

# From Bot to Robot: How Abilities and Law Change with Physicality

*Brittany Postnikoff (@straithe)*

*Sara-Jayne Terp (@bodaceacat)*

*Wendy Knox Everette (@wendyck)*



**robot**

**Brittany  
"straithe"  
Postnikoff**



**law**

**Wendy  
Knox  
Everette**



**bot**

**Sara-Jayne  
"bodacea"  
Terp**

# introduction

# SOCIAL BOTS



Good  
will always  
defeat Evil.

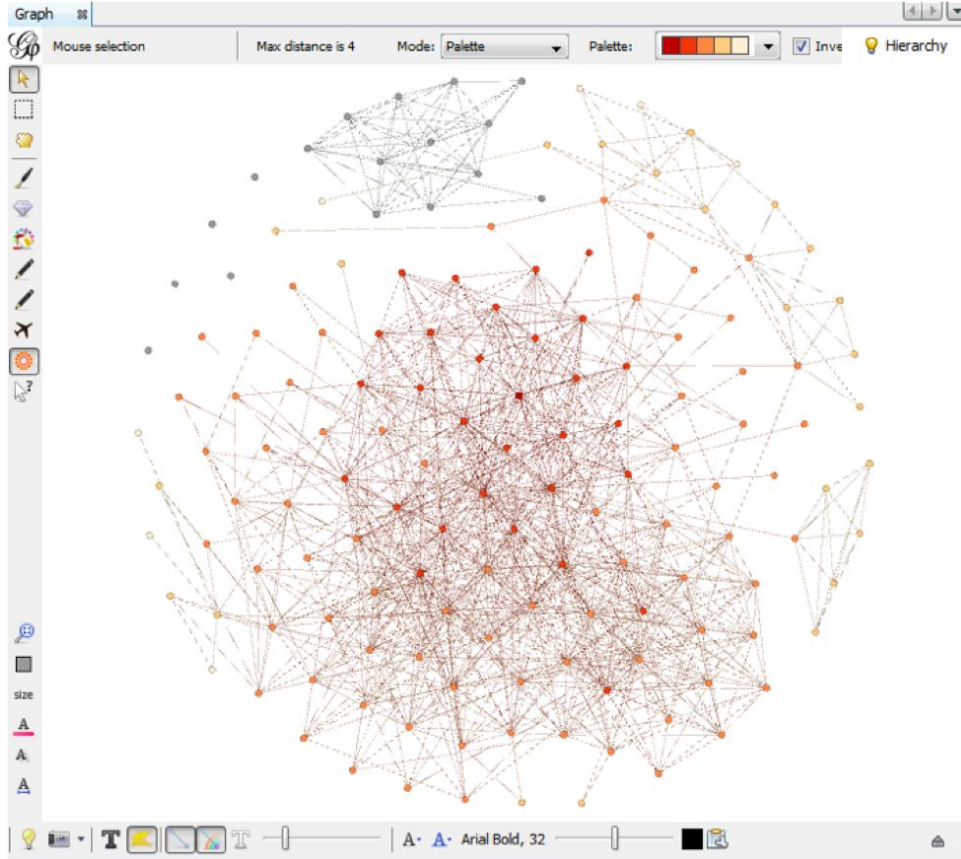
- Q Anon

| Tweets | Following | Followers |
|--------|-----------|-----------|
| 584K   | 130       | 3,614     |

[Follow](#)

EVERY DAY IS GOING TO BE A FIGHT! YOU WANT ANSWERS! THE TRUTH! THE BATTLE FOR AMERICA BEGINS TODAY! #TCOT Don't Tread on Me! Reagan Coaliti...  
BROOKLYN NEW YORK

# SOCIAL BOTNETS

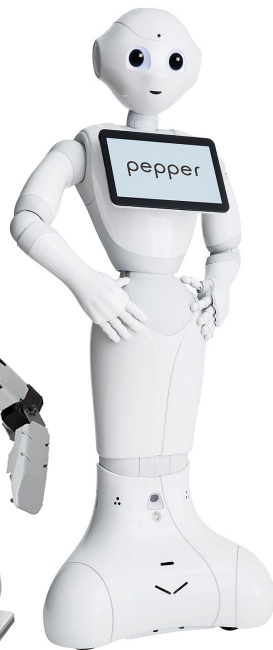
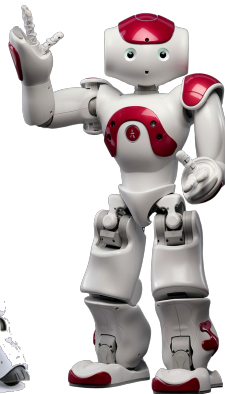


