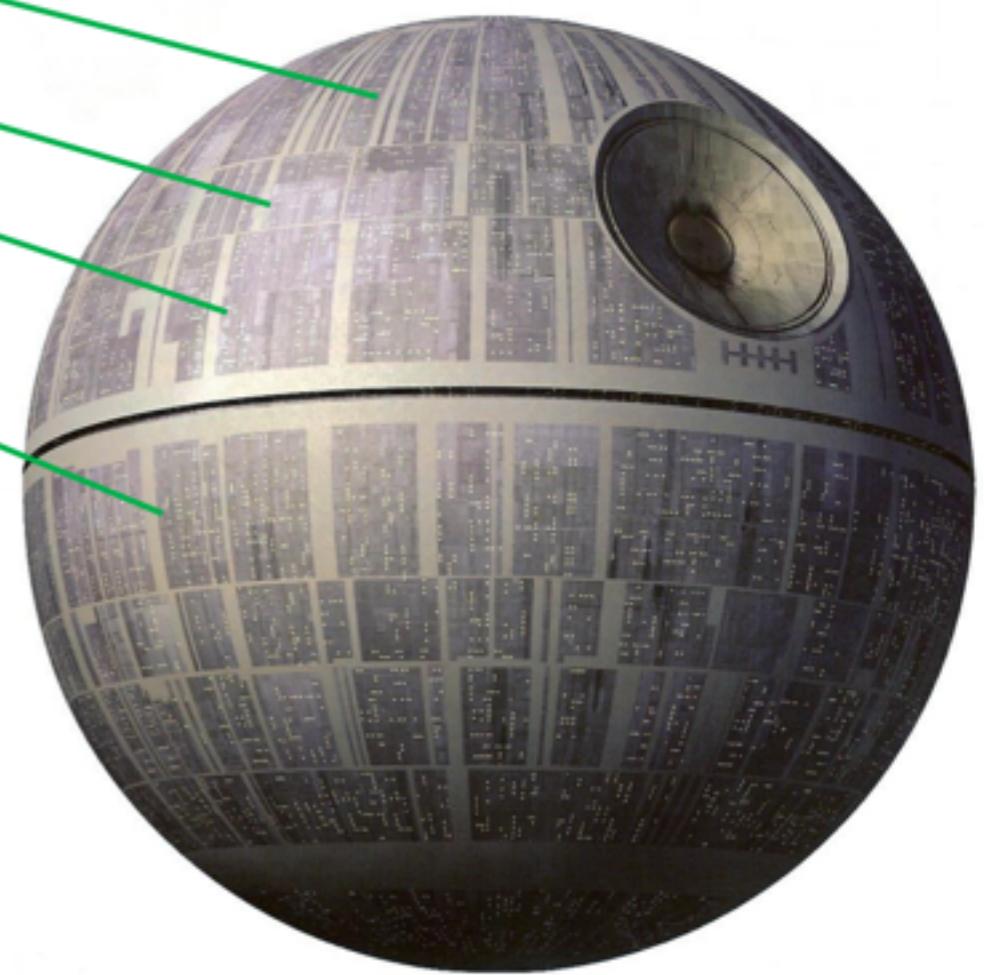
