

Technology and our Minds in 2018

Holland Professional Club January 2018

Eric Snyder



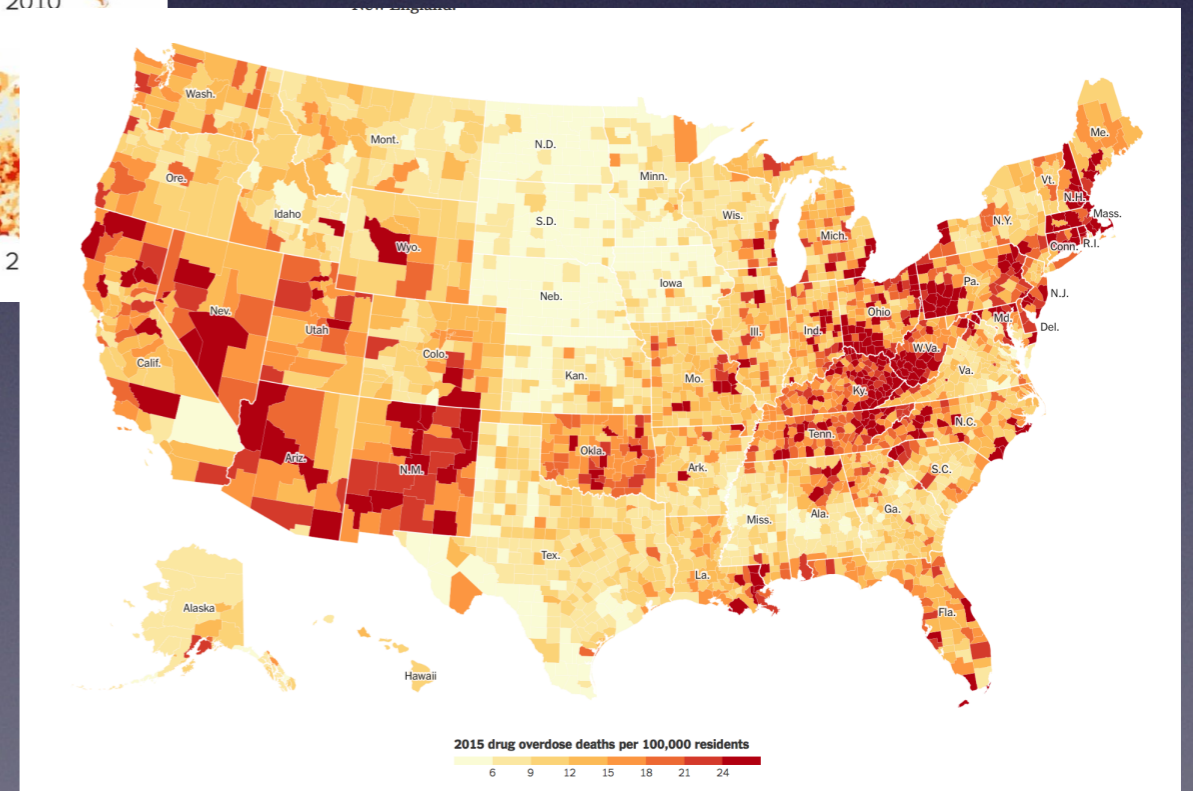
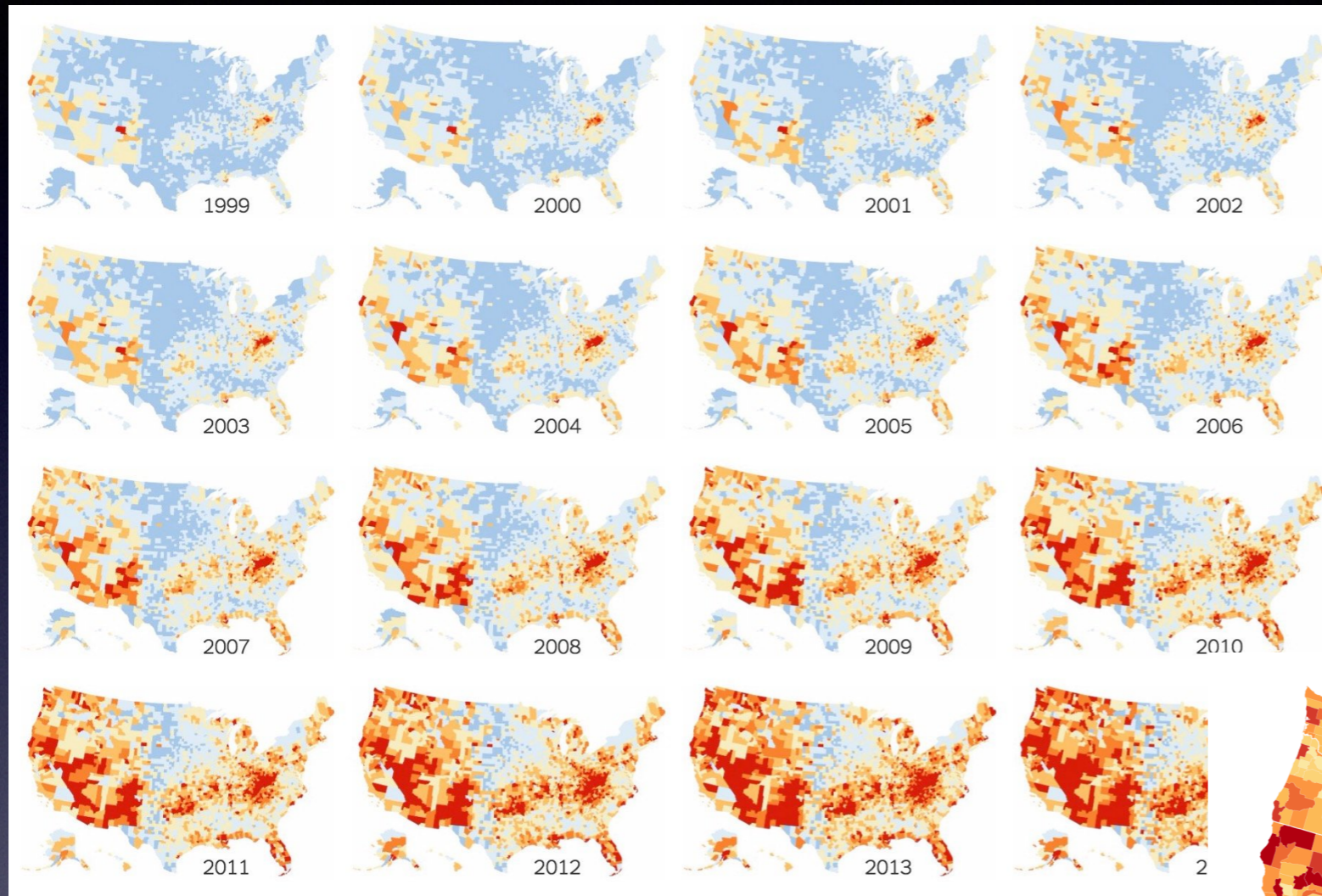




