The role of fake news

How to track the online circulation of information disorders
And how to communicate it

Angeles Briones angelesbriones@gmail.com
A FIELD GUIDE TO

"FAKE NEWS"

and other

INFORMATION DISORDERS

A COLLECTION OF RECIPES FOR THOSE WHO LOVE TO COOK WITH DIGITAL METHODS

COMPILERS:

Liliana Bozoglu
Jonathan Gray
Tommaso Venturini
Michela Mauri
Presenting a research

How to create a visual report

Showing examples of fake news
fake news is said to represent
a step-change in information warfare; an emerging form of cynical profiteering; an engine for energising “alt-right” and other digitally mediated grassroots political mobilisations around the world; a partisan battle cry for a new liberal “ministry of truth”; an unwanted byproduct of the online platforms which organise our digital societies; or a canary call signalling a collapse of consensus around established institutions and processes of knowledge production, heralding a new “post-truth” era in politics and public life.
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TYPES OF INFORMATION DISORDER

FALSENESS

Misinformation
Unintentional mistakes such as inaccurate photo captions, dates, statistics, translations, or when satire is taken seriously.

Disinformation
Fabricated or deliberately manipulated audio/visual content. Intentionally created conspiracy theories or rumours.

INTENT TO HARM

Malinformation
Deliberate publication of private information for personal or corporate rather than public interest, such as revenge porn. Deliberate change of context, date or time of genuine content.
7 COMMON FORMS OF INFORMATION DISORDER

**SATIRE OR PARODY**
No intention to cause harm but has potential to fool

**MISLEADING CONTENT**
Misleading use of information to frame an issue or individual

**IMPOSTER CONTENT**
When genuine sources are impersonated

**FABRICATED CONTENT**
New content is 100% false, designed to deceive and do harm

**FALSE CONNECTION**
When headlines, visuals or captions don’t support the content

**FALSE CONTEXT**
When genuine content is shared with false contextual information

**MANIPULATED CONTENT**
When genuine information or imagery is manipulated to deceive
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A FIELD GUIDE TO "FAKE NEWS" and other INFORMATION DISORDERS

A COLLECTION OF RECIPES FOR THOSE WHO LOVE TO COOK WITH DIGITAL METHODS

COMPiled by
Liliana Beunegru
Jonathan Gray
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Michela Mauri
Showing the results of a research:

- Field guide
- cookbook
BROADBILLS

EURYLAIMUS
World 15 species. Barred in a head-spot with 8 species, including 2 males, and 2 females. The three green Ceylon broadbills (broad black spot) are almost exclusively breeders. The breedbills (broad black spot) are found in mountainous areas with varying levels from more than 1,000 m. The largest insects including bees and wasps are eaten at times. The broadbills breed in small colonies in the mountains, usually making a nest of moss and leaves. The nest is located in a tree cavity. The eggs are 1-3. The sexes are different, and the eggs are incubated by both parents. The nestlings are fed by both parents. The nest is usually placed in a tree cavity. The eggs are incubated by both parents. The nestlings are fed by both parents.

1 DUSKY BROADBILL Cordyline monacha 25 cm

Swinhoe Length
Breeding Plumage

2 BLACK-AND-RED BROADBILL Cymbopsophus marmoratus 20 cm

Swinhoe Length
Breeding Plumage

3 BANDED BROADBILL Eurylaimus scutatus 22 cm

Swinhoe Length
Breeding Plumage

4 BLACK-AND-YELLOW BROADBILL Eurylaimus ochromalus 18 cm

Swinhoe Length
Breeding Plumage

5 LONG-TAILED BROADBILL Procoptodramus defassa 24 cm

Local Subspecies

Phoenicurus cheni
"Chan's megadactyl" (86 cm)
Insofar as we focus on providing procedures for inquiry rather than pictures of the phenomena, this guide may also be considered a kind of “recipe book.”
How a recipe book is made?