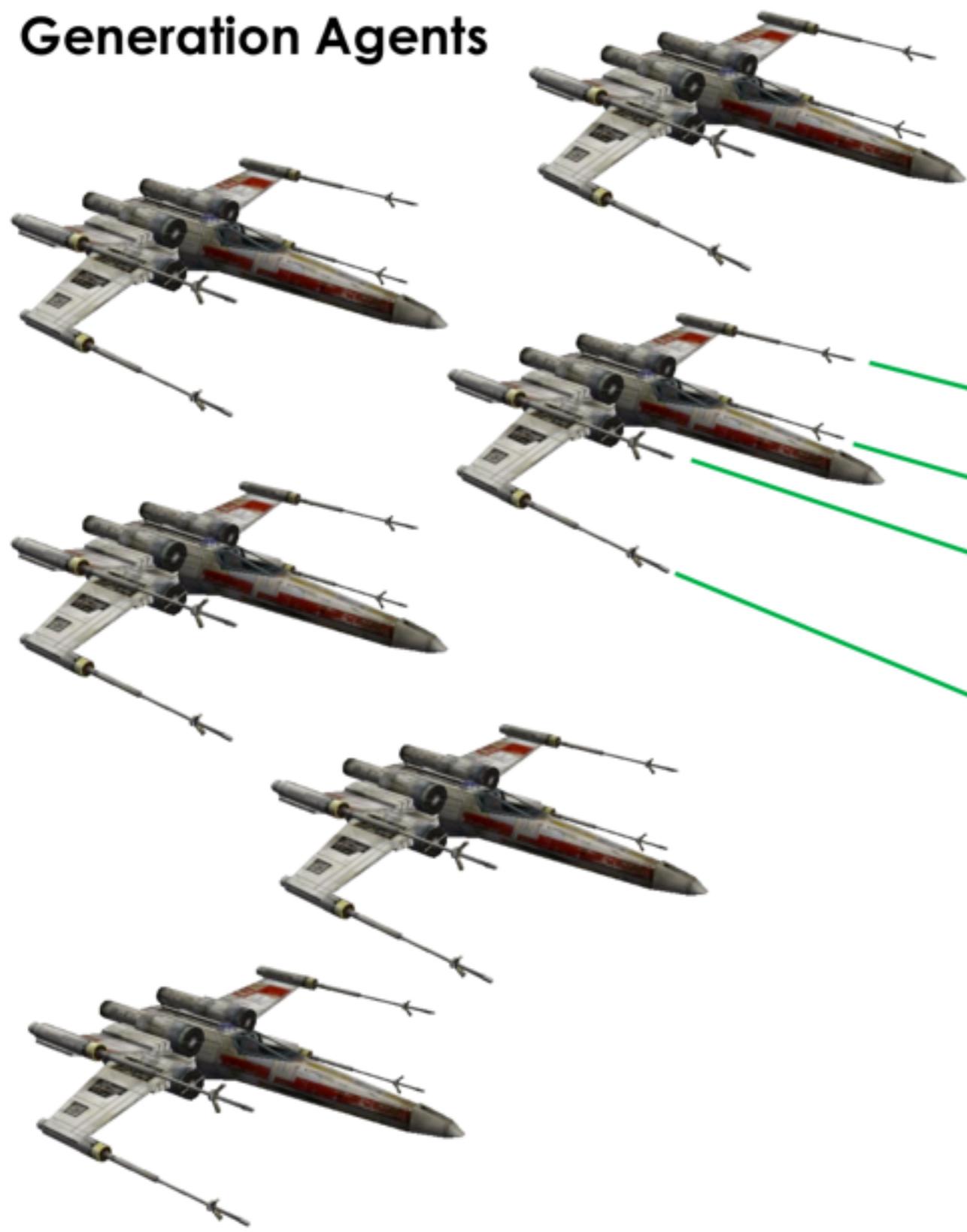
Can we “hack” vipassana?

