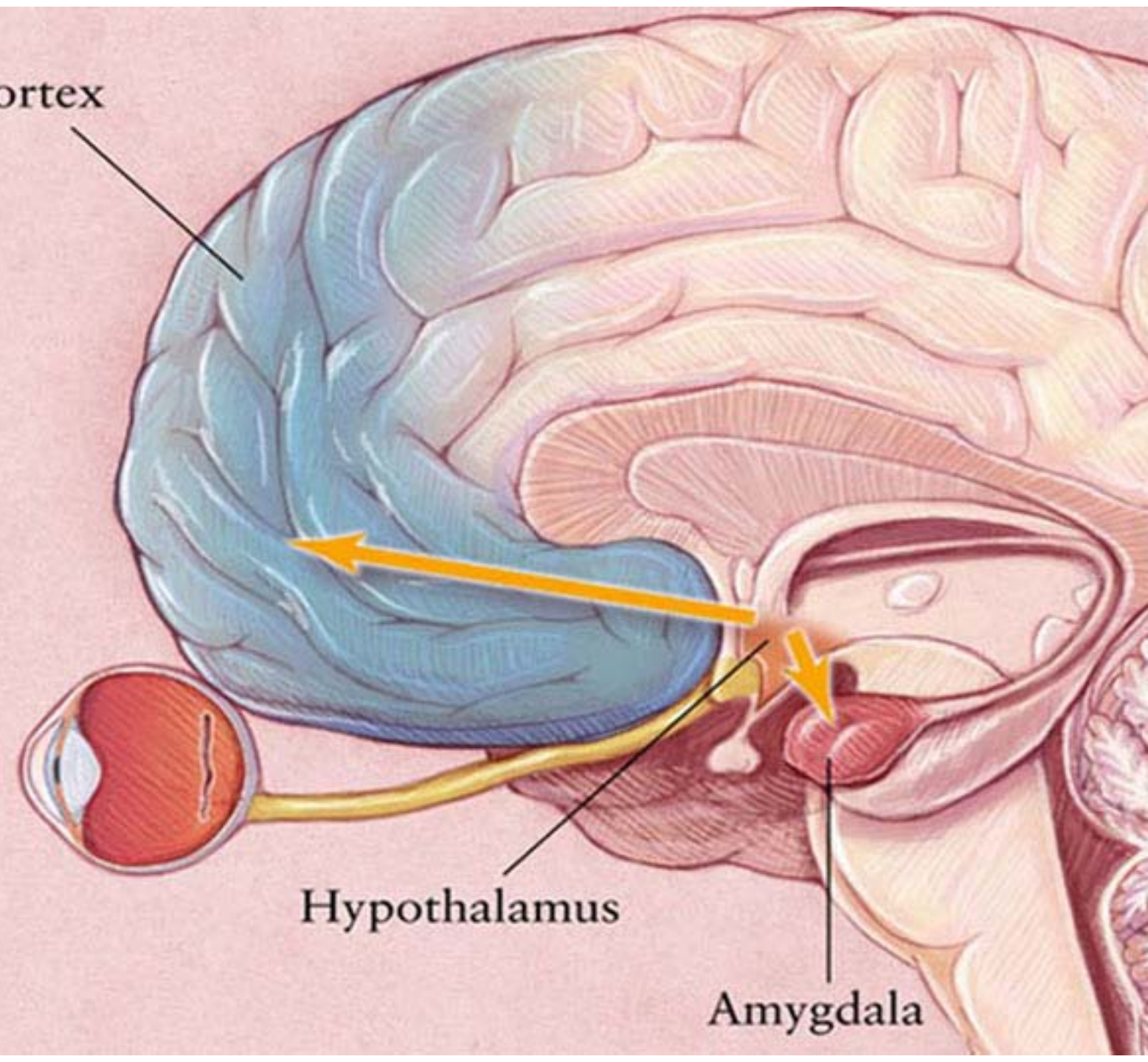


*The Emotional Brain*, Joseph LeDoux, Simon&Schuster, 1996



Cortex

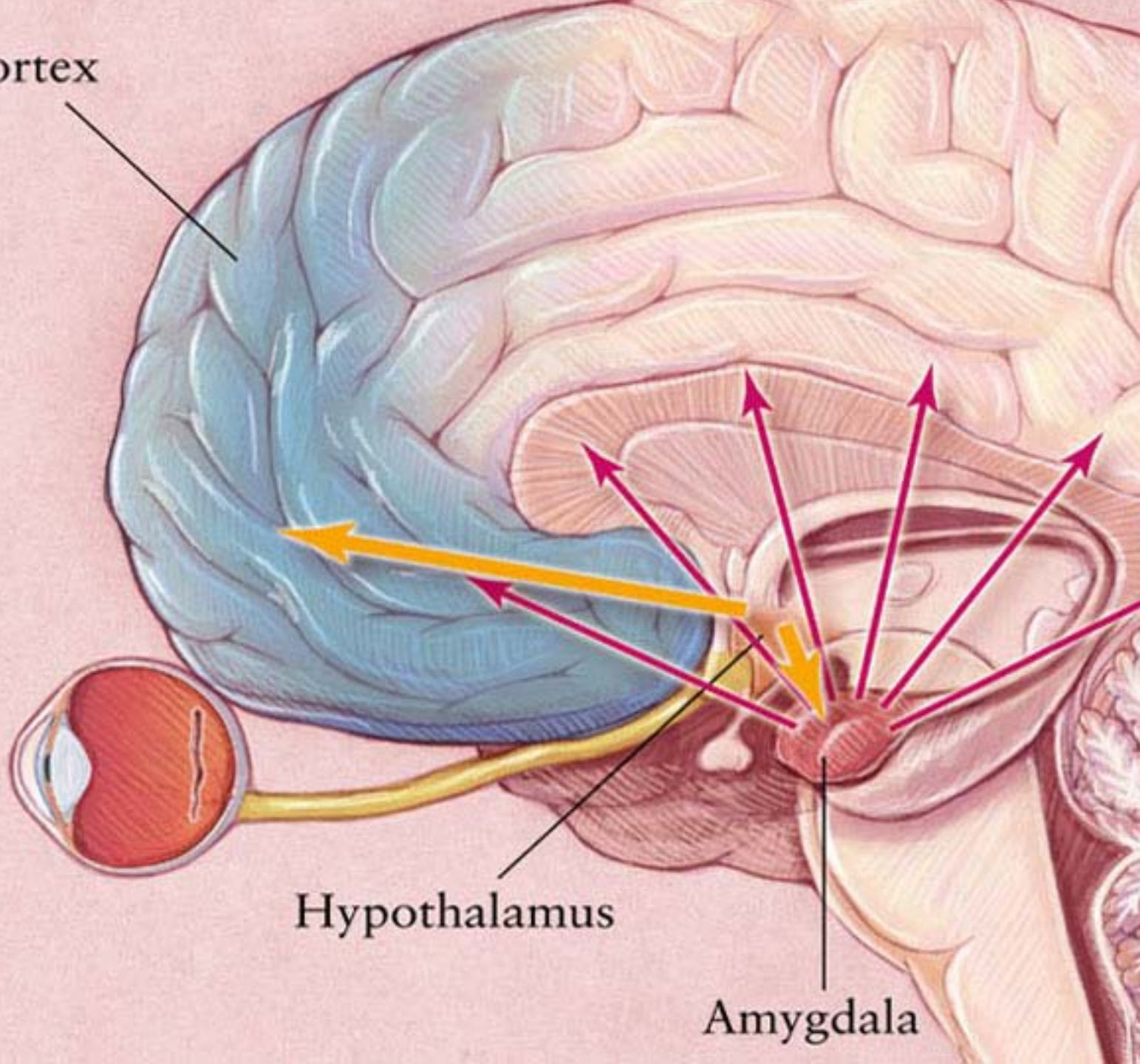


Hypothalamus

Amygdala



Cortex

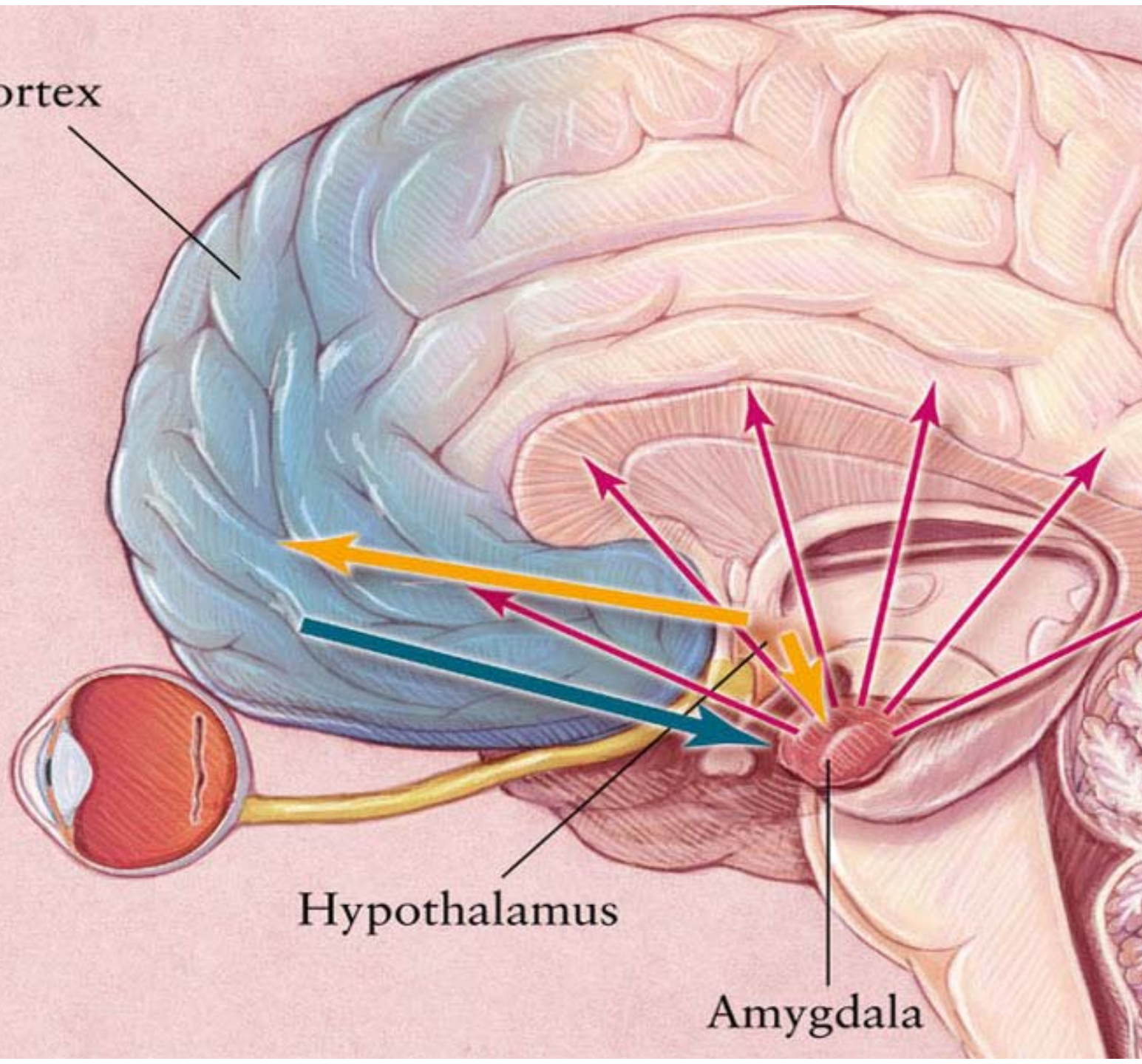