- Expected result
- Tools and ingredients
- Actions
- Encoded grammar
Lasagne alla Bolognese

Le lasagne alla Bolognese sono un piatto tipico della gastronomia dell'Emilia Romagna e, nello specifico, della città di Bologna. Nonostante la paternità di questa ricetta sia Emiliana, le lasagne sono conosciute a tal punto da diventare uno dei simboli della cucina italiana nel mondo e conosce numerose e prelibate varianti. Dalla preparazione agli ingredienti, questa ricetta è la quintessenza della "ricchezza" della cucina tradizionale bolognese, celebre anche per molte altre ricette di pasta fresca e non solo, basti pensare allo gnocco fritto. Per preparare una buona lasagna alla Bolognese la cosa fondamentale è la giusta scelta...
Ingredienti per una teglia 20x30 cm

PER IL RAGù ALLA BOLOGNESE

- Carne di suino macinata (molto grassa) 250 g
- Manzo polpa tritata 500 g
- Olio extravergine d'oliva 1 cucchiaino
- Vino bianco 250 g
- Passata di pomodoro 250 g
- Sedano 50 g
- Sale fino q.b.
- Acqua 3 l

PER LA BESCIAMELLA

- Latte intero fresco 1 l
- Noce moscata da grattugiare q.b.
- Burro 100 g
- Farina 00 100 g
- Sale fino 1 pizzico

Preparazione

Come preparare le Lasagne alla Bolognese
Per preparare le lasagne alla bolognese cominciate tritando finemente al coltello il sedano (1), la carota sbucciata e spuntata (2) e la cipolla mondata (3) in modo da ottenere 50 g per ciascun ingrediente.

Scaldate l’olio in un tegame e aggiungete il trito di verdure, stufate per una decina di minuti a fuoco dolce mentre mescolate, di tanto in tanto (4). Trascorso il tempo il soffritto dovrà risultare appassito ed il fondo del tegame asciutto. Unite la carne di manzo macinata grossa (5) ed il macinato di maiale (la pancetta fresca, una parte molto grassa) (6).

HOW MAY WE CHARACTERISE THE SOURCES OF TROLL-LIKE ACTIVITY?

BEFORE STARTING

For this recipe we take as a starting point the 35 accounts that mention at least one political leader at least 100 times identified in the previous recipe (we discarded one account because it was no longer active).
CONVENTIONS
USED IN THE BOOK

In this book we use the 🎨 (eye) symbol to indicate visual results, the 🔨 (wrench) to point to the tools glossary and the 🔄 (arrow) to point to the concepts glossary. To avoid distracting our readers we only use the glossaries icons to mark the first occurrence per recipe of the term or tool explained in glossaries.

Furthermore, each recipe in our chapters is introduced by a diagram, or a method map, representing the key analytical steps taken to arrive at our results. In each method map, arrows represent actions and icons represent their results. You can see the steps in the method maps as possible ingredients for your own recipes.

Some recipes lead to multiple outcomes. When this is the case you will find at the beginning of the recipe a complete method map for the entire recipe (on a blue background), and the parts relevant to each individual step in the recipe highlighted on a white background at the beginning of each recipe alongside the description of the relevant step.

Below you can find a list of all the icons we use for the methods maps.

A dataset is in the form of a table.

Any kind of visualization, such as a bubble graph or a network diagram. See the Concepts Glossary for the full list of visual models used in this guide.

A list. This could be, for example, a list of websites, or a list of Facebook pages.

A screenshot. Usually taken from a web browser with the aim of preserving a snapshot of a web page.

A corpus of images. A set of images captured with the same method.

User profile. It represents all the information related to a user in a social network. For example in Twitter the user profile contains the @name, the description, the profile picture.

Temporal information. Could be, for example, the creation time of a Facebook post.

Hashtag. Used in many social networks, for example in Twitter and Facebook.

Automatic operations. Used to highlight when an action e.g. dividing items into categories is performed by a machine.

Manual operations. Used to highlight when an action e.g. dividing items into categories is performed by a human being.

Image comparison. It is used to highlight when the analyst must visually compare a corpus of images.

Union of lists. When two or more lists are merged into one.
this information may be accessed via public pages). Online platforms have their own ways of organizing the boundaries between public and private. And in the case of fake news, we also have to deal with the consequences of technological fixes to the phenomenon on possibilities to study it. In the case of Facebook, measures to remove problematic posts from the platform mean that researchers are unable to examine how users engaged with these items. How platforms, regulators, policy-makers, users and others negotiate these unfolding questions of the configuration of these emerging spaces of publicity and privacy, their attendant mechanisms of accountability, remains to be seen.

