fbTREX

project status and analysis

version 1.1.1 - December 2018 - https://facebook.tracking.exposed

Executive Summary

fbTREX is a tool to empower citizens facing the opaqueness of Automated Decision Making in their life. We address Facebook as the first platform, because the personal and social impact of News Feed algorithms is, in our opinion, one of the most significant violations of freedom of our time.

It wants also explore the benefits of public owned datasets, collect forensically valid evidence to exert their rights, and works with the Academy, to educate people on algorithm influence.

Algorithms are supposed to help us in discerning and selecting meaningful content among the enormous amount of information available. Implicitly, an algorithm is a de facto delegate to prioritize content. This set of values, implemented in the algorithm, should be in the control of the user itself because no one but them knows what matters more. Empowering every user, letting them decide which algorithm to use, make them shareable, allowing them to be remixed; this is what we call "algorithm diversity." This is opposed to the algorithm hegemony currently imposed by platforms like Facebook. This goal is at the intersection of politics, technology, and freedoms and we should not consider it different from freedom of speech and choice. Algorithm diversity is the techno-political goal of this project.

The mandate of fbTREX is to focus on technology and letting other partners be the domain experts in the social, political and governance issues fbTREX can be used to address.

Targeted political advertising is an issue, and in 2018, we focused on this as one of our main use case. it is just one among many. Misinformation is another one, polarization and extremization of content, echo chambers, content moderation, algorithmic censorship, automated decision-making accountability; they are all symptoms of the current design of the platforms.

We want to support research and projects that address these topics, with the strategic goal of reaching a wide variety of users, offering them alternative perspectives on how social

networks should work, and how data could be treated in the interest of society rather than to exploit it.

I. INTRODUCTION

Executive Problem

If it is true that "*you are what you eat*", then in the information age, "*you are what you know*". If your information diet is composed almost exclusively of puppies, memes, and selfies, then maybe you want to be aware of it. If you have 500 contacts, but your timeline is composed of the same 30 friends, you should be able to understand why. This is nothing less than a distorted perception of reality, a reality that is given to users by social networks. Facebook does not provide statistics or clarity as to why it shows you certain things related to your interest. Analytics can help the user to assess how they are using the platform, if the interaction is productive and the amount of time they spent.

At the moment, we see a debate on Facebook algorithm influence solely based on anecdotal references. This is true because of the very nature of the Facebook experience. The timeline is ephemeral and personalised, and Facebook doesn't provide any information as to how or why information is shown in the timeline. Once the user refreshes the page, that chunk of information is lost.

Executive Solution

Because social networks provide a personalized experience, the technology we developed 1) creates a copy of the user's timeline, with the user's consent and awareness 2) reuses the data collected to perform analytics, comparisons and statistics. The research questions of these analyses are to better understand how the platform interacts with users' data us, or to obtain third-party observation of the platform algorithm. which can be inferred by comparing a statistically significant number of timelines.

We will visualize the differences for the user in an easy to understand way. On top of this educational experience, we want to implement accessible interfaces and design to allow users to experiment with different algorithms. An algorithm is a form of prioritization which is going to stay in our lives; we want to let users experiment with their data to see if they can develop a better algorithm than Facebook. It might seem like an impossible task due to the unmatchable capacity of the two entities. Still, we have a chance: as free-willed human beings, we are curious and often change, especially when we add input received outside social networks and bring them back into our online activities- and this curiosity can be/should be reflected in our interactions within social networks. We believe that a more personalized algorithm 'owned' by users might eventually perform differently than

Facebook, but the users can pick the most appropriate use in different situations within daily life. FbTrex offers a new potential reality of how users and algorithms can co-exist, by allowing users agency and ownership over the algorithm, and letting users experiment with all of the potential alternatives for social interactions, information, and news that an algorithm can display. Display the possibility, suggest a new potential, let imagine a new reality. Show the power of the algorithm, let the user experiment with alternatives.