Hypothalamus

Amygdala



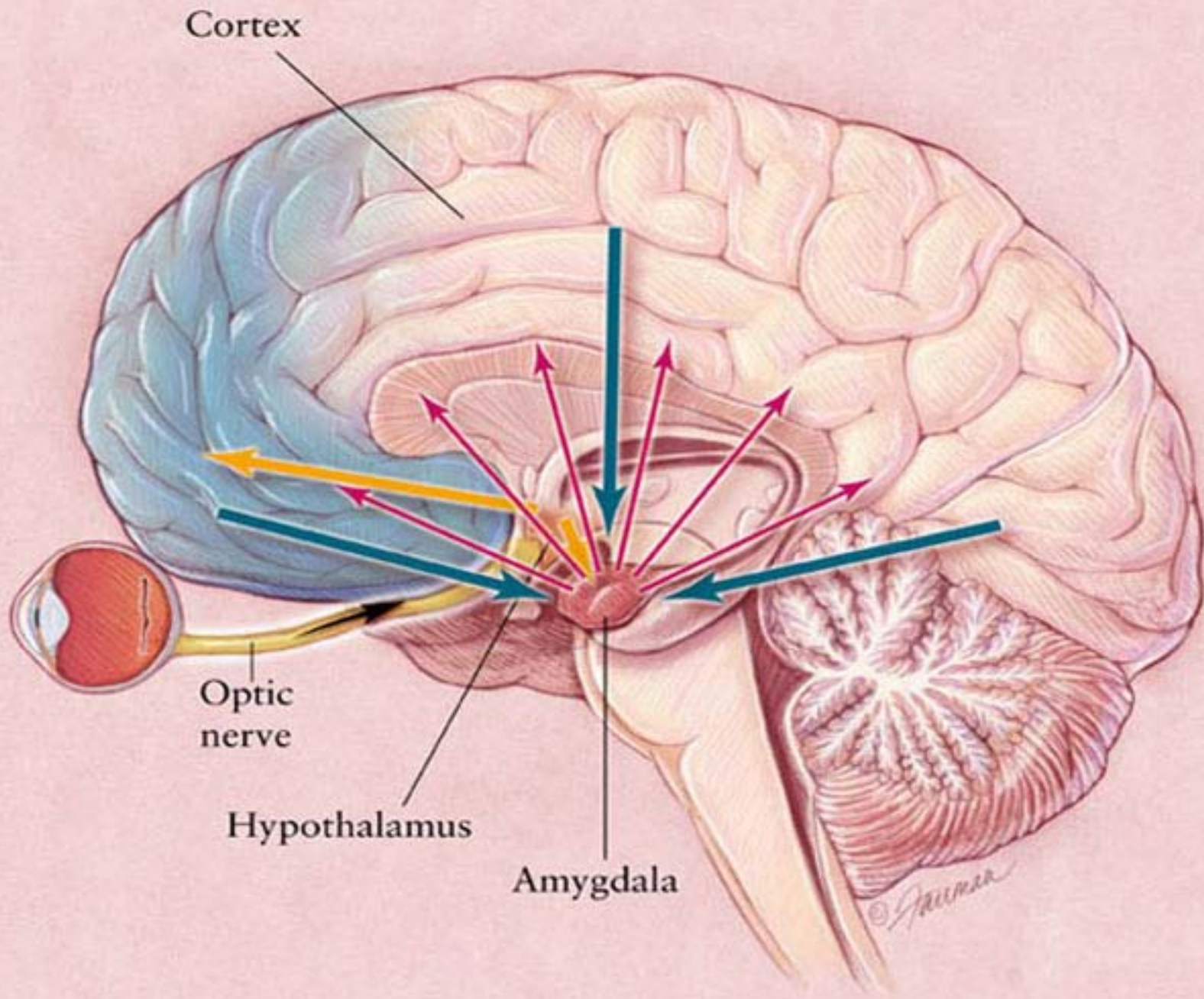
Cortex



Hypothalamus

Amygdala





Cortex

Optic  
nerve

Hypothalamus

Amygdala

© Fauna



# Bounded Rationality

(Models of Bounded Rationality, Herbert Simon,  
MIT Press, 1982)

**When we don't have all the time,  
all the information, or all the  
intellectual ability to make a  
completely fact-based analytical  
decision.**



# RISK PERCEPTION FACTORS

(*The Perception of Risk*, Paul Slovic, ed.  
Earthscan Press, 2000)

Psychological factors by which we gauge what to be afraid of and how afraid to be.

The characteristics of a risk,  
apart from the facts.