Beyond questions about how digital landscapes are studied, organised and reshaped, we hope this guide may also serve as inspiration for how digital methods may be used to study and intervene around data politics in the contemporary moment. Who will have the capacities to shape how data is created and used? How can data be used not only to close debate but to enrich it? How can different kinds of data help us to pursue objectivity not just through a single picture, but through a plurality of different perspectives? How does the configuration of digital infrastructures shape what is hearable, sayable, seeable and double with data? Who and what will stand to benefit from the data society? The Field Guide to Fake News is the first of an ongoing series of activities and experiments with the Public Data Lab through which we hope to continue to explore these themes.

Jonathan Gray (@jgrayj), Liliana Bounegru (@bh_liliana), TommasoVenturini (@TommasoVenturini)
Paris, November 2017

**TOOLS GLOSSARY**

In this section we provide brief descriptions and links to various tools that are referenced throughout the field guide. These descriptions are intended to be sufficiently informative to enable readers to follow the text. It should be noted that it is very important in any research project or investigation to develop an appreciation of precisely how they work and what they do (and what they do not do). Hence we advise you to refer to the documentation and more detailed descriptions on the websites listed below before using them in your own project.

- **BuzzSumo**: a social analytics service which enables users to explore the most “engaged” content relative to a given topic or domain. You can filter the results by language, country, word count and content type (article, infographic, interviews, videos). ([http://buzzsumo.com/](http://buzzsumo.com/))

- **CorText**: an online application used to analyse textual data. It allows users to create various types of statistical and network visualisations. ([http://www.cortext.net/](http://www.cortext.net/))

- **CrowdTangle**: digital tool that allows users to track how content spreads through the web and follow the performance of posts and accounts on Facebook, Twitter, YouTube, Instagram and Vine. ([http://www.crowdTangle.com](http://www.crowdTangle.com))

- **CSV Rinse Repeat**: a JavaScript based tool to clean and
How we created it
DESIGN  →  Co-DESIGN  ←  Re-DESIGN
Chapters / Lenses

1. Platforms (Facebook) → FB
2. Behaviours (Circulation) → web
3. Technical (Artifacts) → web
4. Language (Memes) → FB
5. Actions (Trolls) → Tw
The focus is on circulation because false and misleading knowledge claims are not born “fake news”. To become fake news they need to mobilise a large number of publics – including witnesses, allies, likes and shares, as well as opponents to contest, flag and debunk them.
THE HIGHEST MANAGEMENT?

The diagram illustrates the interactions between pages and groups that share content. Items, sized according to the number of pages they share and tagged to their number of interactions, can share the same page. The pages and groups with the highest number of interactions are primarily pro-Trump and anti-Hillary groups. The network analysis of the highest number of interactions with fake news stories is related to Republican TV personality Judge Jeanine Pirro.
DO FACEBOOK PUBLICS HAVE PREFERRED STORY THEMES?

Network of public Facebook pages and groups connected by the fake news stories which they share. Notable is the core of the network which consists of a series of pages and groups associated with Trump supporters which are animated by anti-Hillary Clinton narratives.
WHAT KINDS OF PUBLICS ARE ENERGISED BY FAKE NEWS?

Types of Facebook publics animated by fake news, according to a manual classification of pages that share fake news items. Notable are grassroots activists for a variety of issues, political candidate loyalists as well as entertainers.
RAGE AGAINST THE MACHINE To Reunite And Release Anti Donald Trump Album

Marzo 21, 2016 - news - Tagged: crossover, donald trump, Los Angeles, rage against the machine, reunion - no comments

It has been more than fifteen years since Rage Against The Machine have released new music. The members of the band have involved themselves in various other projects during their lengthy hiatus, but one pressing issue has forced the band to team up once again.
ARE DEBUNKING WEB PAGES ACKNOWLEDGED BY THE PUBLICS OF FAKE NEWS?

Fake news pages and debunking web pages have different publics on Facebook. Only six of the public pages that share fake news stories have acknowledged web pages which aim to debunk them in our CrowdTangle dataset. While Google looks to prioritise debunking web pages, on Facebook it is fake news stories that circulate better. While both progressive and conservative pages share fake news stories it is primarily progressive Facebook pages and those pertaining to journalists and fact-checking initiatives that share web pages which aim to debunk fake news stories.
Fake news are not just “false news”. They are interesting not so much because their content or form are different from that of “authentic news”, but because they travel as much as (and sometimes more than) mainstream news.
WHICH ARE THE MOST VISIBLE SOURCES RELATED TO A FAKE STORY? WHEN AND BY WHOM ARE THEY MENTIONED?