We say "perform differently" and not "perform worse than Facebook" because, better or worse is a matter of metrics. To be clear, we are exploring this metric; our first scientific publication and the first initial months of research have been used to explore how we can measure algorithms, which is necessary before we start to develop any kind of replacement.

II. PROBLEM DEFINITION

The problem of personalized IXs is not exclusively on Facebook, but affects all platforms

As much as our informative experience becomes tailored to our interests, and content production and delivery becomes increasingly specific to particular audiences: a conversation, a debate, among friends or in a more public sphere with strangers; it becomes harder if you are not even sure if the audience shares the same background knowledge as you or where that audience came from. Confrontation and exchange, overall, works only if we have a common ground.

The problem with Facebook content moderation

Content moderation is the complex socio-political issue which Facebook wants to address with artificial intelligence. The process already of content moderation, inside of social networks but especially Facebook, is a closed, hidden and secret process, with a lack of accountability and appeal. This problem has been recently highlighted by the documentary The Cleaners[1]. But adding in the usage of AI will only amplify problems of bias, a lack of accountability and understanding in content moderation.

At the moment, Facebook has tried to delegate task forces for some critical cases (i.e. Correctiv for Germany elections). In other, more complex situations such as regional conflicts, the decision on who gets the power to ban or delete is a decision with political consequences, and it's entirely in Facebook's hands.

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[1] https://www.imdb.com/title/tt7689936/

For example,despite the complexities within the region, Facebook only has one content revision office for all Arab-speaking countries and it is situated in the United Arab Emirates In regards to all the Mashriq and Maghreb countries, the evident socio-political problems are the use-cases[2] we address to highlight the weakness of the centralized model platform.

fbTREX's approach in this sense, enables citizens, authorities and communities to keep Facebook accountable for their moderation decisions. Mark Zuckerberg promised multiple times, in front of the US Congress and EU Parliament, the adoption of more sophisticated AI to address hate speech. The solutionist approach of delegating complex political tasks to AI is an additional reason to keep accountable an automated tool which experts believe can't catch up with the complexity and the diversity of the conflicts around the world. Facebook and some other initiative financed by FB, GOOG and others, promise transparency and fairness, but if you consider the technological complexity and the limited access authority can have, this is far from be a fair solution of the connected population.

fbTREX engage everyday people as primary users. They are those most affected by algorithms, those with the least amount of power and equity. We want all users capable to have an ability to audit how Facebook is shaping their informative experiences.

The problem with personalization algorithms

If we can't be on a large network without a filter, users have a right to know the nature of that filter, and some day in the future we should have enough power to determine our own algorithms. This is what we call algorithm diversity, the technical possibility to apply your own algorithm on top of your timeline. Change it when you feel the need, share it, and remix it- similarly to what free licenses such as GPL permit. This is not something which is permitted by Facebook's current business model, but if algorithms have such an impact on your life, it makes sense you should exert control over them.

According to Facebook's confirmation of strategy in early 2018, the NewsFeed algorithm[3] is prioritizing certain content for the user to see and deprioritizing other content based on a variety of hidden and/or arbitrary variables. In fbTREX talks[4], it is usual quote three historical cases as a reference:
1. The Facebook's massive experiments in emotional manipulation[5]
2. The personal testimony of someone missing out on a tragic message[6]

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[2] https://en.wikipedia.org/wiki/Use_case
[3] https://newsroom.fb.com/news/2018/01/news-feed-fyi-bringing-people-closer-together/
[4] https://livestream.com/accounts/9198012/hope/videos/178834386
[5] This emotional manipulation was based on selecting only *positive* or *negative* status updates (posts) implicitly not displaying the others
https://www.theguardian.com/science/head-quarters/2014/jul/01/facebook-cornell-study-emotional-contagion-ethics-breach
[6] https://www.theverge.com/2017/12/19/16796078/facebook-friend-death-post-algorithm-problems

3.   The selective appearance of a political uprisings such as Black Lives Matter[7]. We built fbTREX to give scientific accuracy to such observations and be less dependent of anecdotes. In our first achievement, researchers get able to perform analysis. Future development would enable the user itself to understand more on the algorithm influence, maybe, even to empower them in spotting algorithm misbehavior.

