

# EXERCISE BOOK

# CAHIER D'EXERCICES

NAME/NOM alex perlin

SUBJECT/ SUBJET science

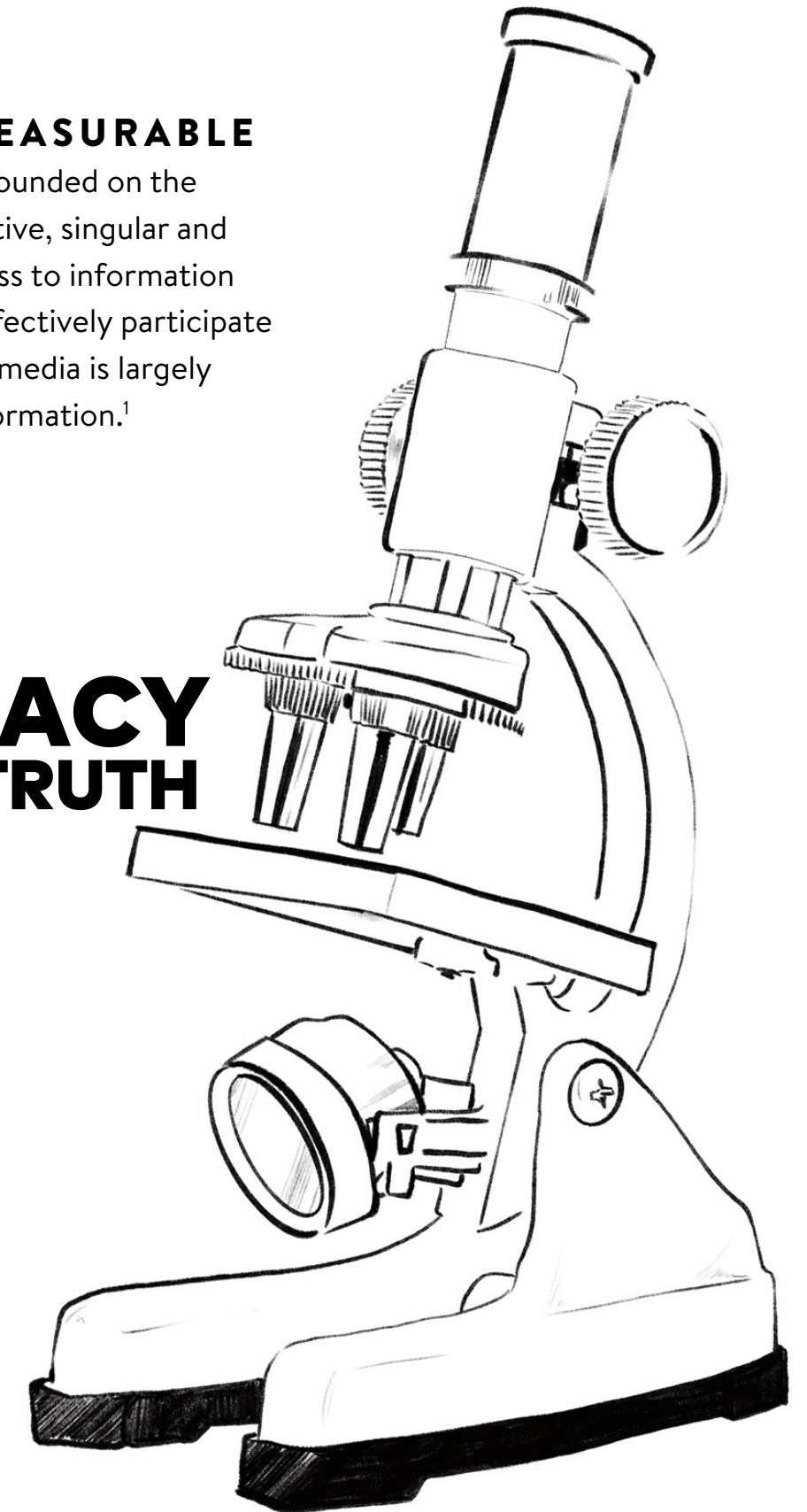


## SCIENTIFIC TRUTH AND DEMOCRACY

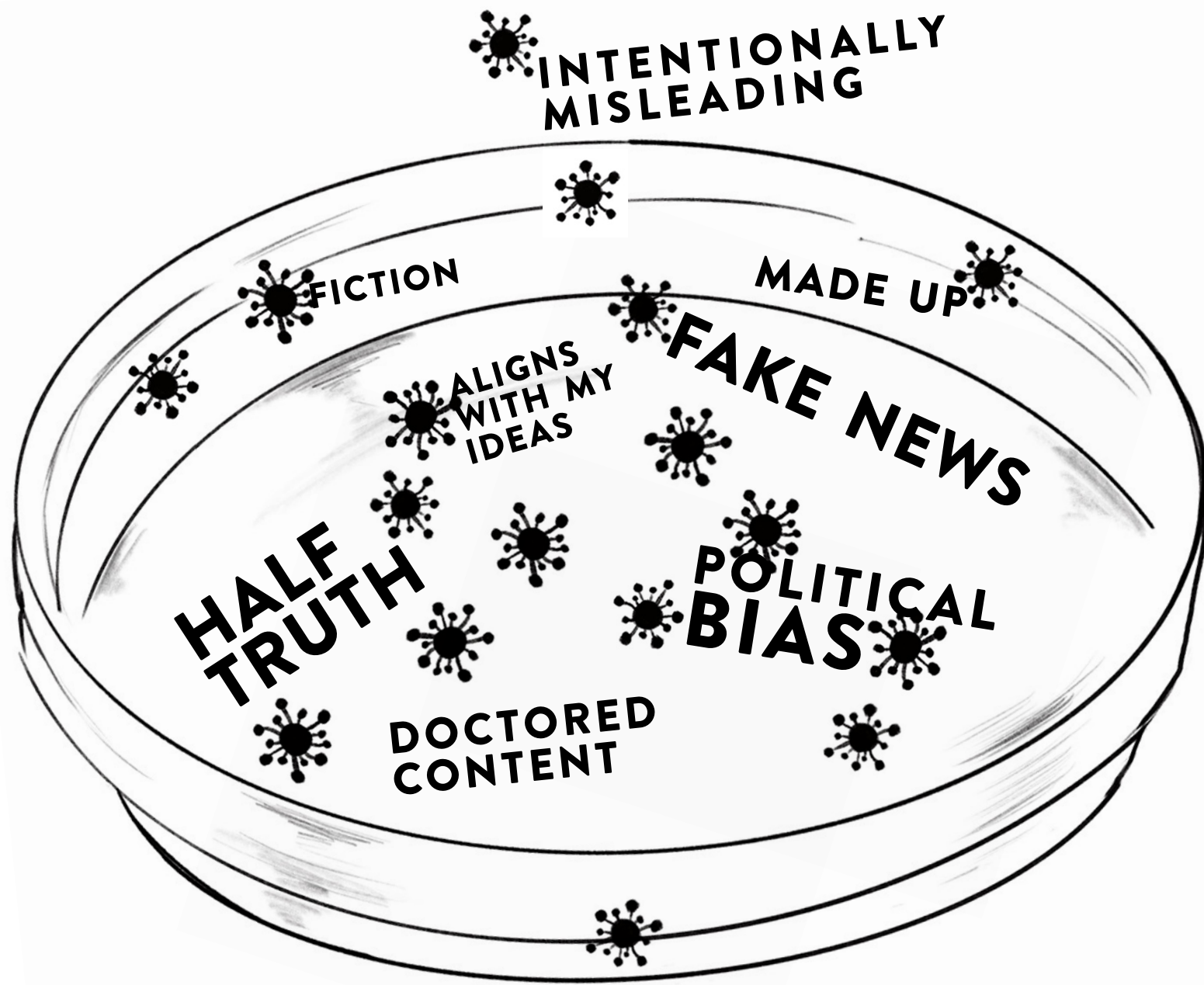
### OBJECTIVE AND MEASURABLE

Like science, democracies are founded on the assumption that reality is objective, singular and measurable. Citizens need access to information about that reality in order to effectively participate in the democratic process. The media is largely responsible for sharing that information.<sup>1</sup>

## DEMOCRACY SCIENTIFIC TRUTH



## THE VIRUS OF FALSE INFORMATION



Today, with widespread use of the Internet both real and false information can travel more rapidly and can reach more people than ever before. False information can spread like a virus, having devastating consequences for democracies, rattling citizen's confidence in their elected leaders and institutions or sowing conflict among citizens.<sup>2</sup>