Let’s ask Martin Thompson.

## Distributed Load Generation Agents

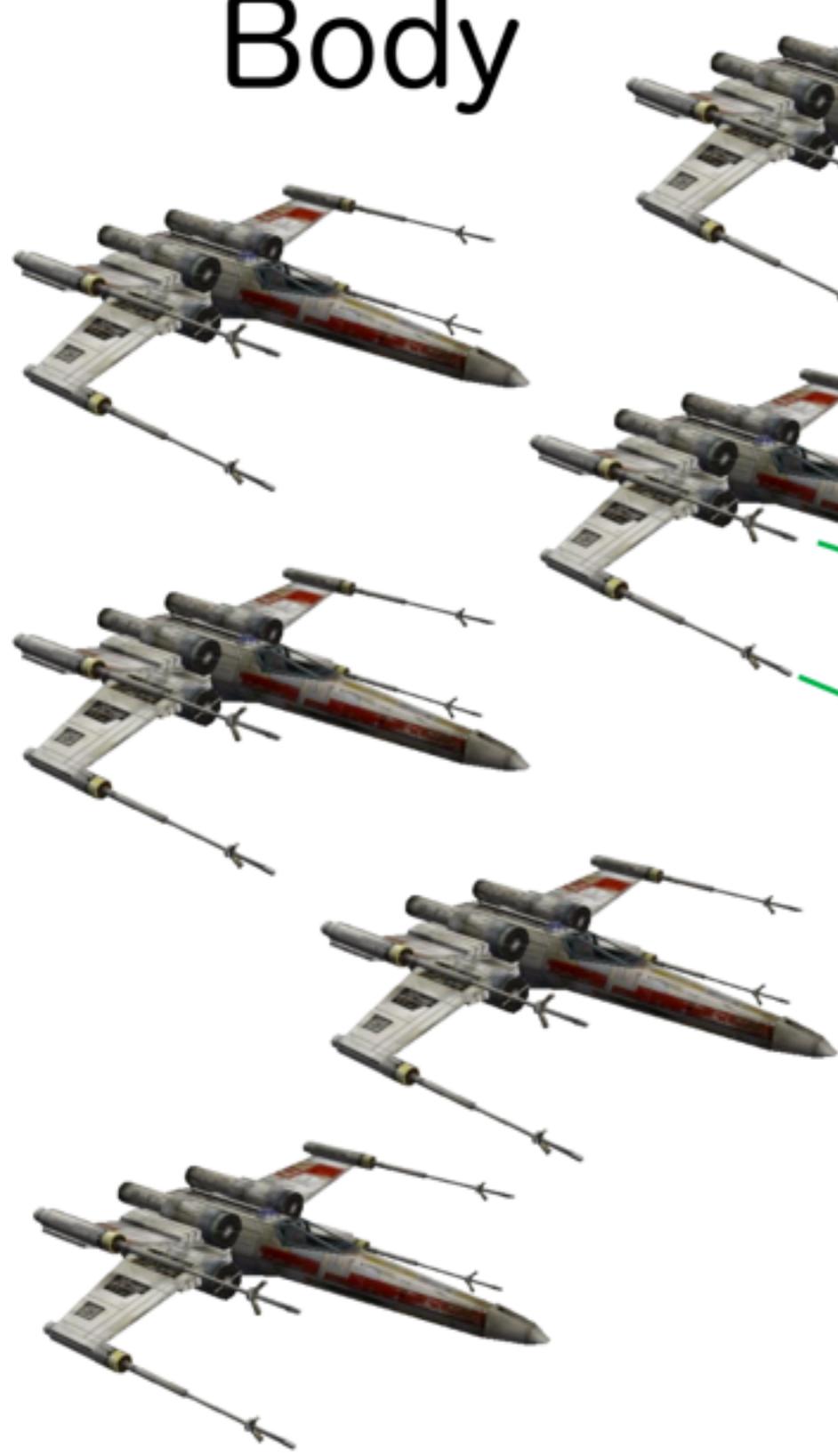


## Distributed Load Generation Agents

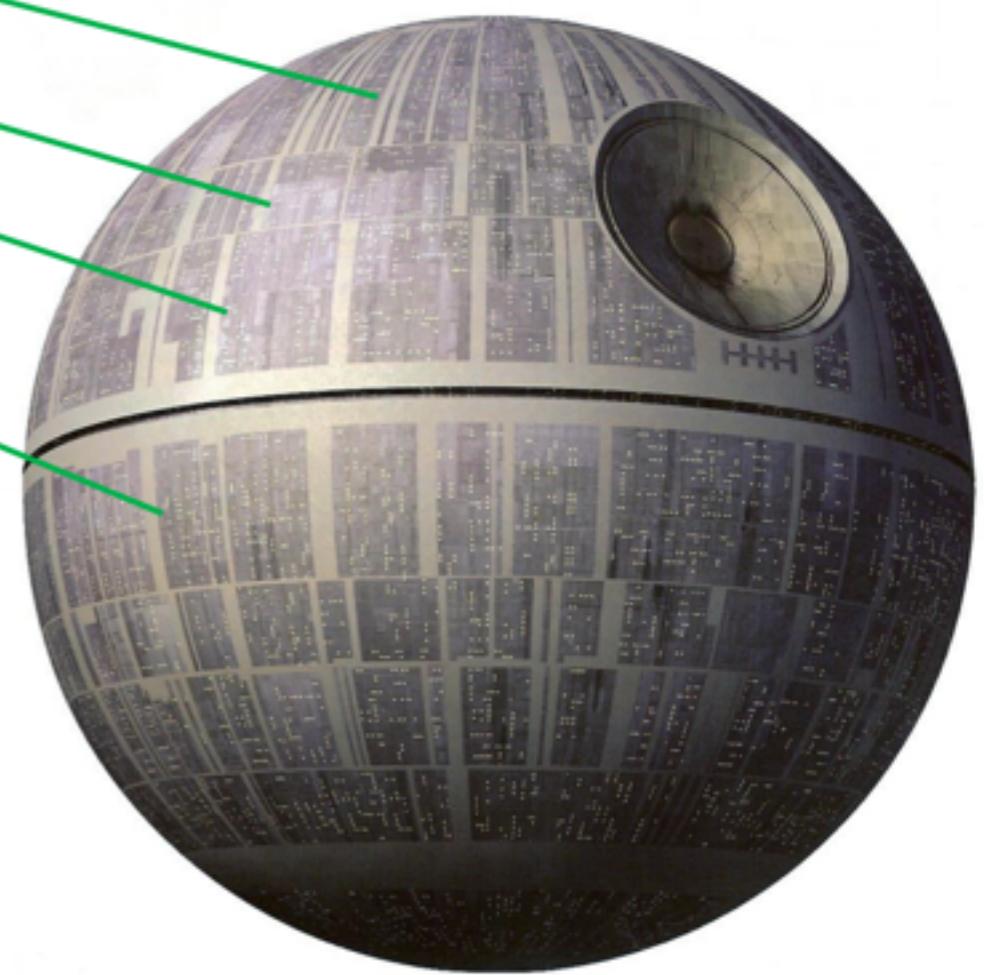


System Under Test

Body



Observer



Brain

Honesty is inherently necessary for scientifically objectively observing anything — but especially oneself.

(#3 “Dissolution of the  
body is a thing.”)

# “Where am I?”

“The studies reported that people who had once been able-bodied and then became paralyzed felt... less. Less happy than able-bodied people, less sad than able-bodied people. Just less.”

# “Where am I?”

“Our *being* is rooted in a body-state. If I were able to remove from your brain, the representation of your body, you would not know that you were you.”

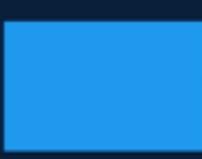
Mutually-recursive  
consciousness I/O:

Feedback causes a *completely new kind of distraction*.

sensors

signals

brain



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- **Examples**
- Outcomes

a non-example:  
the resolution of paradox

holding a baby

writing a poem

time slowing down

time speeding up

time going...  
backward?

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- Examples