BEFORE STARTING

This recipe enables a scaling up of the approach presented in the previous recipe, but requires a bit more technical knowledge, as well as some bigger datasets. In particular, you will need to have access to:

◊ A web archive (we used Radarly by Linkfluence).
◊ A list of all the possible web sources in which your chosen fake news story may have appeared (we used the list curated by Le Monde Décodex).

To illustrate this recipe, we focus on a false story that circulated during the 2017 French presidential election and referred to the presumed homosexuality of Emmanuel Macron.

WHAT ARE THE SOURCES CITED IN THE OCCURRENCES OF THE FAKE NEWS STORY?

HOW MANY OCCURRENCES OF THE FAKE NEWS ARE PUBLISHED IN EACH PERIOD OF TIME AND WHAT SOURCES DO THEY CITE?
WHAT ARE THE MAIN SPHERES IN THE FRENCH MEDIA SYSTEM?

Network analysis of the media sources active in French public debate. The image shows the news sources listed by the Décodex project by Le Monde and the hyperlinks connecting them. A force-directed layout has been applied to reveal the main clusters of websites and their respective associations and positions.
**How Many Occurrences of the Fake News Story Are Published in Each Period and What Sources Do They Cite?**

Temporal evolution of the fake news story in the whole observed period. In this image, the occurrences of the fake news story are divided in slices of 4 weeks (with an overlap of two weeks) and represented as a density heat map rather than as individual points. Though mentions of the story have been present for more than one year, its circulation appears to spike up in February 2017, when a new strand of the fake story is published by the Russian website Sputnik International.
Many websites use “trackers” – small bits of embedded code – in order to monitor engagement, including visitor numbers, visitor behaviour and the effectiveness of ads.
Sardegna, centrodestra avanti. Crollo Di Maio: per il governo non cambia. Ma Nugnes: sua leadership va ridiscussa.
DO MAINSTREAM MEDIA AND FAKE NEWS WEBSITES SHARE THE SAME Tracker ECologies?

Scatterplot representing tracker usage on a series of fake news and mainstream media sites. While fake news sites and mainstream media sites share popular tracker services such as Google AdSense, DoubleClick and Google Analytics, mainstream media sites appear more mature and sophisticated in its use of trackers in terms of the number and diversity of trackers that it uses.
HOW DO FAKE NEWS SITES AND MAINSTREAM MEDIA CLUSTER ACCORDING TO THEIR TRACKER USAGE?

Bipartite network of trackers and websites that use them. Shared tracker signatures may be used to explore tracker practices or strategies amongst a set of websites or to detect fake news "media groups."
Chapter 4

We shall use the term "memetic activity" in this section to designate the multiple ways in which users act around memes online, including circulating, imitating and transforming them.
WHAT THEMES LEND THEMSELVES TO MEMETIC ACTIVITY ON BREITBART’S FACEBOOK PAGE?

Network of nouns and adjectives co-occurring in images posted in 2016 on Breitbart’s Facebook page (two words are connected if they are present in the same image). Colors identify clusters according to Louvain modularity. The two most prominent clusters are centered around Donald Trump (top, blue) and Hillary Clinton (bottom, yellow). One may examine the terms present in the Hillary Clinton cluster and in clusters in its proximity in terms of framing and agenda setting.

NOUNS

ADJECTIVES

CO-OCURRENCES of nouns and adjectives in images

CLUSTERS according to Louvain modularity

DONALD TRUMP CLUSTER

HILLARY CLINTON CLUSTER
Chapter 5

Tactics such as trolling and the use of bots and “sock-puppet” accounts have been linked to the spread of political disinformation and propaganda online.
HOW CAN WE CHARACTERISE SOURCES OF TROLLING ACTIVITY BASED ON THEIR PROFILE INFORMATION?

Clustering of 24 accounts engaging in troll-like activity around the Dutch elections. The profile information is clustered according to similarities. Three users have very similar profiles and are created in a short amount of time: this helps us to identify them as 'sock-puppet' account created for trolling activities. Other six promote the same anti-Islam agendas, but without being fake accounts.

CREATION DATE

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<th>Profile Picture</th>
<th>Banner</th>
<th>Bio Description</th>
<th>Troll or Not Troll</th>
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- 09/06/2019
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- 03/05/2011
- 10/06/2013
- 14/07/2015
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- 28/11/2016
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- 11/12/2016
- 12/12/2016
- 08/01/2017
- 08/02/2017
- 20/06/2017
- Unknown

Thanks!

www.densitydesign.org