## FAKE NEWS AND ITS SPEEDY SPREAD



In fact, scientists at the Massachusetts Institute of Technology found that false or misleading news stories reached more people and traveled up to six times faster than real news stories.<sup>2</sup>

## MISINFORMATION AND UNINTENTIONAL SPREAD



Regardless of whether it is entertaining, outrageous or mundane, false information is dangerous. The two main forms of false information are **MISINFORMATION** and **DISINFORMATION**.



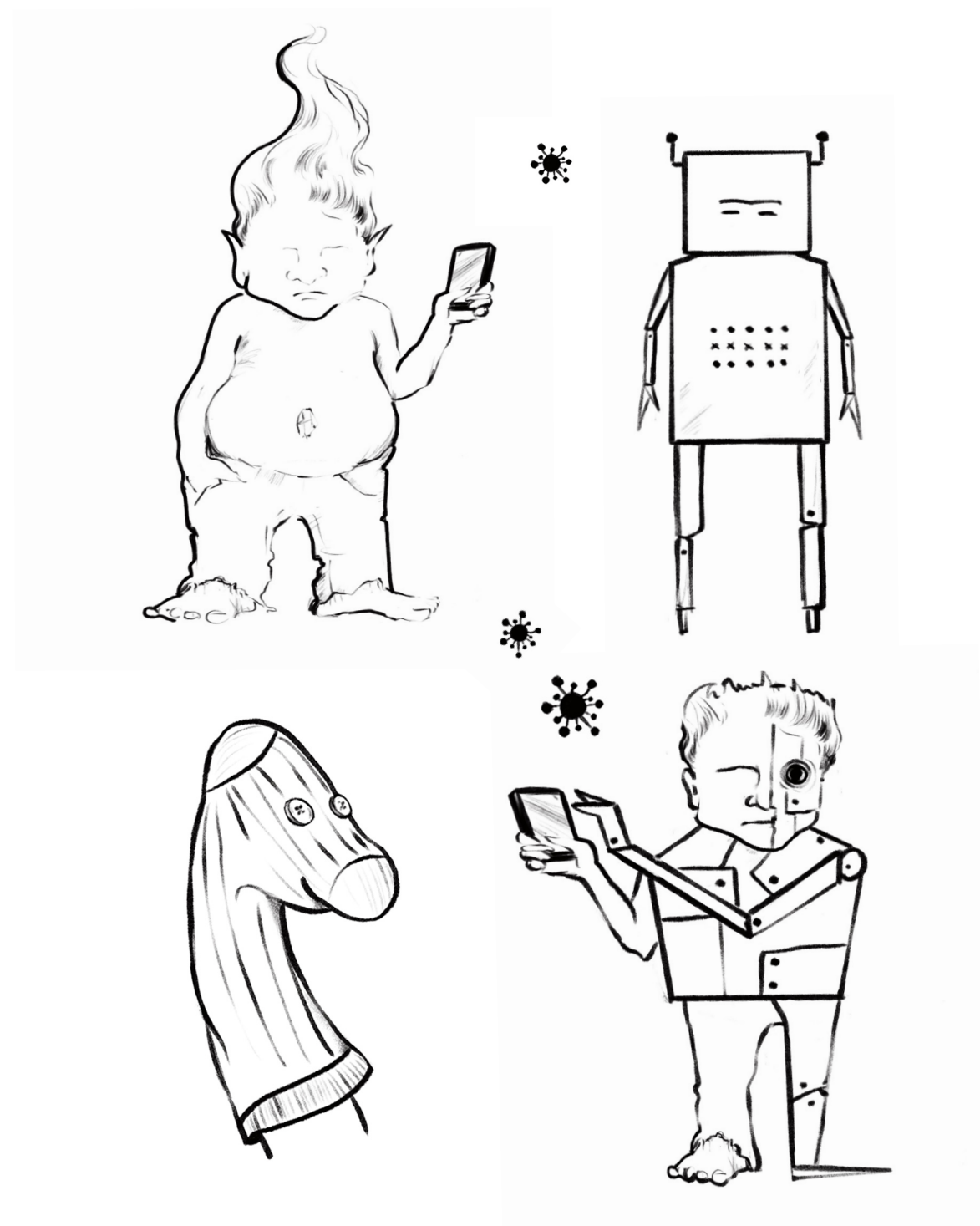
Misinformation is false information that is shared **INTENTIONALLY** or **UNINTENTIONALLY**. Misinformation might be caused by misunderstanding facts and it can be organic or accidental.<sup>3</sup>