We've seen through our research that Facebook sometimes shows the same content more than once, and includes content from sources the user may not follow. It is widely known that this happens with advertising, especially targeted advertising. But it also happens for other reasons which are less well understood, but have potentially harmful impacts on the user and which we are exploring via our research.

The negative consequences that can arise from Facebook showing us what we don't necessarily want to see are known. We are also concerned about what Facebook is not showing us that we would want to see. This is like a more subtle kind of censorship, because it exploits our attention economy with no room or space for intervention or course-correction from the user[8].

Facebook's black box algorithmic system is the equivalent of Coca-Cola's secret recipe; it has a major impact in how we perceive the product, though the components are not readily discoverable. This means that public discourse and the lives of our friends are at the mercy of an unknown system with unknown motivations. In addition to the secrecy, there is also a dominant position factor in place. a network, it is said has a value, equals the square of their nodes. This because less node has a network, less likely users will join it. This is a monopoly issue which in the telecommunications has been solved by interoperability and number portability, currently, the effort done by the regulator(s) are still distant from a true empowering solution, and this keeps the position of Facebook even more ubiquitous.

Algorithms are the technological solution to the information overload: they are as powerful as necessary to manage the overflow of data that reaches us. As explained above, they can also conceal ideas and culture and alter how users assess and judge the impact of culture and ideas as seen and shared through the digital community.

The impact on society also depends on products designed, algorithms are tools for the product. Think to the Facebook *like*, it is the most basic interaction, intended to measure the most uncomplicated appreciation, with an emergent property: the amount of *likes* become the primary measure for social engagement and acknowledgment, But as society, what do we *like* has nothing to do with quality, or accuracy, or trustworthiness. Still, this is the indicator, used by algorithms among others values, in deciding what goes viral and what should silently be forgotten. No one should be allowed to abuse such power over

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[7] https://medium.com/message/ferguson-is-also-a-net-neutrality-issue-6d2f3db51eb0
[8] https://longreads.com/2018/01/31/distraction-is-the-new-censorship/

connected people, At this stage, consent is neither informed nor optional..In fbTREX we try to don't re-use such metadata, or we would be mislead by Facebook design also in our effort in apply different metrics.

Running accurate analysis is hard, because every person has a different profile, access habits and algorithm decision-making can be highlighted only by comparing how two or more users get a different experience among the same opportunities.

An additional issue we faced was to figure out what a fair algorithm is. As a society, we do not yet have metrics and values, but with our tests, we can begin to develop such language. We have no way to measure it, judge it, or understand to what extent the algorithm's agenda matters more than our personal choices.

The problems with conducting and maintaining fbTREX

Facebook keeps changing the HTML needed to allow the client (the user providing the data) to access their data.

fbTREX privacy is tricky: although we are collecting only public posts, the knowledge of users' timeline could leak how Facebook profiled those users, and this can reveal private information or let third parties attribute characteristics to a fbTREX user. Aware of this risk, we do not make the users' contribution public at all. Only the users submitting their data have access to the data and it is their decision to opt-in and share their data with third parties. Because we can't solve all the trust problems with technology, it is important to define precisely the security and privacy property of this component. Log access to the database and build within it privacy-by-design.

We, as the users, want more control and transparency, we should clearly understand the impact of our activity on our information diet. Meanwhile, the wave of misinformation leads to unnecessary pressures on publishers and platforms to get new powers, legitimised by public demands. We don't expect to offer a solution which can fit every context, but we want to offer alternative perspectives from the one spread by the monopolist, and we especially want to enable local actors in exerting their politics over their community, over their data and their algorithms

The hearing at the European Parliament, held on the 22nd of May 2018, showed many political criticisms of the Facebook model and the same amount of non-answers from Mark Zuckerberg. We feel there is a lot of space for third-party independent analysis but it is an effort which requires investment and strategy.