Two problems

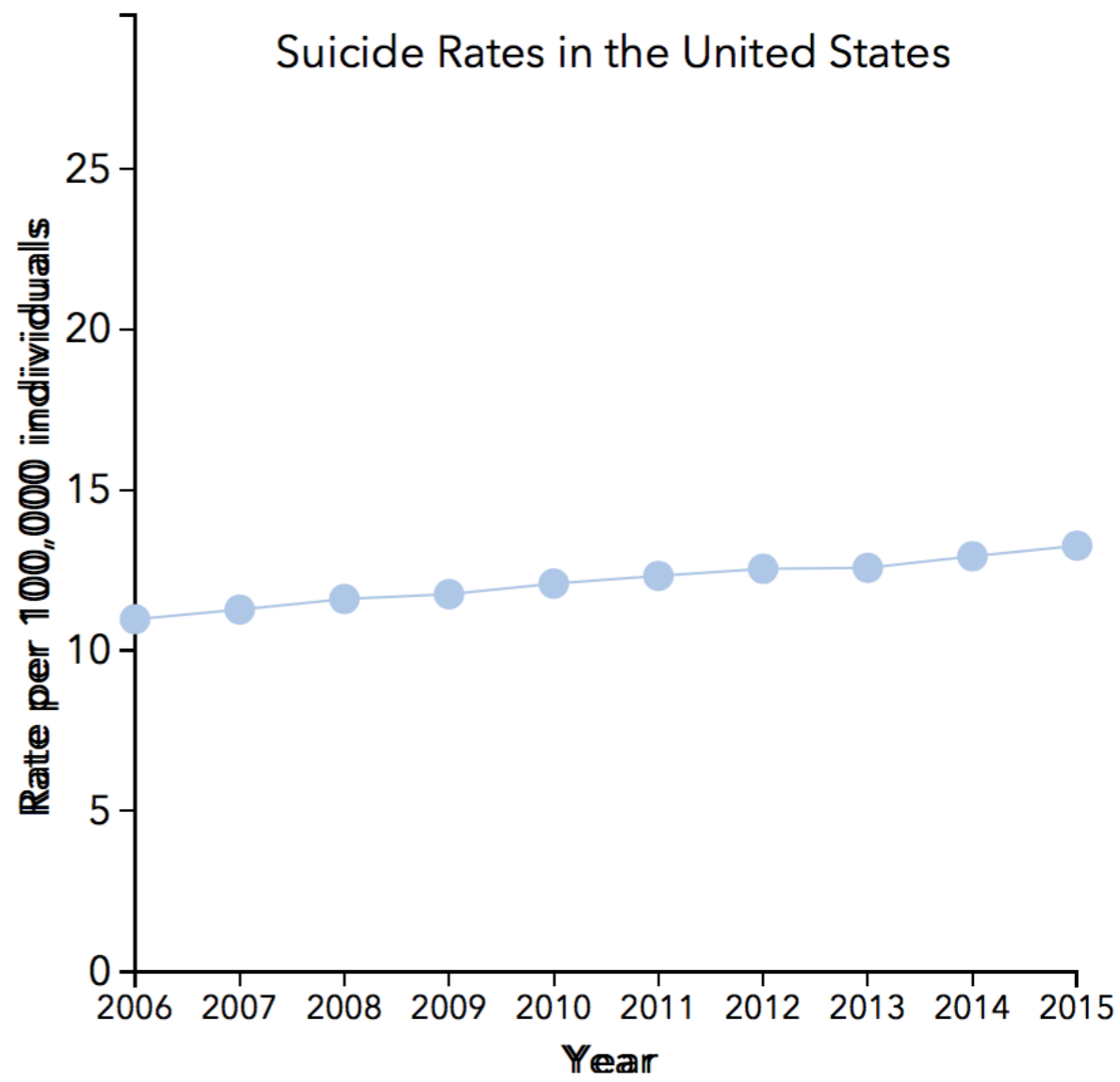
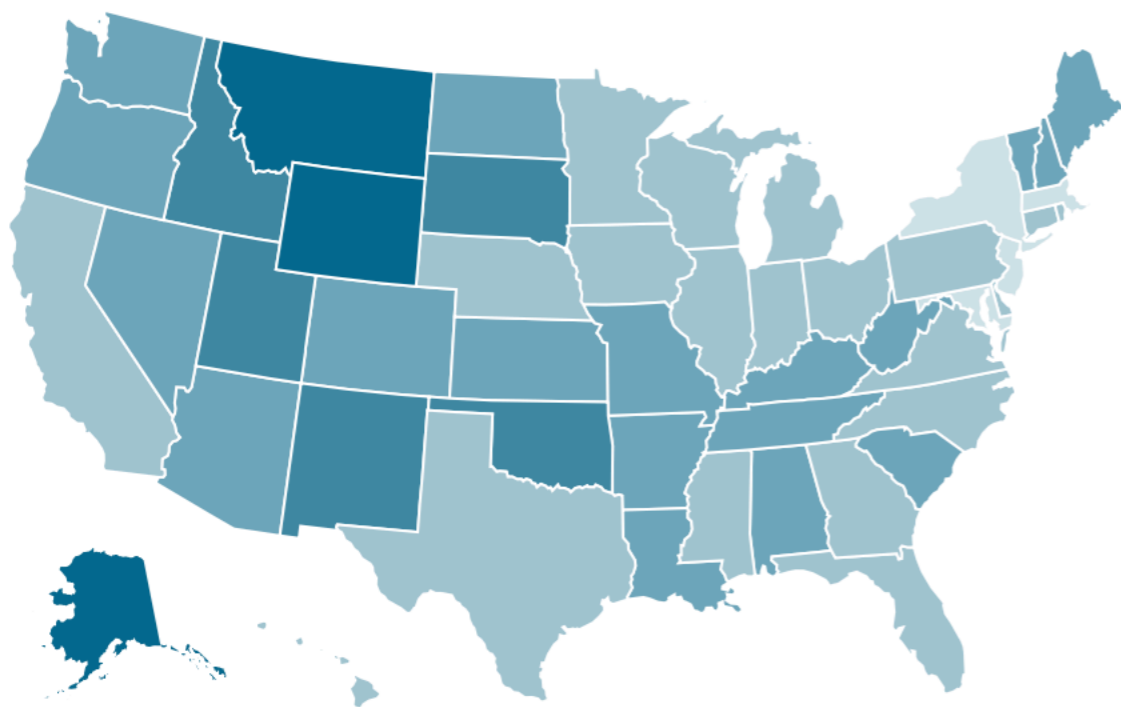
1. Opioid Epidemic