## DISINFORMATION AND INTENTIONAL SPREAD



Disinformation is false information that is shared that is **DESIGNED** to intentionally mislead and manipulate a population to achieve political objectives.<sup>3</sup>

## PRIMARY SPREADERS OF DISINFORMATION



### SPREADER SPECIES

There are several species of creatures that spread disinformation Online. The following section outlines the anatomy of these creatures and how you might avoid or combat them, when required.

## ANATOMY OF A COMMON INTERNET TROLL

### MOTIVATION

Trolls may be motivated by personal and political gains or by their own amusement.<sup>4</sup>



### THE COMMON INTERNET TROLL

Is a human actor who posts inflammatory and harmful messages Online that provoke strong emotional responses from other users.<sup>4</sup>

### DEVELOPMENT

It was originally assumed that human actors set out to become trolls. It now more widely believed that people can become trolls Online unintentionally or accidentally.<sup>4</sup>

## IF YOU ENCOUNTER AN INTERNET TROLL

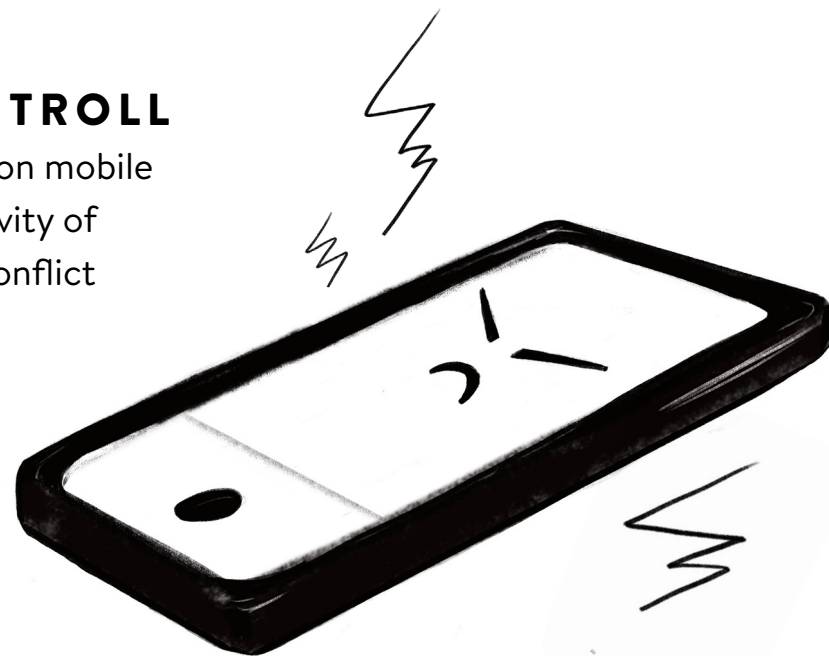


### DO NOT FEED THE TROLLS

If you encounter an Internet troll, do not engage. Engaging with trolls can encourage and intensify their bad behaviour.<sup>4</sup>