# SOCIAL ROBOTS

***"A physically embodied,  
autonomous agent, that  
communicates and interacts with  
humans on a social level."***

*Extending Legal Protection to Social Robots: The Effects of Anthropomorphism, Empathy, and Violent Behavior  
Towards Robotic Objects Kate Darling. 2016. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2044797](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2044797)*

# ROBOTS



# LEGAL FRAMEWORKS

**intent & agency**



# **TORTS, CONTRACTS, & CRIMINALS**

**can bots or robots  
commit crimes?**

# **TORTS, CONTRACTS, & CRIMINALS**

**can bots or robots  
form a contract?**

# **TORTS, CONTRACTS, & CRIMINALS**

**is a robot  
a product?**

# **PRODUCT LIABILITY AND NEGLIGENCE**

**product liability  
or negligence?**

**creating /  
acquisition**

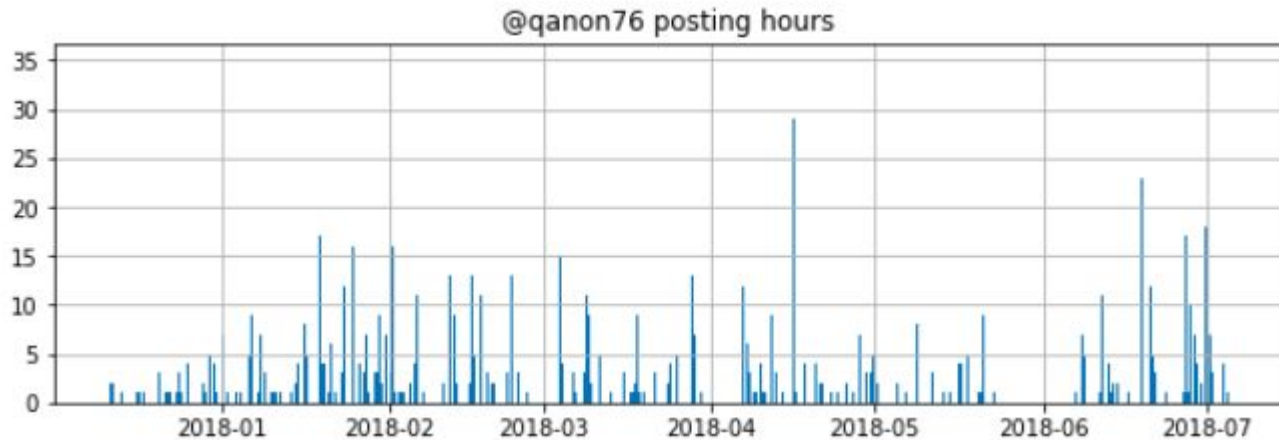
# BUYING A BOTNET

 For sale

| Provider                | Quantity | Price for 1000 accounts                      |
|-------------------------|----------|--|
| Mail.ru                 | 497984   | 1K-10K: \$6   10K-20K: \$6   20K+: \$6       |
| Mail.ru Mix             | 149252   | 1K-10K: \$6   10K-20K: \$6   20K+: \$6       |
| Mail.ru Human           | 74735    | 1K-10K: \$8   10K-20K: \$7.5   20K+: \$7     |
| Mail.ru No SPAM         | 47722    | 1K-10K: \$8   10K-20K: \$7.5   20K+: \$7     |
| Mail.ru EN              | 50674    | 1K-10K: \$8   10K-20K: \$7.5   20K+: \$7     |
| Mail.ru UA              | 104500   | 1K-10K: \$7   10K-20K: \$6.5   20K+: \$6     |
| Mail.ru Second Hand     | 69056    | 1K-10K: \$3   10K-20K: \$3   20K+: \$3       |
| Mail.ru Mix Second Hand | 31815    | 1K-10K: \$3   10K-20K: \$3   20K+: \$3       |
| Rambler.ru              | 11339    | 1K-10K: \$25   10K-20K: \$25   20K+: \$25    |
| Rambler.ru Mix          | 9347     | 1K-10K: \$25   10K-20K: \$25   20K+: \$25    |
| Gmail.com PVA SMTP      | 0        | 1K-10K: \$420   10K-20K: \$420   20K+: \$420 |
| Gmail.com USA PVA LS    | 0        | 1K-10K: \$400   10K-20K: \$400   20K+: \$400 |