Drug overdose deaths per 100,000 residents

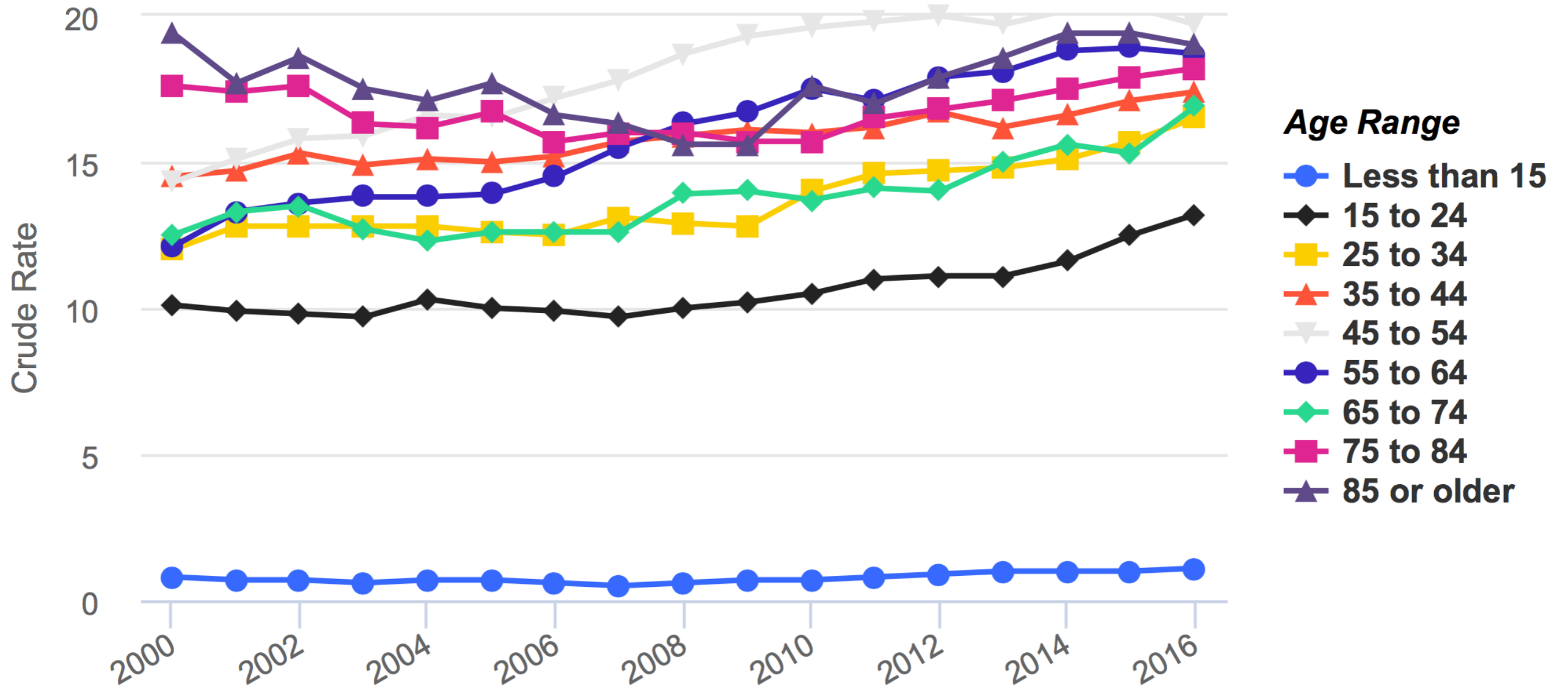


Current Crisis in our Society

2. Suicide



Suicide Rates by Age from 2000 to 2016



10 Leading Causes of Death by Age Group, United States – 2014

Rank	Age Groups										Total
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Congenital Anomalies 4,746	Unintentional Injury 1,216	Unintentional Injury 730	Unintentional Injury 750	Unintentional Injury 11,836	Unintentional Injury 17,357	Unintentional Injury 16,048	Malignant Neoplasms 44,834	Malignant Neoplasms 115,282	Heart Disease 489,722	Heart Disease 614,348
2	Short Gestation 4,173	Congenital Anomalies 399	Malignant Neoplasms 436	Suicide 425	Suicide 5,079	Suicide 6,569	Malignant Neoplasms 11,267	Heart Disease 34,791	Heart Disease 74,473	Malignant Neoplasms 413,885	Malignant Neoplasms 591,699
3	Maternal Pregnancy Comp. 1,574	Homicide 364	Congenital Anomalies 192	Malignant Neoplasms 416	Homicide 4,144	Homicide 4,159	Heart Disease 10,368	Unintentional Injury 20,610	Unintentional Injury 18,030	Chronic Low. Respiratory Disease 124,693	Chronic Low. Respiratory Disease 147,101
4	SIDS 1,545	Malignant Neoplasms 321	Homicide 123	Congenital Anomalies 156	Malignant Neoplasms 1,569	Malignant Neoplasms 3,624	Suicide 6,706	Suicide 8,767	Chronic Low. Respiratory Disease 16,492	Cerebro-vascular 113,308	Unintentional Injury 136,053
5	Unintentional Injury 1,161	Heart Disease 149	Heart Disease 69	Homicide 156	Heart Disease 953	Heart Disease 3,341	Homicide 2,588	Liver Disease 8,627	Diabetes Mellitus 13,342	Alzheimer's Disease 92,604	Cerebro-vascular 133,103
6	Placenta Cord. Membranes 965	Influenza & Pneumonia 109	Chronic Low. Respiratory Disease 68	Heart Disease 122	Congenital Anomalies 377	Liver Disease 725	Liver Disease 2,582	Diabetes Mellitus 6,062	Liver Disease 12,792	Diabetes Mellitus 54,161	Alzheimer's Disease 93,541
7	Bacterial Sepsis 544	Chronic Low Respiratory Disease 53	Influenza & Pneumonia 57	Chronic Low Respiratory Disease 71	Influenza & Pneumonia 199	Diabetes Mellitus 709	Diabetes Mellitus 1,999	Cerebro-vascular 5,349	Cerebro-vascular 11,727	Unintentional Injury 48,295	Diabetes Mellitus 76,488
8	Respiratory Distress 460	Septicemia 53	Cerebro-vascular 45	Cerebro-vascular 43	Diabetes Mellitus 181	HIV 583	Cerebro-vascular 1,745	Chronic Low. Respiratory Disease 4,402	Suicide 7,527	Influenza & Pneumonia 44,836	Influenza & Pneumonia 55,227
9	Circulatory System Disease 444	Benign Neoplasms 38	Benign Neoplasms 36	Influenza & Pneumonia 41	Chronic Low Respiratory Disease 178	Cerebro-vascular 579	HIV 1,174	Influenza & Pneumonia 2,731	Septicemia 5,709	Nephritis 39,957	Nephritis 48,146
10	Neonatal Hemorrhage 441	Perinatal Period 38	Septicemia 33	Benign Neoplasms 38	Cerebro-vascular 177	Influenza & Pneumonia 549	Influenza & Pneumonia 1,125	Septicemia 2,514	Influenza & Pneumonia 5,390	Septicemia 29,124	Suicide 42,773

Data Source: National Vital Statistics System, National Center for Health Statistics, CDC.
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.



Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

The Brain

- What is it?
- How does it work?
- What model do we have to understand it?
- How can we study it?