### AVOID BECOMING A TROLL

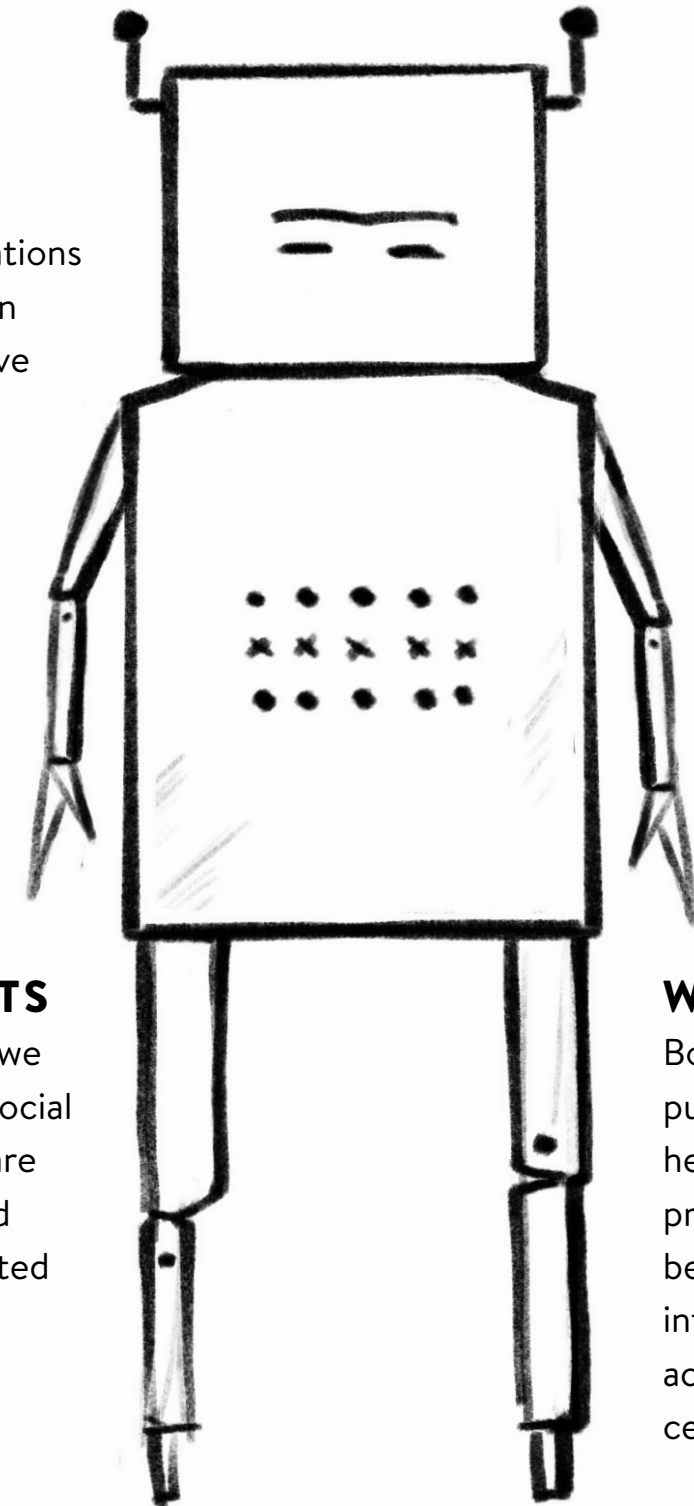
Studies show that we are less civil on mobile devices, due to the nature and brevity of mobile messaging. We can avoid conflict by practicing 'slow politics' and by not engaging in reactionary political conversations on our phones.<sup>4</sup>



## ANATOMY OF A COMMON DIGITAL BOT

### WHAT IS IT

Web robots or bots are software applications that automate or run structurally repetitive tasks Online.<sup>4</sup>



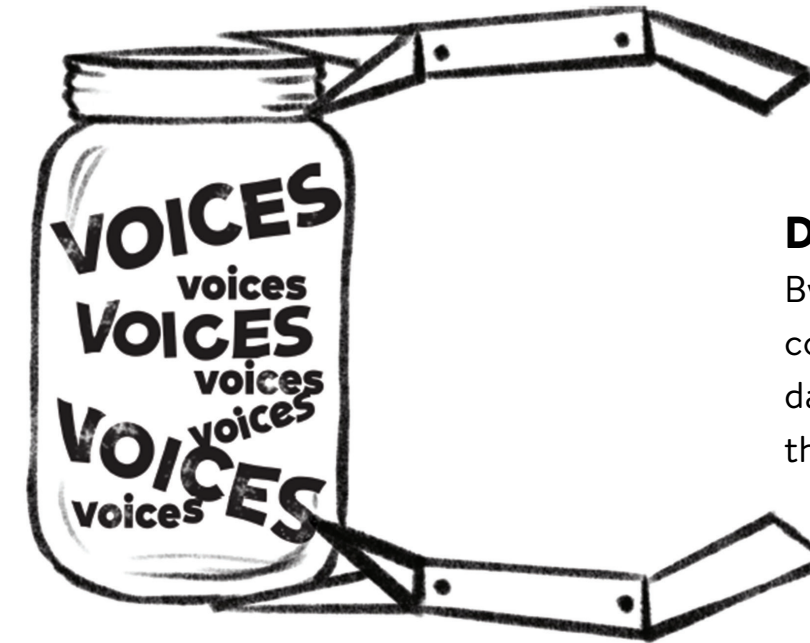
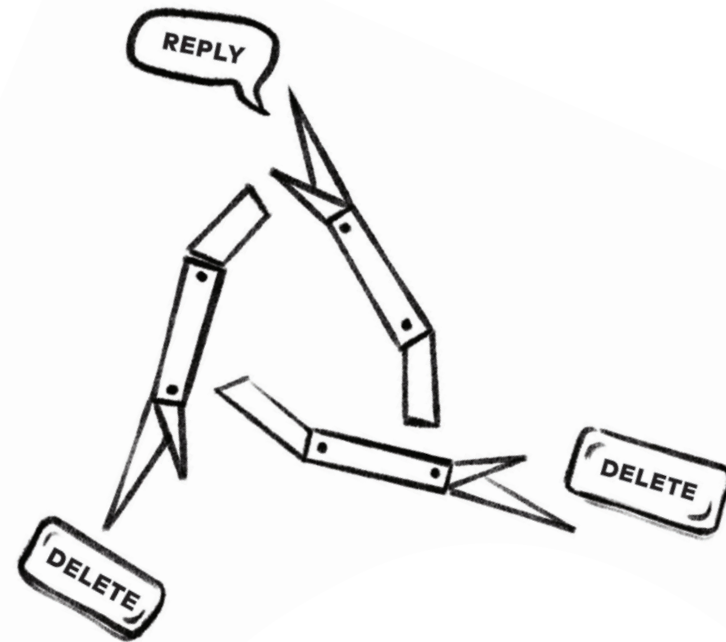
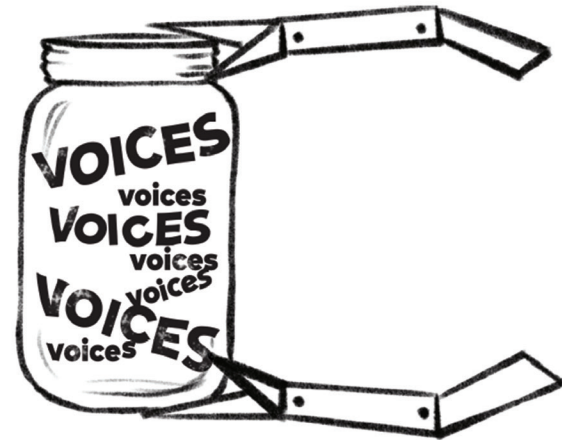
### POLITICAL BOTS