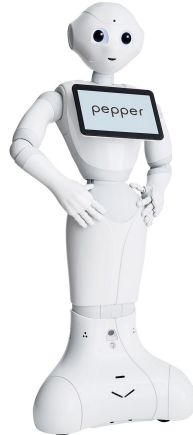
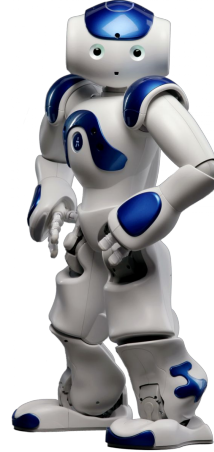
**\$100 buys  
you a lot of  
reach**

# SETTING UP BOTNETS



**don't get  
caught**

# ACQUIRING (SOCIAL) ROBOTS





# **BOTS FOR SALE: THE LAW**

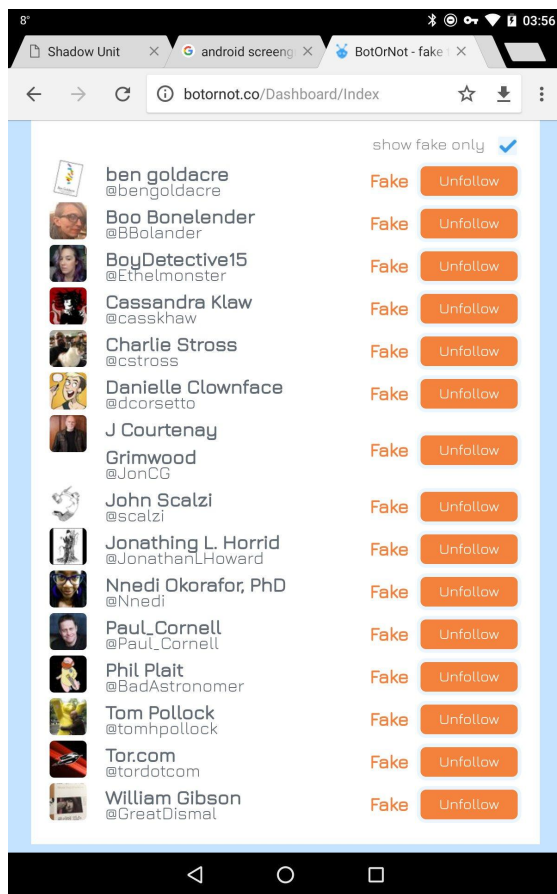
## **Computer Fraud and Abuse Act (18 USC §1030)**

# **ROBOT VS BOT AND THE LAW**

**effect of embodiment  
on analysis**

# interaction

# BOTNETS AS AMPLIFIERS



**current game:  
human attention  
and beliefs**

# BOTNET CONTROL OF HUMANS



Donie O'Sullivan

@donie

Follow

Video of two opposing demonstrations that took place outside an Islamic center in Houston in 2016. The whole thing was organized by Russians. The full story: [money.cnn.com/2018/01/26/med](https://money.cnn.com/2018/01/26/med) ...



5:40 AM - 27 Jan 2018 from [Manhattan, NY](#)

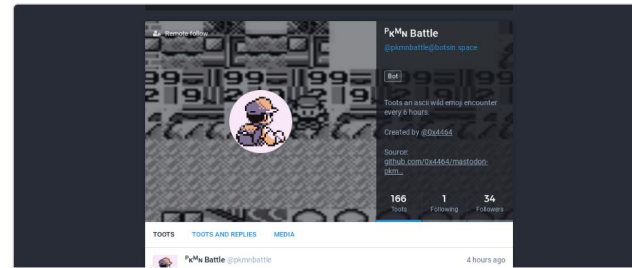
**current game:  
creating  
real-world  
human actions**