# **RISK PERCEPTION FACTORS**

**Psychological factors by which  
we gauge what to be afraid of and  
how afraid to be.**

**The characteristics of a risk,  
apart from the facts.**





# 1. TRUST

## **(More Afraid)**

- Anything connected with industry
- Communications from politicians
- A decision making process that's closed

## **(Less Afraid)**

- Anything connected with consumer groups
- Communications from neutral experts (doctors, academics)
  - A decision making process that's open



# 1. TRUST

- **In the communicator**
- **In the organization that's supposed to protect you**
- **In the organization creating the risk**
- **In the process**



## **2. HARM v. BENEFIT**

- **Nuclear radiation in a medical setting**
- **Nuclear radiation in non-medical setting**
- **Vaccines, prescription drugs, using a cell phone while you drive.**

# **3. CONTROL**

**(ability to influence events  
as they occur)**

## **(More Afraid)**

- **Riding as a passenger in the front seat of a motor vehicle**
- **A process in which you can NOT participate**

## **(Less Afraid)**

- **Driving a motor vehicle**
- **A process in which you CAN participate**



# 4. CHOICE

(is the risk voluntary or imposed)

**(More Afraid)**

- Food with a potentially harmful ingredient NOT listed on the label
- The government chooses you for duty at an atomic test site.

**(Less Afraid)**

- Food with a harmful ingredient that IS listed on the label
- You volunteer for duty at an atomic test site.

# 5. NATURAL v. HUMAN-MADE

## **(More Afraid)**

- Industrial chemicals (drugs, pesticides)
- Technologies (GM food, nuclear radiation)
- Terrorism

## **(Less Afraid)**

- Organic foods and herbal remedies
- Solar radiation, cancer from natural DNA mutation
- Severe weather



QuickTime™ and a  
DV/DVCPRO - NTSC decompressor  
are needed to see this picture.

# 6. DREAD

## **(More Afraid)**

- Anything associated with radiation (cancer)
- Pesticides (cancer)
- Plane Crash

## **(Less Afraid)**

- Heart disease (leading cause of death in the U.S.)
- Flu
- Food poisoning



# 7. CATASTROPHIC or CHRONIC

**(More Afraid)**

- Terrorism
- Plane crashes
- Nuclear “disaster” (e.g. Chernobyl)

**(Less Afraid)**

- Heart disease
- Motor vehicle crashes
- Air pollution from fossil fuels

# 8. UNCERTAINTY

*(When we don't have all the answers, or we have them but don't understand them.)*

**(More Afraid)**

- New technologies
- Complex technologies/ (nuclear power, chemicals, GM foods)
- Conflicting scientific studies (hormone repl. therapy)

**(Less Afraid)**

- Artificial sweeteners, microwave ovens, electrical & magnetic fields, fossil fuels.



# 9. ME OR THEM

- **Terrorism to Americans in “The HoMEland” after September 11, 2001**
- **Radiation from power lines when such a line is installed near your home**
- **HIV/AIDS to those in high risk groups.**

# 10. NEW or FAMILIAR

## (More Afraid)

- West Nile Virus in year one
- Terrorist attacks in America
- Avian influenza (H5N1)

## (Less Afraid)

- West Nile Virus in year two, three....
- Terrorist attacks in Israel
- “Regular” Influenza



# 11. CHILDREN

- **Plastics in children's toys**
- **Abduction**
- **Pollution problems in schools**

# 12. PERSONIFICATION

- Fear of child abduction rises when there is a specific case in the news
- Fear of war rises after we see pictures of the dead and injured
- Concern about medical errors increases when we learn of a specific victim of a doctor's mistake





**Michelle Gardner Quinn**  
**1985 - 2006**

# 13. AWARENESS

**(More Afraid)**

- Terrorism
- Avian flu
- Nuclear power

**(Less Afraid)**

- Heart disease
- Influenza
- Fossil fuel pollution



# THE BOSTON PHOENIX

OCTOBER 21-27, 2005 | BOSTON'S LARGEST WEEKLY | FOUR SECTIONS | FREE

NEWS + FEATURES

## Smelling blood on Bush

THE MEDIA FINALLY  
WAKE UP

by Mark Jurkowitz  
See p 14



# YOU'RE ALL GOING TO DIE

Yes, you should be  
afraid of avian flu





# Risk Communication

(Ropeik)

**Actions, words, and other interactions that incorporate and respect the perceptions of the information recipients, intended to help people make more informed decisions about threats to their health and safety.**