- **Outcomes**

outcomes: what happens  
**after** the meditation?

perception is relative  
(with others)



perception is relative  
(with yourself)





# “Where am I?”

“Honey, don’t forget what  
the half-life is on the  
autonomic nervous system.”

The autonomic nervous system is what makes — and keeps — you angry.

(And afraid and sad and anxious and...)

Vipassana is a systematic practice to calm the nervous system (and brain?) so that every sensory input can be analyzed rationally.

Hacking is usually about *removing* mystery (“magic”).

Vipassana appears to *extend* it.

# Credit & References

- “Where Am I?” by RadioLab:
  - <http://www.radiolab.org/story/91524-where-am-i/>
- Douglas Hofstadter’s StrangeLoop 2013 Keynote:
  - <http://www.infoq.com/presentations/strange-loop-keynote>
- “Godel, Escher, Bach”
- “I am a Strange Loop”
- [www.catb.org/esr/faqs/hacker-howto.html](http://www.catb.org/esr/faqs/hacker-howto.html)
- “Man” by Jetro Cabau Quirós from the Noun Project
- “Brain” by Sergey Demushkin from the Noun Project
- Michael Abrash on VR:
  - <https://www.youtube.com/watch?v=XVCthGEFwHw>
- On Vipassana:
  - <http://blog.deobald.ca/2013/02/an-atheists-glimpse-of-god.html>
- On Drugs & Meditation: