



# The Science Behind Human Hacking

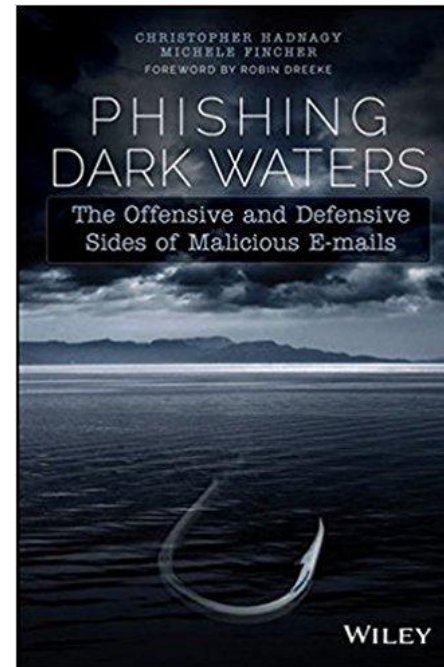
Chris Hadnagy  
Social-Engineer, LLC

**Bold  
Statement**

**75%**

13,000,000  
phish  
&

This is  
me...



**My  
Origin**

**SOCIAL**

**ANY ACT THAT INFLUENCES A  
PERSON TO MAKE A DECISION  
THAT MAY OR MAY NOT BE IN  
THEIR BEST INTERESTS**

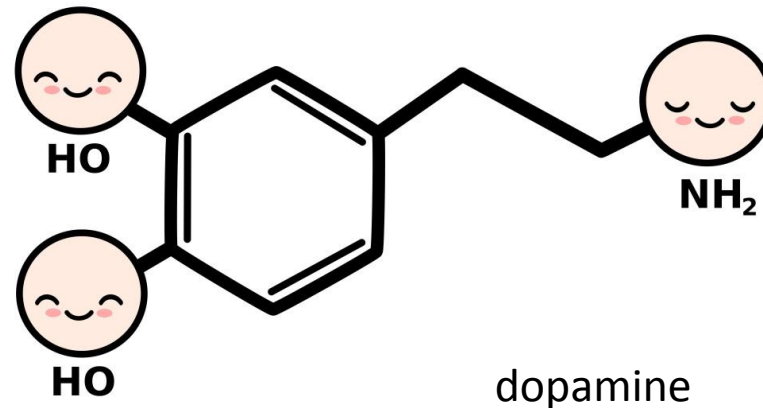
**ENGINEERING**

**Study the  
good to  
understand  
the bad**



# Chemical release allows me to make decisions I would not normally make


Why did I say yes?





My quest

“I started a quest to  
understand how we  
make those decisions  
then learn to exploit  
them...” - me



Need to  
understand  
the 4 vectors

- **Phishing**

- **Vishing**

- **SMiShing**

- **Impersonation**



Area of  
study #1:  
Ekman

- $1/25^{\text{th}}$  of a second **muscular response** to emotional stimuli
- Making the **expression** can create the emotion