In a political context, we think of bots as fake social media accounts that are sometimes automated and sometimes operated in part by a person or organization.<sup>4</sup>

### WHAT THEY DO

Bots serve several purposes. They can be helpful in automating processes or they can be harmful in posting inflammatory messages acting to suppress certain voices.<sup>4</sup>

## ANATOMY OF BOTS – SUBSPECIES



### DAMPENING BOTS

By automating aggressive or negative commenting, bots can be used to dampen or suppress certain voices in the political sphere.<sup>4</sup>



### TRANSPARENCY BOTS

Bots can be used by organizations to hold government accountable or to generate useful information Online.<sup>4</sup>

## SUBSPECIES OF BOTS

Different bots are designed to perform different tasks. The following section will outline several subspecies of bots as described by researchers Elizabeth Dubois and Fenwick McKelvey.<sup>5</sup>

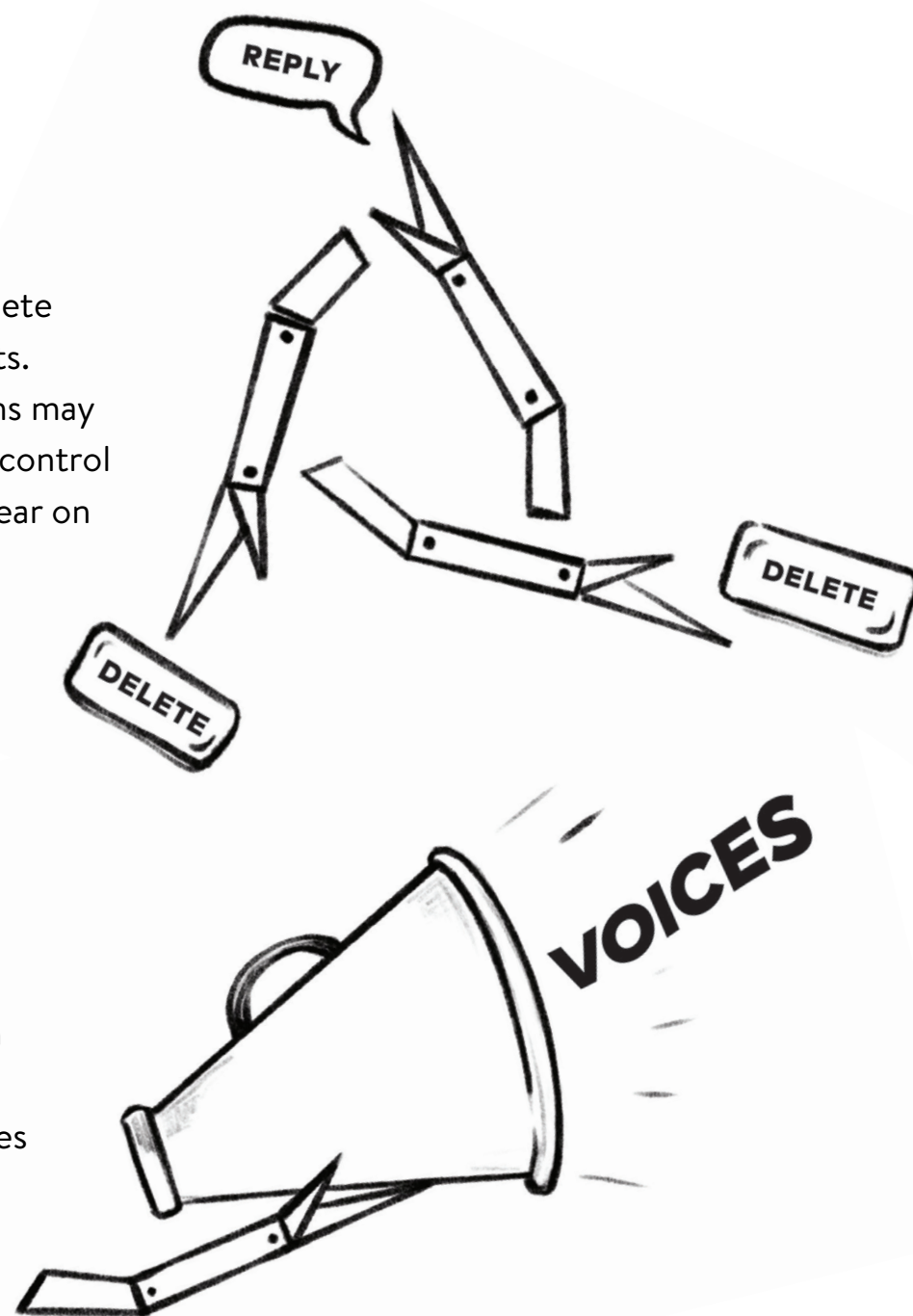


**1 IN 5 TWEETS A BOT**  
In a study of election related tweets in September and October of 2016, the University of Southern California found that 1 out of 5 were sent by bots.<sup>2</sup>

## BOT SUBSPECIES DEFINITIONS

### BOT SERVANTS

Bots can be used to reply or delete information on existing accounts. Political actors and organizations may use bots in this context to help control the types of messages that appear on their accounts.<sup>4</sup>



### AMPLIFYING BOTS

Through actions like sharing or automatically reposting certain content or messages, bots can be used to amplify certain voices or agendas.<sup>4</sup>