Considering how much social media influences our learning process...
the only way to compare a person's timeline with mine is by having access to their mobile phone.

At the moment, we see Facebook in front of Congress acknowledging responsibilities and making bold statements such as "*with artificial intelligence, in 5 years we will solve the problem of hate speech and False[9] News*". This project's position is: they don't deserve any additional function in the social sphere. Facebook already has certain responsibilities and it fulfills them with disheartening results[10], and we argue third-party actors should be in charge of it: decentralized among the different cultures and languages.

Self-imposed limitations and data ethics

We refuse to share the full access to the database to who ask us so, that assets represent the trust of our adopters and we pledge to protect it.
At the moment, the protection model is *by policy*, as part of our development roadmap, we want to gradually improve the technology and offer protected *by design*.

By installing fbTREX, we are asking individuals to share some of the data - not their personal data, but what Facebook gives them. The goal is to study how social media influences, not the subject participating.

Still, many Personally identifiable information, can be present in such informations. Because the only goal of this data collection is the collective interest, transparency and fairness are two essential values. The project ethics define clearly which limits we give to yourself, in the collection and in the analysis. We don't have a business to develop, or a user profiling schema behind,

First limitation: we observe only the timelines, not individual profiles or pages. This is the difference between self assessment and enabling social media intelligence[11], which could be an abusive practice and we do not want to enable that kind of practice carelessly. We consider timeline of public post something linked to your individual profile, therefore is for us a PII to protect.

Second limitation: we only store public posts on our server

Third limitation: Users who install the extension have full control over their data; they can delete what they submit whenever they want.

Fourth limitation: Nobody has access to an individual's data unless the owner grants them access.This means: users can opt-in to every possible third-party they might want to include or interact with.

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[9] https://newsroom.fb.com/news/2018/05/hard-questions-false-news/
[10] https://www.theguardian.com/world/2018/apr/03/revealed-facebook-hate-speech-exploded-in-myanmar-during-rohingya-crisis
[11] Social media intelligence, the wayward child of open source intelligence.

Fifth limitation: if we, fbTREX, run analysis on the dataset, the analysis would be developed to understand the social phenomenon of information served up in an algorithmic timeline, not specific information about the individual profiles we are studying. This can't be formally verified, therefore during the ALEX development we would like to formulate and publish updates on the safeguards we are implementing in that research.

III. MANDATE/SOLUTIONS

The mission of fbTREX is to raise a general criticism of Facebook's current data exploitation model and to visualize and permit a collective judgment on the responsibilities of the current information trainwreck.
Algorithms, experiments with social dynamics, targeted propaganda, lack of accuracy, and content moderation: they are all just symptoms of a social network's business model.

As algorithms define what our priorities are, they should be recognized as an extension of our will. We must be able to consciously build our own algorithms, change them whenever we want, and not have to delegate this decision to a commercial entity with opaque functioning and objectives.

This is the goal of facebook.tracking.exposed, a goal that can only be achieved through education, study and awareness. We recognize that not everyone possesses the knowledge and skills to design their own algorithms, and therefore there is the need to create a support community, where algorithms can be shared, compared, improved and criticized. The algorithm is power; it can be a harmful cage or a helpful filter. Only autonomous and informed individuals can decide what is most appropriate for them at a given time.

With a personal copy you can try to simulate and explain what Facebook does in terms of content curation, expose their logic, educate users on the kind of controls they can demand. Eventually, it could push for a stronger corporate transparency in regards of automated decision making. .

fbTREX belongs to a more significant project, which is tracking.exposed (TREX).
TREX is an umbrella for other projects which share the same philosophy and technical infrastructure.

When we realize an analysis specific for Italy, during the Italian national elections, we built https://elezioni.tracking.exposed to coordinate the test and to publish the conclusive results. A self-contained, time-limited, language dependent is what we refer as declination. This term would be recurring because TREX offers technological support for political and digital activism. The effort of a campaign and contextualize is what we call declination, and usually this takes a dedicated subdomain under tracking.exposed, with a dedicated website,

advocacy, and reference person. Anyone who lives in a context where Facebook might exploit the public discourse, fbTREX could be declined by your team.