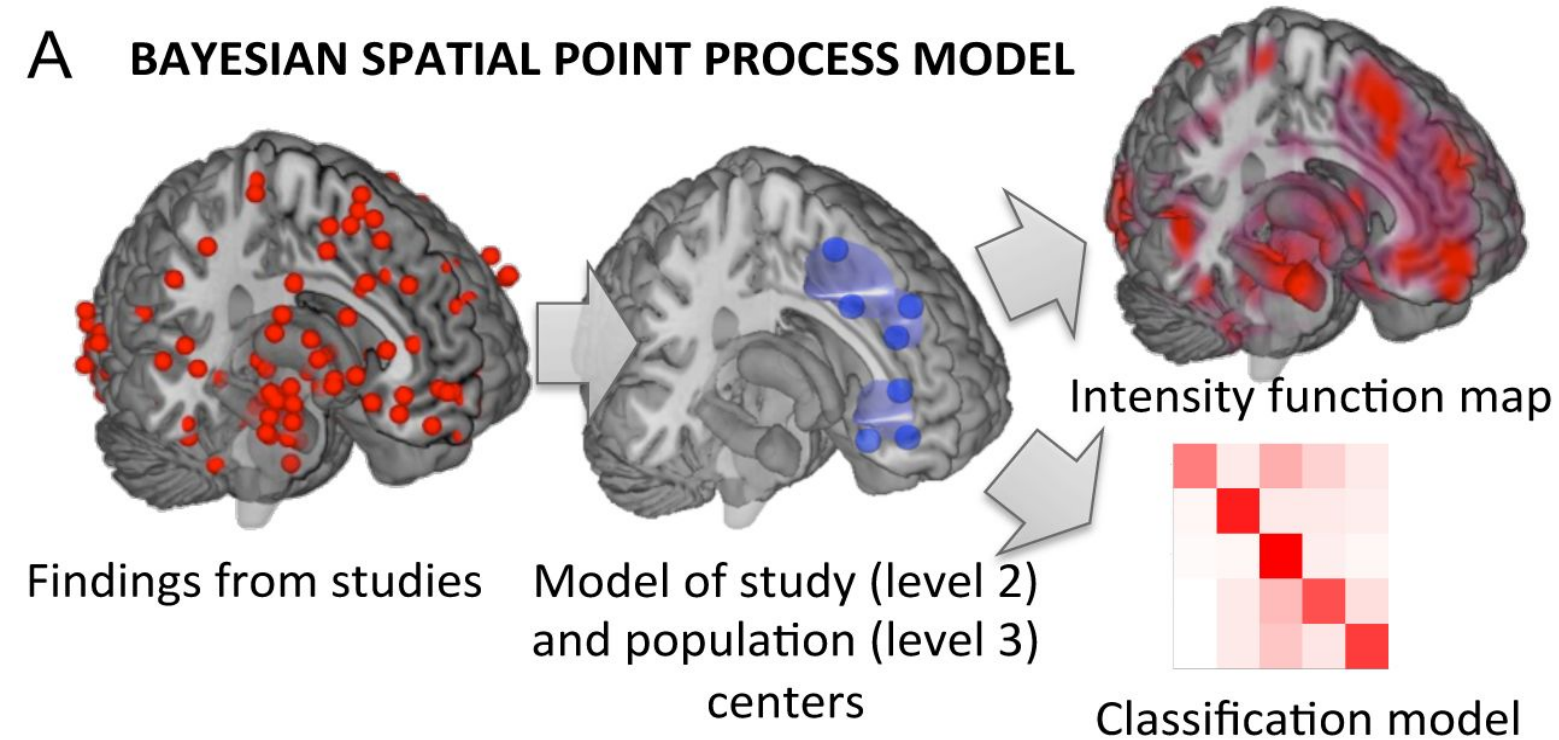
**Example**





Leave you  
feeling  
better



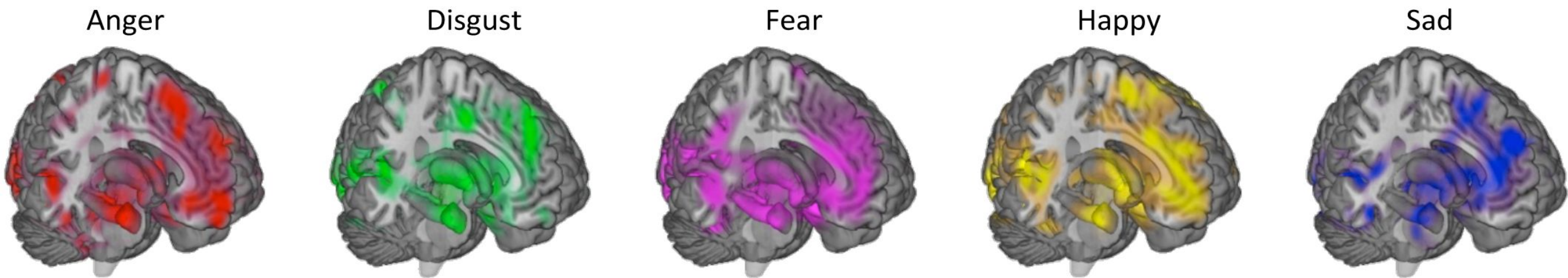


**B CLASSIFICATION ACCURACY**

True class	Anger	Disgust	Fear	Happy	Sad
Anger	0.43	0.07	0.28	0.15	0.08
Disgust	0.03	0.76	0.08	0.08	0.06
Fear	0.02	0.04	0.86	0.06	0.03
Happy	0.00	0.07	0.23	0.58	0.11
Sad	0.00	0.07	0.20	0.09	0.65

Classification based on brain

**C ESTIMATED INTENSITY MAPS FOR FIVE EMOTION CATEGORIES**



**CASE STUDY**



75%

A 3D rendered image of the text '75%' in a bold, red, sans-serif font. The characters are thick and have a slight shadow cast to the right, giving them a three-dimensional appearance. The background is plain white.