### TRAFFIC BOTS

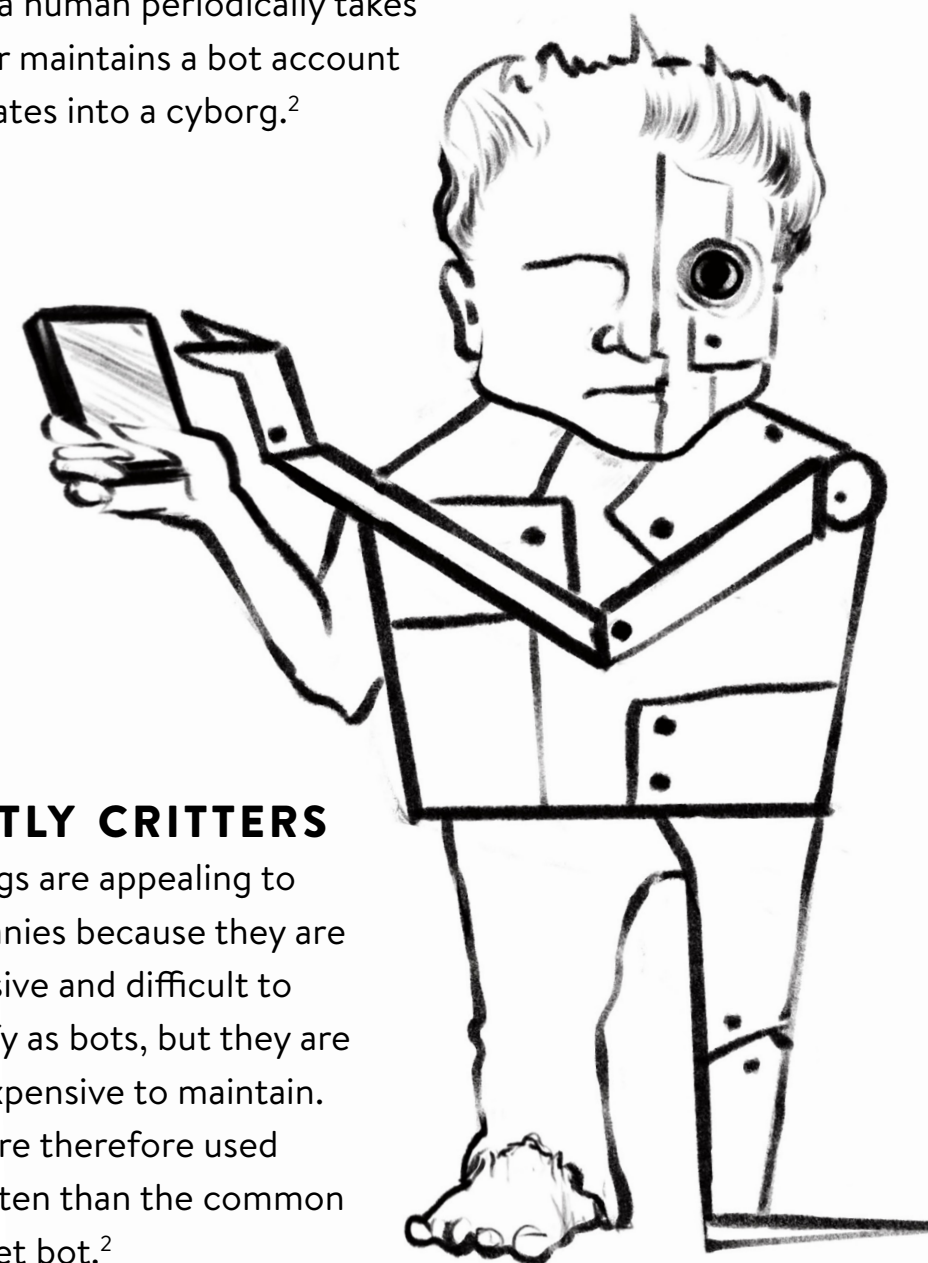
A 2018 study by The Pew Research Centre found that bots may generate up to two-thirds of all tweets that redirect traffic to popular web pages.<sup>2</sup>



## ANATOMY OF AN INTERNET CYBORG

### RISE OF THE CYBORG

When a human periodically takes over or maintains a bot account it mutates into a cyborg.<sup>2</sup>



### A UNIQUE SPECIES

Cyborgs merge the soft skills of human actors with a bot's impressive production capacity. This can make cyborgs particularly difficult to catch.<sup>2</sup>

### COSTLY CRITTERS

Cyborgs are appealing to companies because they are so elusive and difficult to identify as bots, but they are also expensive to maintain. They are therefore used less often than the common Internet bot.<sup>2</sup>



## ANATOMY OF A SOCK PUPPET

### ORIGINS

Sock puppets are impostor accounts. An important component of the sock puppet account is that it remains

### A PUPPET NAMED PIERRE

Sock puppets are highly focused on maintaining their anonymity, but some sock puppets have been revealed to the great surprise of the public. For example, Sen. Mitt Romney was revealed to have been operating a sock puppet account called 'Pierre Delecto', who defended Romney when he faced criticism.<sup>2</sup>



## ANATOMY OF A VERY FAMOUS SOCK PUPPET

### JENNA ABRAMS

One of the most famous sock puppets is Jenna Abrams, an account created by St. Petersburg's Internet Research Agency or the Russian government-funded "Troll Farm" that tricked the mainstream media. Abrams account presented the image of a young American women, and amassed over 70 000 twitter followers.

The account was started in 2014 and began tweeting controversial content promoting Trump, xenophobic and anti-immigrant views in the lead up to the 2016 election. Her comments were featured in stories by major news networks around the globe including the BBC and the New York Times.<sup>7</sup>