7 Reasons the iPhone has made our lives worse

1. They're bad for our brains

1. Addiction





SCREEN RECORDING

now

Screen Recording video saved to Photos

SIRI APP SUGGESTIONS

Show More



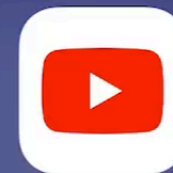
Clash Royale



Photos



Safari



YouTube

SIRI SEARCH SUGGESTIONS

Clear

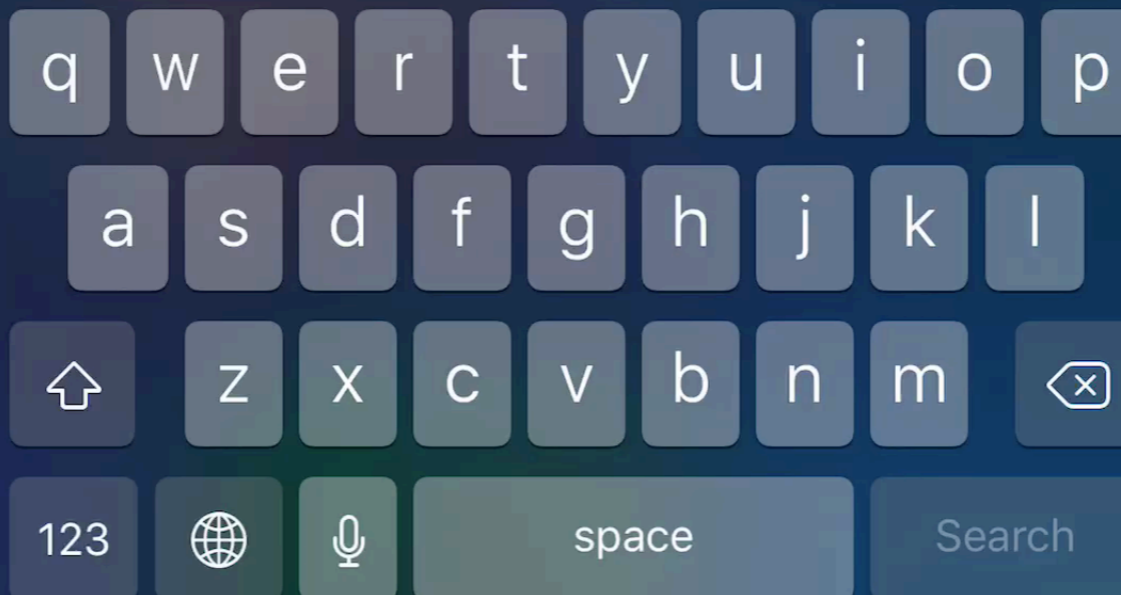
🔍 ravens

🔍 amazon prime

🔍 ello

🔍 ncf

🔍 fox



7 Reasons the iPhone has made our lives worse

1. They're bad for our brains
2. While we're busy on our phones, we're ignoring the world around us.
3. We're also ignoring each other.
4. They're ruining our relationships.
5. They promote FOMO ("fear of missing out") syndrome
6. We have come to need constant validation.
7. We're expected to be available for work 24-7.

When do we use our phones?



Facebook

- Most commonly used website
- More than 1 billion users world wide.
- Americans spend 84 billion minutes per week in religious activities and 56 billion minutes per week on facebook.



Social

Why Our Brains Are
Wired to Connect

Matthew D. Lieberman

*"A brilliant and beautiful exploration of how and why we are wired together,
by one of the field's most preeminent pioneers." —DANIEL GILBERT,
professor, Harvard University, and bestselling author of Stumbling on Happiness*

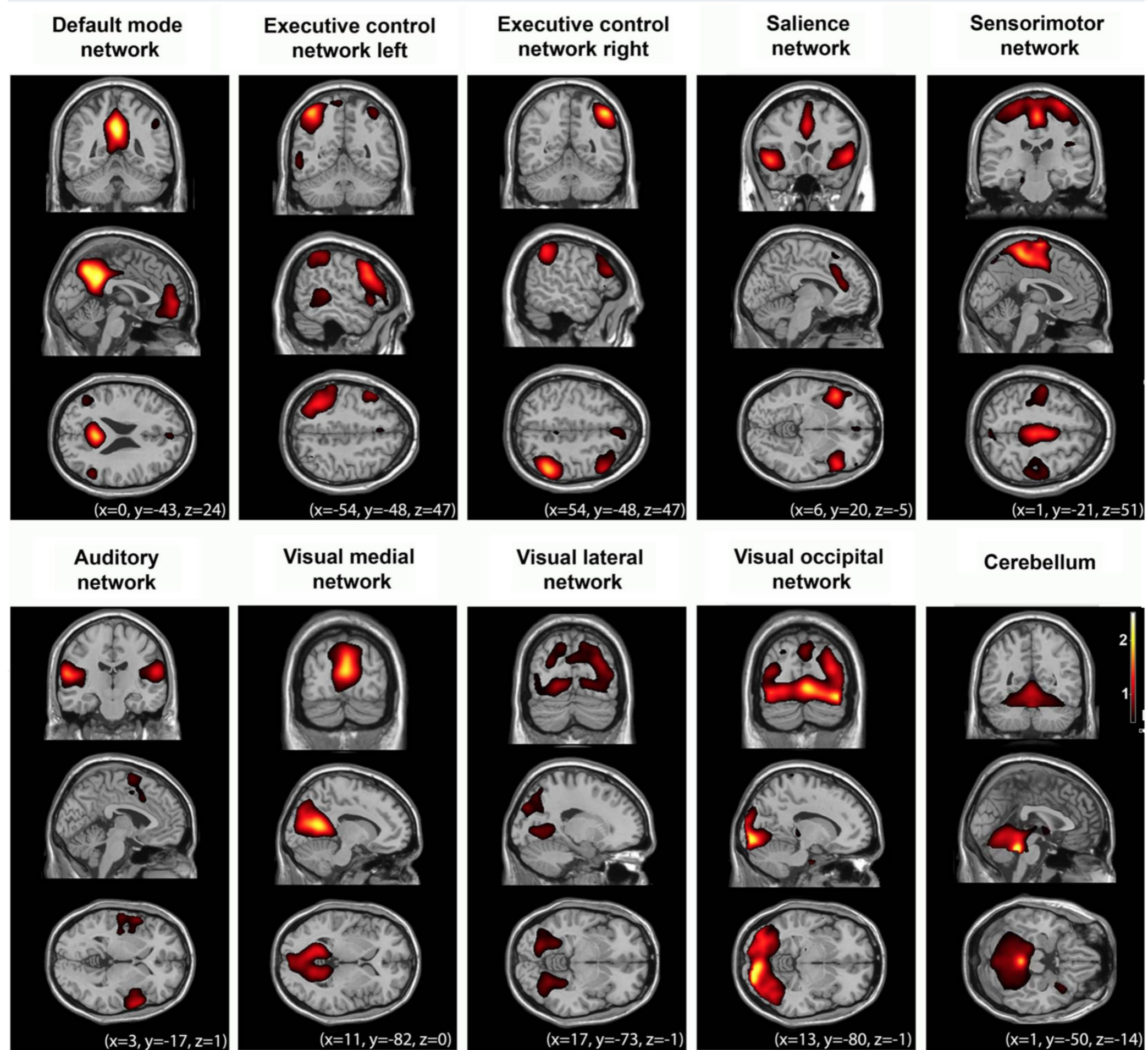
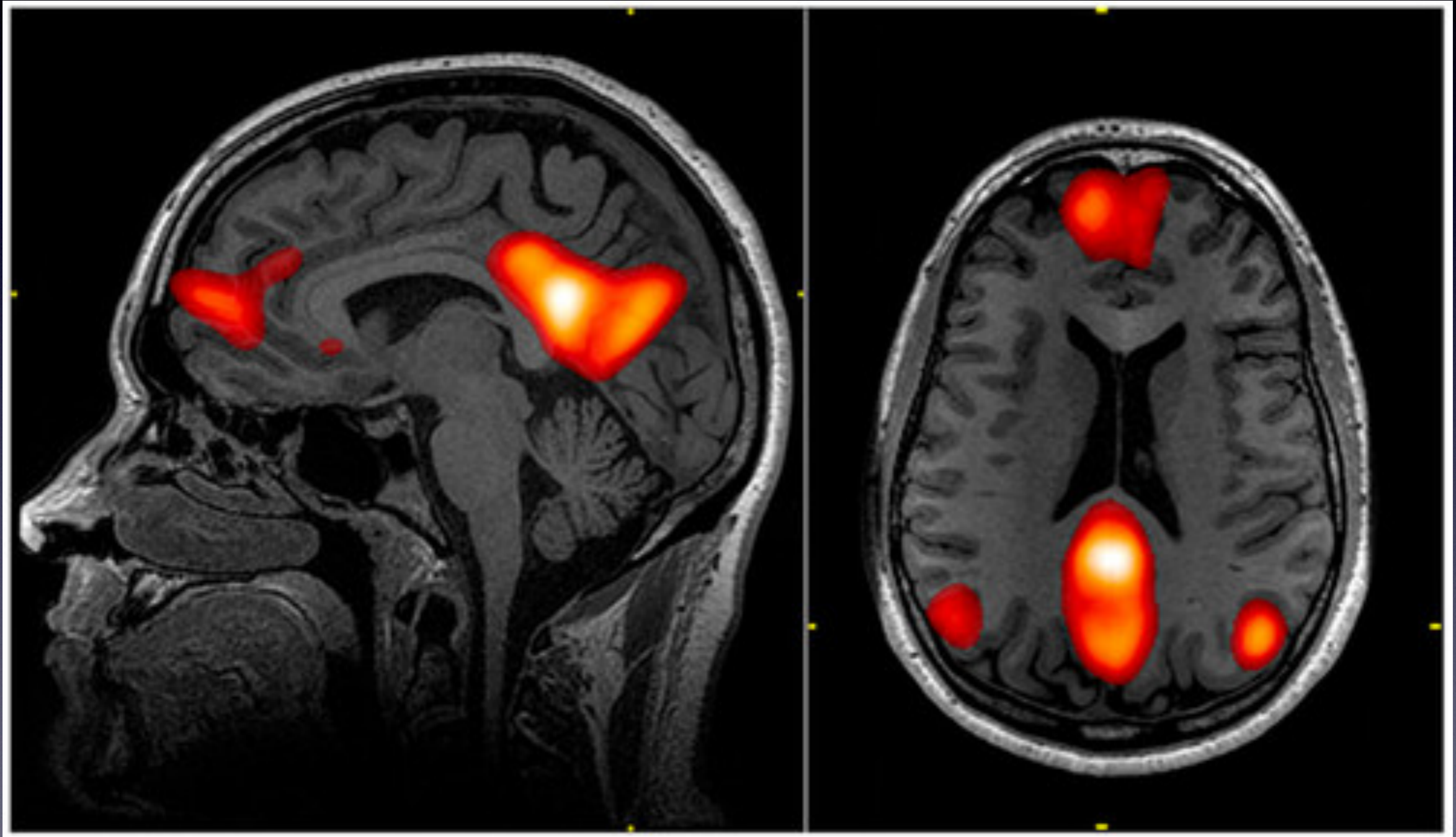


Figure 1. Cerebral networks identified with fMRI. *Resting State Networks and Consciousness* (2012)
 Lizette Heine, Andrea Soddu, Francisco Gómez, Audrey Vanhaudenhuyse, Luaba Tshibanda, Marie Thonnard,
 Vanessa Charland-Verville, Murielle Kirsch, Steven Laureys, and Athena Demertzi doi:10.3389/fpsyg.2012.00295

Default Mode Network



Andrew Meltzoff





baby
einstein™



Maslow Had it
WRONG

Our REAL Hierarchy
of Needs

Meaning



Physical Needs

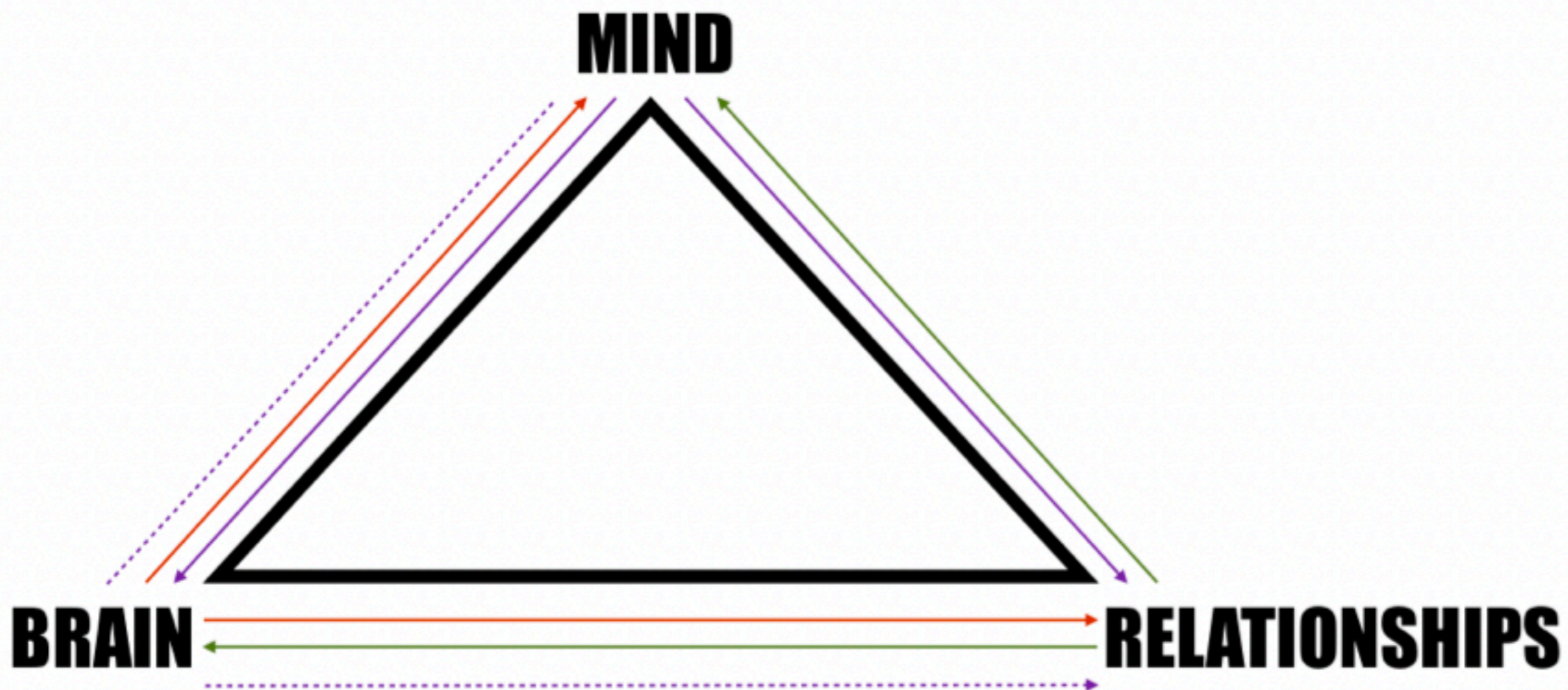


Social Needs



Matthew Lieberman, PhD

DAN SIEGEL'S MODEL



RELATIONSHIPS/
(+) INTERACTION