We anticipate early adopters: We predict four target user groups will find the data especially relevant: analysts, activists, advocates, and journalists.

Monetization is not the primary goal, sustainability is. In this primary phase, donations, project-based grants and crowd-funding are the model considered.

fbTREX is an infrastructure, to process collected data from our personal social media experiences.
As we realized at the beginning, we have to explore different use cases to display the potential of this infrastructure. In the first years our research has proven the validity of the model, and thanks to such achievements, it has been possible to establish new collaborations. The current strategy and vision are outlined in this paper.

Considering the current impact of Social Media on society and the life of the individual, we expect to find diverse ways of reusing this data and our findings. We do not have the mandate to deliver one, specific, feature here described. Permitting all of them is the goal, because it could create a robust infrastructure which can support others experiments and interventions in the future that could naturally emerge from the ethical and technological framework of the tracking-exposed projects.

Those who write the UX and the assessment logic would implicitly impose their agenda, their frame. This project governance aims to let users experiment with the framework and infrastructure. letting other experiment themselves. This task is complete when:
1. A stable information diet visualization (IDV) is provided by fbTREX
2. An API is implemented in fbTREX to permit a developer to run their own analysis in their IDV, and to implement their own new visualization.
3. Any user can import/run/adopt the IDV implemented by anybody else.

Considering we have no power of influence on the Facebook roadmap, at least, with fbTREX we can record what is otherwise ephemeral, and these pieces of evidence can be used to hold Facebook AI accountable.

Our approach fosters new narratives, tools and methodologies that can offer alternative viewpoints on the relationship between society and social media. We will offer products, such as the use-cases described in this document, but rather than a defined set of functionalities, our goal is enable communities to enforce, experiment with and apply their own data policies. That is the main reason why we need an open source community in support of the project.

The principal strong point of a distributed network, or an open source community such as the one we want to build, is the ability to follow up on very peculiar needs when a worldwide product could lose their ability to change, in exchanged of a standardized design.

fbTREX looks for existing political conflicts and offers to be the technical supporter for investigating the role of Facebook in those contexts.
We do not want to impose our metrics, or our judgment, on what is a suitable algorithm, but we do want to work openly to let others experiment and decide how algorithms could behave..

Letting users define their own set of values, naming, visualization is something permitted by the GPL license and it is at the core of much of the free software community. Inspired by the Collective Code Construction Contract[12] we aim to build the global community we need. It is our strategy to get enough diverse contributors and raise criticisms on the current algorithm monopoly.

Development strategy in the short term

To enlarge the user base:
1. Address misinformation issues: visualize the *Information Diet* and build tools for more tech-savvy people at the beginning, and improving the UX over time until we get a version that can be used by more general users.
2. Cover different contexts where content moderation and algorithm filtering might represent a political issue: not just elections, but other conflicts area too.
3. Display as much as possible the impact of personalization algorithms and improve knowledge and understanding about it.

To affirm fbTREX as a valid forensic evidence collector:
1. Identify target users subject to particular rights.
2. Use the evidence collected to criticize Facebook's content moderation, and/or to raise legitimate questions about the NewsFeed algorithm.

To educate on ethical data usage and to enlarge our impact:
1. Collaborate with other research groups and partners.
2. Offer a clear and transparent opt-in on our data processing and our procedures.
3. Strengthen our position as technical supporters for local and global politically motivated activism.

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[12] https://rfc.zeromq.org/spec:42/C4/

Sustainability

In July 2018, we got confirmation from the European Research Council that our 12 month development plan has been funded in a joint project with the University of Amsterdam. We are looking for partnership and funds complementary with this project plan.

IV. ETHOS

This project consists of free software technology, designed to address many issues in the domain of algorithm accountability and social media impact.