# INDEPENDENT BOTS



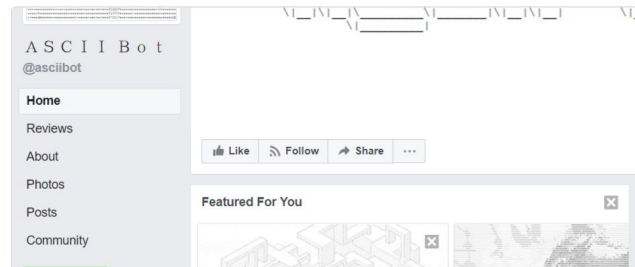
## Twitter bots

Browse

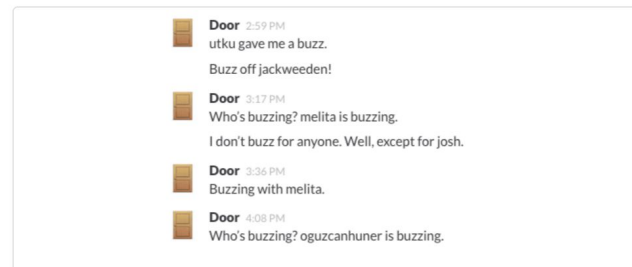


## Fediverse bots

Browse



## Facebook and Messenger bots



## Slack bots



# WORKPLACE (SOCIAL) ROBOTS



## Ripple Effects of an Embedded Social Agent: A Field Study of a Social Robot in the Workplace

*Min Kyung Lee, Sara Kiesler, Jodi Forlizzi, Paul Rybski. 2012.*

*[http://www.cs.cmu.edu/afs/cs.cmu.edu/Web/People/kiesler/publications/2012/2012\\_Ripple-Effects.pdf](http://www.cs.cmu.edu/afs/cs.cmu.edu/Web/People/kiesler/publications/2012/2012_Ripple-Effects.pdf)*

*Image: <https://www.flickr.com/photos/jiuguangw/6265557906>*

# (SOCIAL) ROBOTS IN PUBLIC



## **Knight Robot as Security**

*(<https://qz.com/1154649/a-knightscope-security-robot-is-being-used-to-shoo-away-homeless-people-in-san-francisco/>)*



# ROBOT SOCIAL ENGINEERING



## **Robot Social Engineering: Attacking Human Factors with Non-Human Actors**

# **THE FIRST AMENDMENT**

**who is speaking,  
the bot or the creator?**

# **MAKING IT PHYSICAL**

**place and manner  
restrictions**

# **UPDATING BOTS AND ROBOTS**

**embodiment: state of the  
art & product liability**

**destruction /  
removal**

# BOT REMOVAL BY HOST

Your account has been locked.



**misinfo links**  
@misinfo links

## What happened?

Your account appears to have exhibited automated behavior that violates the [Twitter Rules](#). To unlock your account, please complete the steps below and confirm that you are the valid account owner.

## What you can do:

To unlock your account, you must do the following:

- Verify your phone number

**Start**

**hosts  
have a  
lot of  
power**

# BOT REMOVAL BY OPERATOR

CLOSE ACCOUNT

Deactivate Account

Delete Account

Deactivate

# GETTING A BOT REMOVED

[Help Center](#) > [Twitter Rules and policies](#) > [Impersonation policy](#)

## Impersonation policy

Impersonation is a violation of the [Twitter Rules](#). Twitter accounts portraying another person in a confusing or deceptive manner may be permanently suspended under the Twitter impersonation policy.

An account will not be removed if:

- The user shares your name but has no other commonalities, or
- The profile clearly states it is not affiliated with or connected to any similarly-named individuals.

Accounts with similar usernames or that are similar in appearance (e.g., the same avatar image) are not automatically in violation of impersonation policy. In order to be impersonation, the account also portrays another person in a misleading or deceptive manner.

Twitter users are allowed to create parody, commentary, or fan accounts. Please refer to Twitter's [parody, commentary, and fan account policy](#) for more information about these types of accounts.

Find more information about [reporting impersonation on Twitter](#).

## Automation rules

*Updated November 3, 2017*

This page is primarily intended for **developers**.

**For Twitter users:** You are ultimately responsible for the actions taken with your account, or by applications associated with your account. Before authorizing a third-party application to access or use your account, make sure you've thoroughly investigated the application and understand what it will do. If automated activity on your account violates the [Twitter Rules](#) or these automation rules, Twitter may take action on your account, including [filtering your Tweets from search results](#) or suspending your account.

For more information on third-party applications, please see our article on [connecting and revoking third-party applications](#).

- If you are a developer and have questions about these Automation Rules, please reach out via <https://twittercommunity.com/c/rules-and-policies>.
- If your application has been suspended or restricted from performing write actions, you may submit an appeal at [/forms/platform](#).