Phase 2:  
The Phone  
Call



**Oxytocin:  
compliments on  
doing something right**





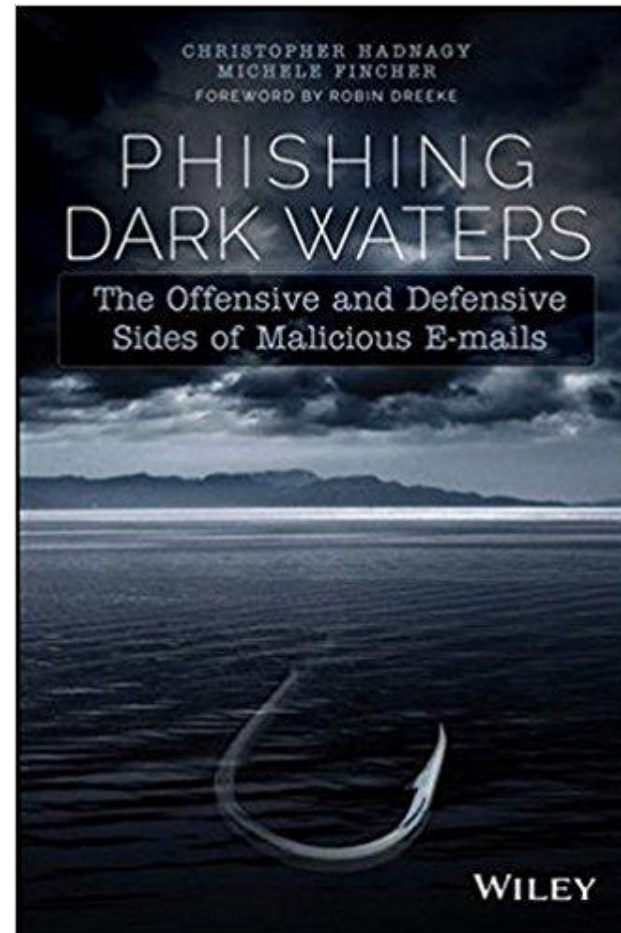
NO DON'T  
SAY IT

There is no match  
for human stupidity

**WRONG!!**

# 13,000,000

Embarrassmen  
t  
COMMENCE



Embarrasmen  
t  
COMMENCE





**The 5 Tips  
to Safety**

1. Realize it is ok to wait
2. Educate the weakness, reward the positive
3. Use technology to safeguard not as the savior
4. Actionable Policies
5. Realistic Testing... from the top down

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Human Hacking Conference  
[sevillage.org](http://sevillage.org)  
Feb 20-22



Q&A

[innocentlivesfoundation.org](http://innocentlivesfoundation.org)