We can not try to confront Facebook in a closed model. We can not be centralized, otherwise we are just a different Facebook.

Because fbTREX's assets are unique, rather than offering a product with finite limitations, fbTREX aims to enable anyone aligned with our mission to reuse the data we have gathered through collective observation.

We don't want to sell our data, we want to exist in the public interest. fbTREX should be seen as an infrastructure to facilitate the analysis of Facebook data by the target user groups, rather than a specific product based on top of scraped data.

Diversity ensures validity in testing. Diversity of users means a more varying observation of social media. Algorithms are affecting all kinds of people, from widely different locations, with different languages, cultures, and politics. It's important to understand how algorithms affect these very different groups of people, who make up the global community of social network users.
We want to develop a reproducible method to measure the diversity of the debate observed and value our growing with such a metric; this is more important for us than the raw number of users.

V. COMPONENTS

The fundamental component is a tool which makes a copy of your timeline and later on compares it with people you know. This process of copying and comparing is the primary method needed to figure out how individual social media experiences show us different realities.

Browser extension - makes a copy of your data and submits it to the system through a server. We have a feasibility study for mobile in progress.

The browser extension performs a copy of the HTML section and our technology in the backend extracts metadata out.

within every HTML post we have (6 million in total) is all the information that has been selected for you by Facebook.. This is the best evidence for us and through this block of HTML text, metadata are extracted by **our parsers.**

The parsers are small self-contained programs which analyze the data provided by the users and extract metadata from them. The metadata are the assets on top of which we can build our analysis and, the more parsers we have, the more metadata we can derive from the users' contribution.

Metadata extracted (September 2018)

Post type	Sponsored or NewsFeed? The sponsored posts are the paid content Facebook uses to make money from advertising. They represent 10%-15% of the whole timeline. The algorithm impacts the NewsFeed.
Text	The statements shared by the author, or the preview text from a shared link.
Media type	This is the knowledge of the media type, it can take three values at the moment (post, video, image)
Number of comments, likes, shares	Metrics declared by Facebook.
Links included	If one or more clickable links are shared, we have this as separate metadata. Most of the news agencies only publish links.
Post ID	Is an unique identifier from Facebook, from which it is possible to find the original post.
Publication time	The date and time that the post has been published by the author.
Author	The name of the publisher,

There are some metadata which are not extracted but attributed, such as **language,** and **semantic analysis** – made with our partner Spaziodati[13]. This uses Wikipedia as a semantic engine. It extracts only elements with a page in Wikipedia.

To permit third-parties to collaborate, the communication with our infrastructure shall be regulated by documented interfaces (API).

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[13] https://dandelion.eu/

As of July 2018, more than 2000 people installed the tool despite our limited communication efforts. We didn't aim in the first phase to reach any large amount of users, because offering a proper UX is a hard task, and in the first phase of the project, getting some academic endorsement has helped provide credibility and solidity to the long term plan.

VI. SIMILAR PROJECTS

- DataSelfie (article[14], website[15]) has been discontinued by the author, but is a good example of what an *information diet* is. The issues Hang faced were in maintenance and costs for metadata analysis, we don't have the same limitation, but we have a far poorer UX design.
- ProPublica Political Ad Collector[16]: has a similar approach in data collection of fbTREX, but focuses on political advertising.
- WhoTargetsMe[17] developed by political researchers in UX, has been used to raise attention on the grey area of political advertising and electoral campaign money. It is used to produce results for the electoral authority.
- OpenHumans[18] is one of our potential partners, they want to collect data to open up to researchers upon an ethical agreement, fbTREX might be one of their sensor in regards to Facebook.

VII. FUTURE DEVELOPMENTS

Each one of these points requires a separated description, but in summary:

(1) *Visualizing the Information Diet*: As a first step, fbTREX's browser plugin will provide users with the ability to visualize the selection of what is being presented to them. This function will be improved over the grant period to evolve from simple analysis towards mining for more complex, semantic information. A key feature of this tool is that it allows users to obtain data on their Information Diet and to experiment with the parameters in order to better understand how Facebook's algorithm works.