BBC

USA TODAY

THE TIMES OF INDIA

CNN

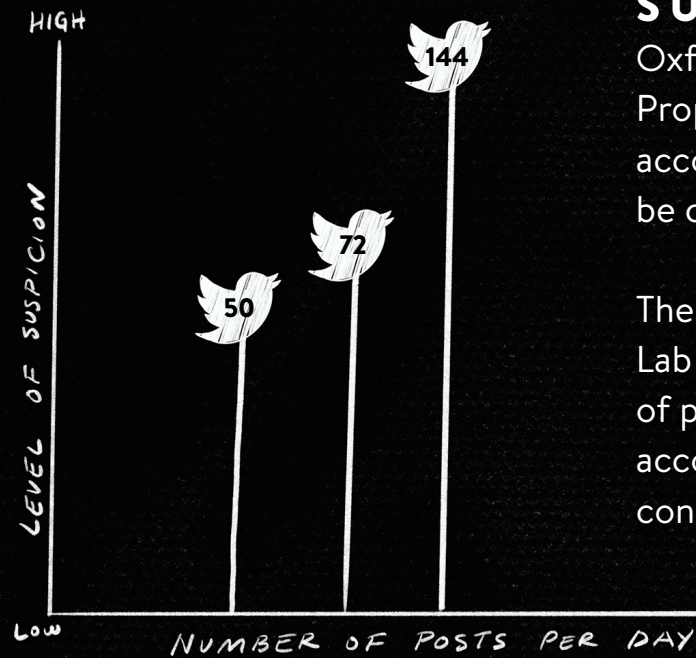
FOX NEWS

### CLOSELY RELATED SPECIES: CATFISH + ASTROTURFERS

These terms are also used to describe fake personas and social media accounts.<sup>6</sup>

## FIVE BOT SPOTTING FORMULAS

There are many types of bots, but here are some tips on how to identify the type of bots that pose as human actors and that amplify political messaging.<sup>8</sup>



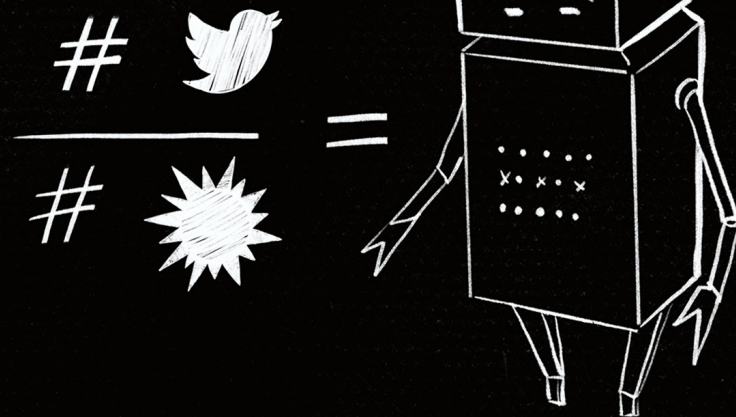
### ONE: SUSPECT POSTS

Oxford Internet Institutes Computational Propaganda team concludes that if the account has over 50 posts a day, it should be considered suspicious.

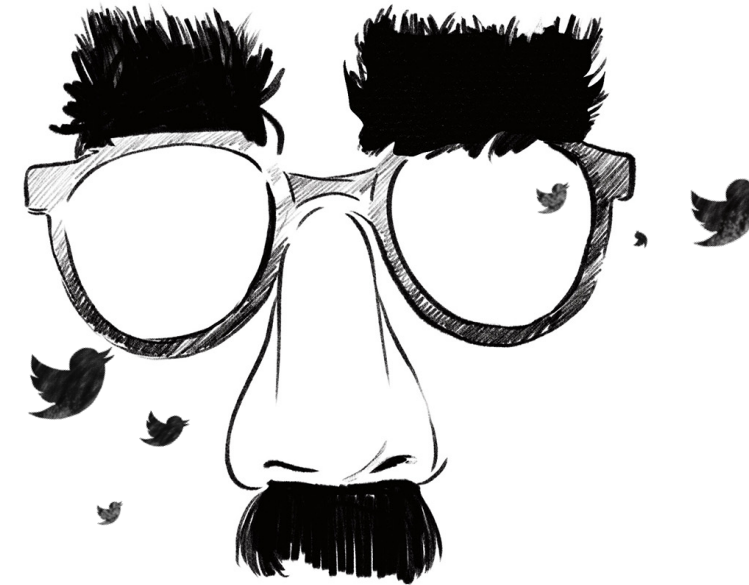
The Atlantic Digital Forensics Research Lab suggests that 72 is the number of posts associated with suspicious accounts, while 144 daily posts is considered highly suspicious.<sup>8</sup>

### WATCH ACTIVITY

Bots are often recognizable because they post more frequently than real users do. To examine the activity data, simply divide the number of posts by the number of days an account has been active for.<sup>8</sup>



## FIVE BOT SPOTTING FORMULAS

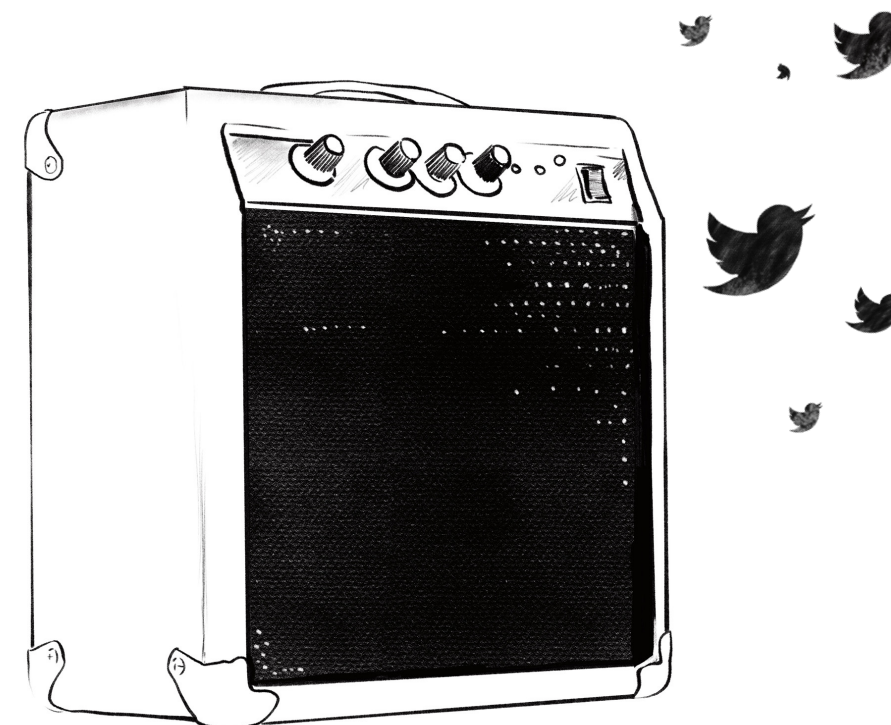


### TWO: ACCOUNT ANONYMITY

Very little personal information or generic avatar images on an account may indicate that it belongs to a bot.<sup>8</sup>