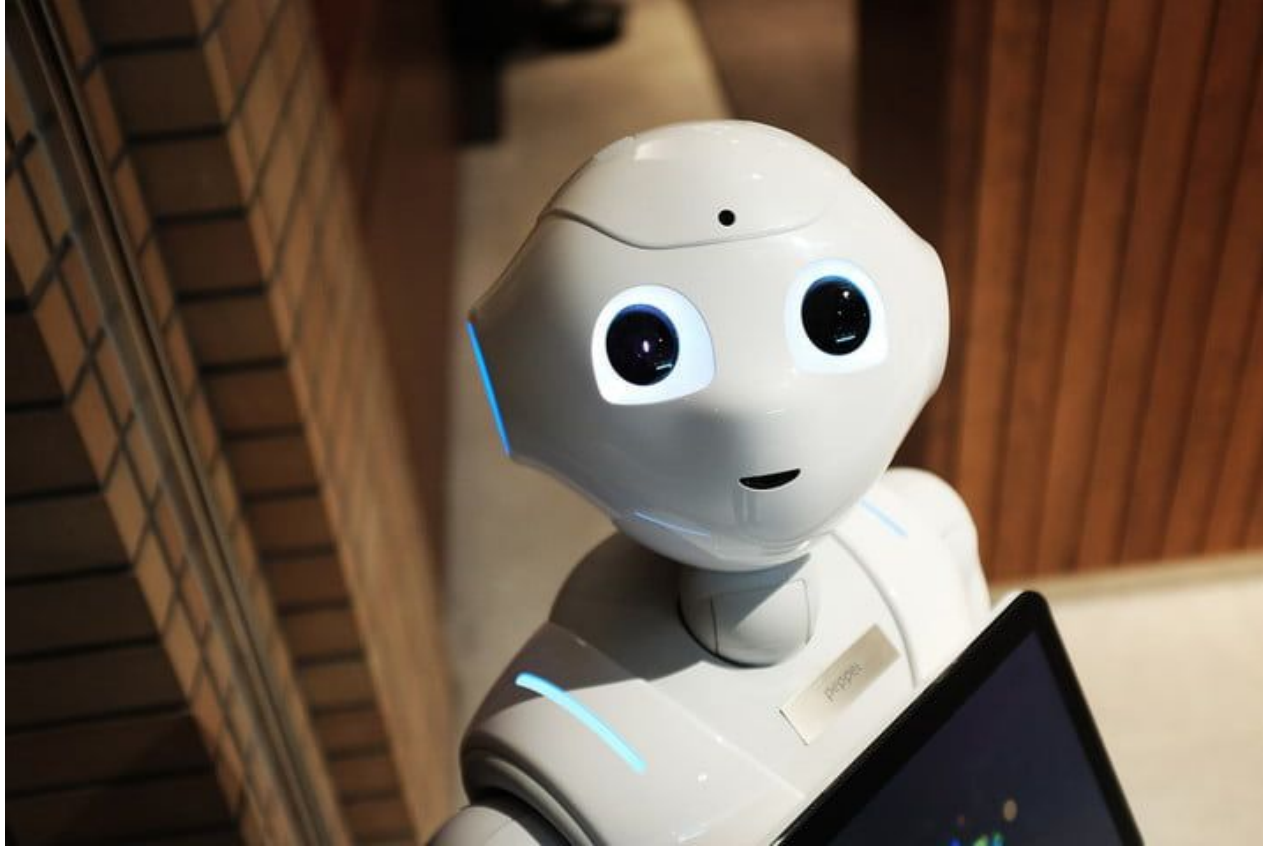
## About fake engagements on Twitter

### Can I purchase or sell account interactions (i.e. Twitter followers, Retweets or likes) on Twitter?

- Twitter strictly prohibits the purchasing and selling of account interactions on our platform. When you purchase followers, Retweets and likes, you are often purchasing bot (fake) or hacked accounts. Any account caught participating in this behavior will be in violation of the [Twitter Rules](#) and may be suspended.
- If your account is found to have purchased followers, Retweets and likes, your account may be suspended.



# FIRING A (SOCIAL) ROBOT



**Pepper as  
a grocery  
store clerk**

*Image: <https://www.digitaltrends.com/cool-tech/pepper-robot-grocery-store/>*

# REMOVING A (SOCIAL) ROBOT



**Bots on  
the  
Ground**

*Article: <http://www.washingtonpost.com/wp-dyn/content/article/2007/05/05/AR2007050501009.html>*

*Image: <https://www.designboom.com/technology/irobot-packbot/>*

# (SOCIAL) ROBOT DEATH



## Sony AIBO funerals

Image: <https://www.japantimes.co.jp/news/2018/05/01/national/japan-aibo-robots-get-funeral/>

# **TAKEDOWNS**

**corporate personhood & the legal  
status of bots and robots**

# conclusion & takeaways

# CONCLUSION

**bots aren't going away**

**robot embodiment changes  
human reaction**

**existing legal frameworks are flexible  
enough**

# CONCLUSION

**choose robot embodiment carefully**

**expect more social engineering from bots  
and robots**

# TAKEAWAYS

**“When we consider how a new technology affects law, our focus should not be on what is essential about the technology but on what features of social life the technology makes newly salient.”**

***- Jack M. Balkin***