(1.1) Let users customize their visualisations. A visualization implies values, priorities and perspectives. We should let users experiment and share their way.
(1.2) Let users customize their algorithm. This is the most complex functionality, but it represents one of our end goals.

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[14] https://motherboard.vice.com/en_us/article/mg7gpy/data-selfie-app-shows-you-exactly-who-facebook-thinks-you-are
[15] https://dataselfie.it/#/
[16] https://projects.propublica.org/facebook-ads/
[17] https://whotargets.me/en/
[18] https://www.openhumans.net/

(2) *Comparing the Information Diet*: fbTREX will provide users with tools for comparing their timelines to that of others, based on mutual agreement. The goal is to involve and compare a diverse group of users across the globe.

(2.1) Advocate for this UX adoption, observe and verify if it can be used to address misinformation and/or missing other people's viewpoints.

(3) *Enabling third-party researchers*: The data mined by fbTREX will be anonymized and provided to selected third-party researchers, either individuals or collectives such as OpenHumans. They will be enabled to contextualize the findings, combine it with other data and complement it with social science research results. In order to protect user data, it is crucial for fbTREX to build trusted relationships and networks with researchers.

(3.1) Develop a framework for ethical data-reuse, use this process to promote literacy on algorithm transparency and accountability. Display the potential of a dataset collected in the public interest, which allows people to understand phenomena but protects individuals.

VIII. ACHIEVEMENTS & REFERENCES

2018
- The first academic publication of ours has been acknowledged as [Best Article] in Brasilian Social Network analysis.[19]
- TacticalTech published a report written by Claudio Agosti and Fabio Chiusi, on Italian political election and digital propaganda[20]. fbTREX data, released in [this repository], have been used in a portion of the report.
- WebFoundation used fbTREX as a measurement tool to analyze how the algorithm shapes the perception of political events. We ran the test in Argentina, and produced a report: The Invisible Curation Of Content.[21]
- European Research Council funded ALEX (ALgorithm EXposed)[22] with 150.000€.
- DataTransparencyLab select fbTREX among the three winners of their yearly price[23]

2017
- We received a small grant from LUSH digital fund, 11.000€.
- Anonymization of a social graph is hard, The fbTREX dataset has been used by a researcher, Silvia Puglisi, to produce a research paper on linkability of anonymized profiles.[24] This also provided a privacy assessment on how to define our open data policy.

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[19] Biases in the Facebook News Feed: a Case Study on the Italian Elections
https://arxiv.org/abs/1807.08346
[20] https://ourdataourselves.tacticaltech.org/posts/overview-italy/
[21] English and Spanish version at:
https://webfoundation.org/research/the-invisible-curation-of-content-facebooks-news-feed-and-our-information-diets/
[22] https://data-activism.net/publications/software-development/
[23] https://datatransparencylab.org/cft2018_winners/
[24] http://www.mdpi.com/1099-4300/19/5/190

IX. ACKNOWLEDGMENTS

A bunch of persons dedicated their free time reading, guessing and questioning this document. Was not simple, as first because I write in a contorted way, as second, because the topic mixes criticism in technology, techno-politics, and an experiment for social empowerment in the digital age.
The TRex project is an unknown path in which nobody can walk alone. We deal against one of the hidden phenomena of our time, pushed by our ethics and political beliefs. You trusted me and this project with your time and attention; I would do my best to include your inputs in the governance of the project and community development.

The most crucial editing phase was lead by **Arikia Millikan**, which took a quite confused document and transformed to the current shape.
Other significant contribution comes from **Barbara Gianessi, Beatrice Cavicchioli, Giovanni Civardi,** and **Sophia Charleson**. With their valuable insights, patience, and questioning, they helped a lot the development of this document, challenging the assumptions and producing a smooth exposure even in the most complicated parts. Sophia also authored the Glossary.

Thanks to all of you, this project has now two years of history

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