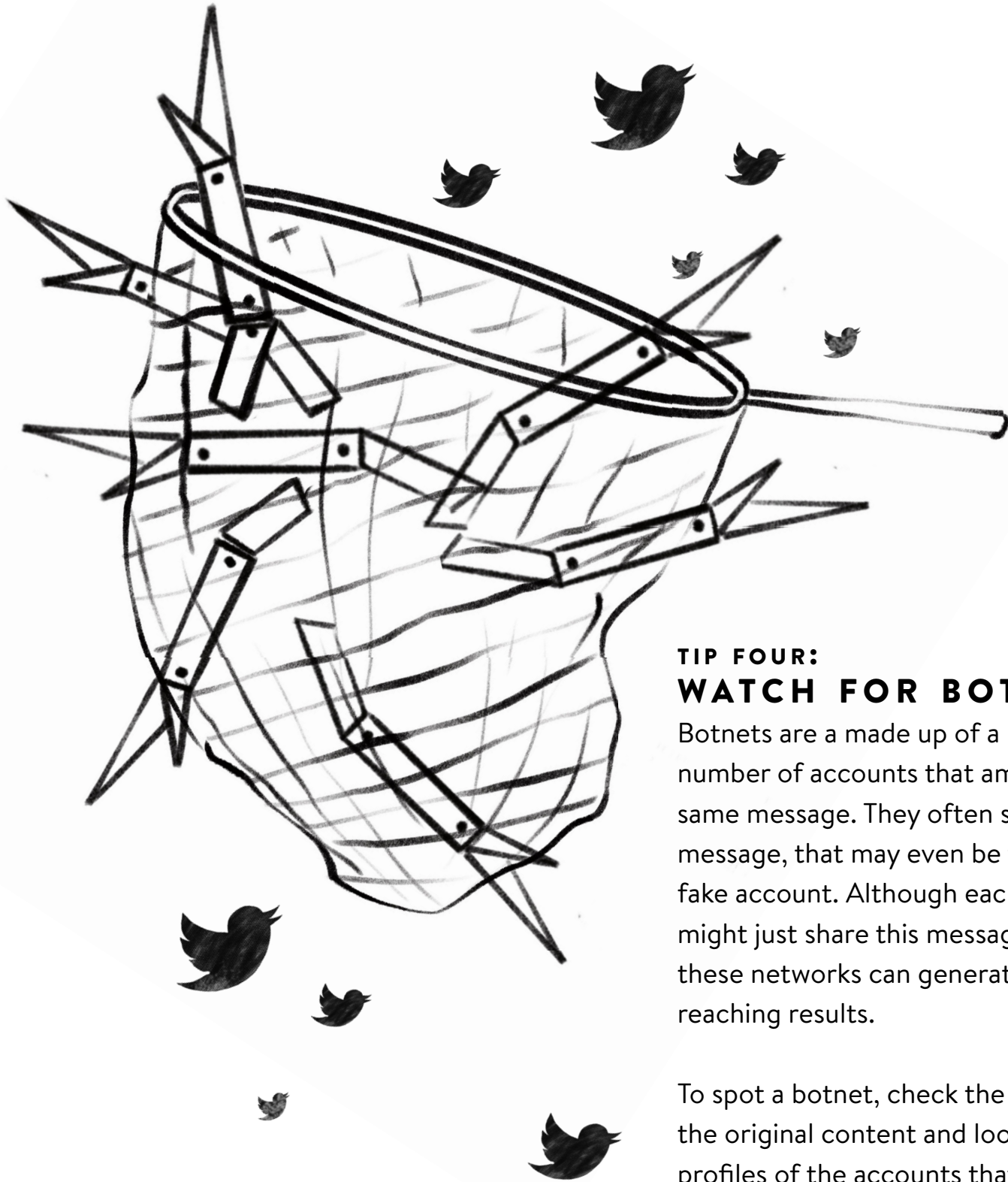
### THREE: ACCOUNT AMPLIFICATION

Another sign of a bot account is when the account shares mainly quotes or retweets. In other words, it has very little original content.



Professional tools known as machine scans can be used to analyze the content of a user's tweets, but you can also review an account's "tweets and replies" tab take a look at the content of a user's recent posts. Experts suggest looking at trends across an account's last 200 posts to determine how often the account shares original content.<sup>8</sup>

## FIVE BOT SPOTTING FORMULAS



### TIP FOUR: **WATCH FOR BOTNETS**

Botnets are made up of a large number of accounts that amplify the same message. They often share one message, that may even be from a fake account. Although each account might just share this message once, these networks can generate far-reaching results.

To spot a botnet, check the source of the original content and look at the profiles of the accounts that shared it. If the accounts have very few followers or all have similar avatars, they are likely part of a botnet.<sup>8</sup>

## FIVE BOT SPOTTING FORMULAS



### TIP FIVE: **SILHOUETTES AND STOLEN IMAGES**

In many cases, bots will not have an avatar, and will instead have the default silhouette for their social media account. Not all silhouetted avatars are bots, but this can be a good indication of bot presence.

More cunning bot accounts have stolen images from real users. You can check the credibility of the account's avatar by doing a reverse image search through Google Chrome to see if the image appears numerous times and with several accounts. If it does, it is very likely a bot account.<sup>8</sup>

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ASSEMBLED IN CANADA WITH IMPORTED MATERIALS.  
ASSEMBLÉ AU CANADA AVEC DES MATIÈRES IMPORTÉES.