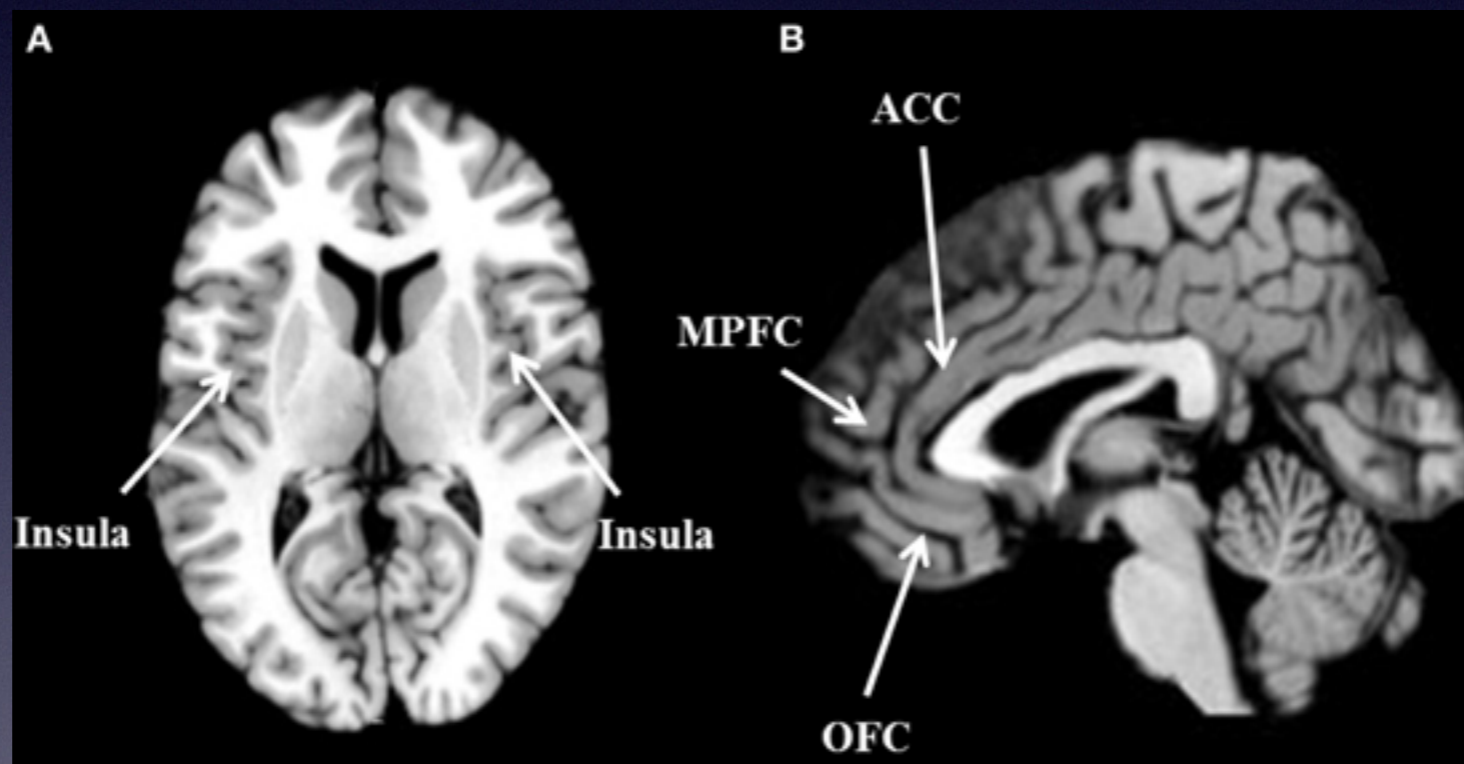
The Mind

The Brain

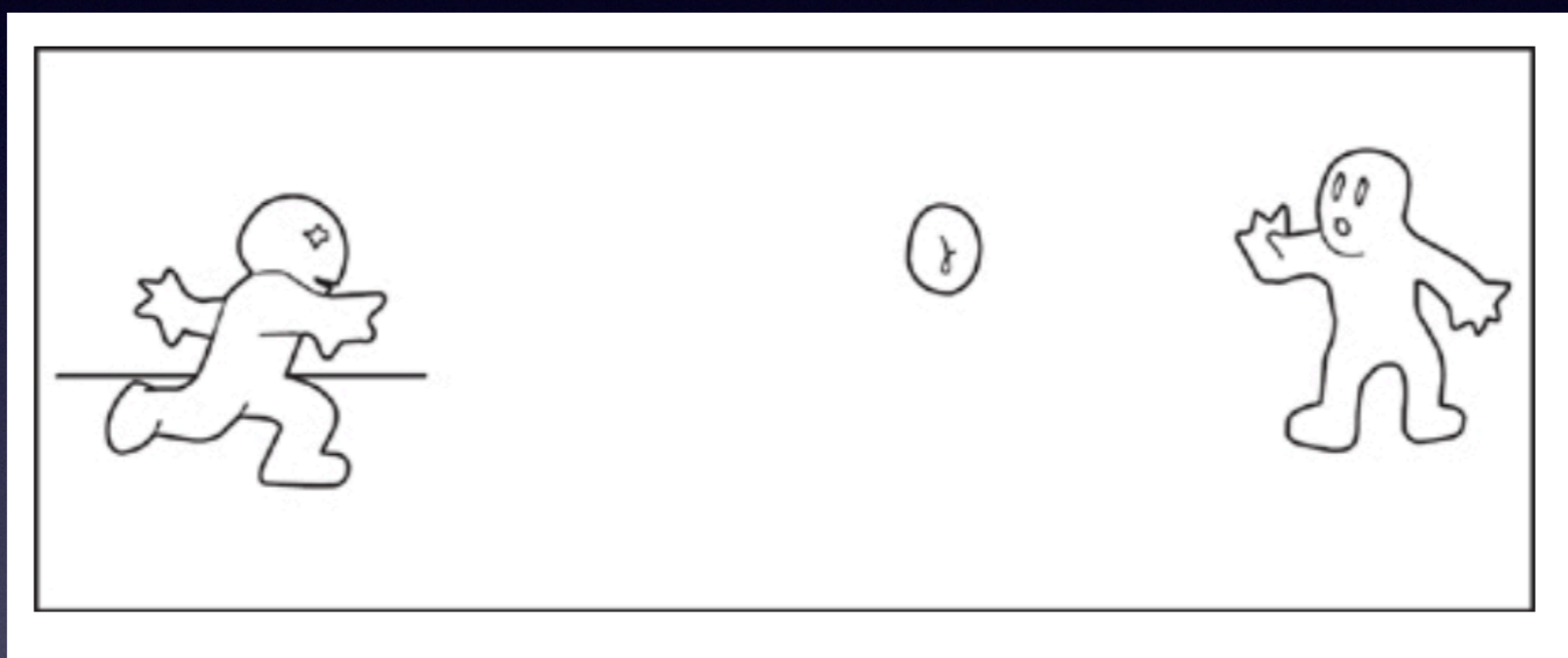
The iPhone



Dorsal Anterior Cingulate Cortex and Anterior Insula



Cyberball Game



Physical Pain = Social Pain





Walsh

*From a
Honduran
Friend.*

"It keeps me from looking at my phone every two seconds."