ALGORITHMIC MEDIATIONS OF GENDER AND FASHION ON PINTEREST

White Paper - June, 2022

antropomedia



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Antropomedia's objective is to show our clients the results of research developed in the field of digital anthropology and data sciences while remaining faithful to its editorial line: the concern of synthesis, explanatory pluralism, multidisciplinarity, and reflexivity.

Helping organizations understand their audiences allows them to reduce their marketing waste, which is one of the foundations of our motivation and commitment, in addition to a desire to apply our analytical skills to the gradually dehumanized digital world and live off our passion by doing applied research with broader impacts than just academic spheres.

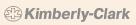
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OUR CLIENTS















Warner/Media

















INTRODUCTION

This white paper attempts to show how Pinterest algorithms display different search results for queries that include "women," "queer," or "men" related metadata and how this platform exerts influence on constructions of gender (Burns, 2015) and fashion consumer culture.

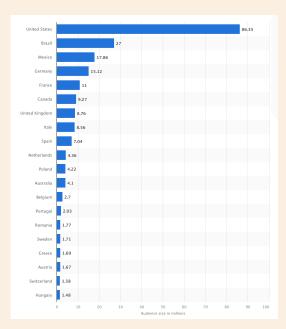






As <u>exploratory research</u>, this document's framework is inspired by a current known as **critical algorithm studies** (Neyland, 2019), which discusses algorithms' cultural biases and social effects. Algorithms can be defined as computational recipes or step-by-step instructions for transforming input data into the desired output (Gillespie 2014), and we presume that their implementation in social media platforms can affect the users' agency, or the physical or mental ability, skill, or capability that enables actors to do something (Arnould, 2007).

PINTEREST



Leading countries based on Pinterest audience size as of January 2022 - Statista 2022

Pinterest is a social media platform that allows users to visually curate, share, and discover new interests by posting, also known as "pinning," images or videos to their own or others' pinboards. Users can either upload images from their computer or pin things they find on the web using the Pinterest Save Button, Pin It Button, or just a URL.

Organizations that rely on driving a high volume of website traffic to increase sales should consider joining Pinterest. In fact, according to Pinterest Global Analysis (Q1 2022), 433 million people use Pinterest every month to find ideas and inspire their next purchase.

PINTEREST STATS



60%

of Pinterest global audience are women.

97%

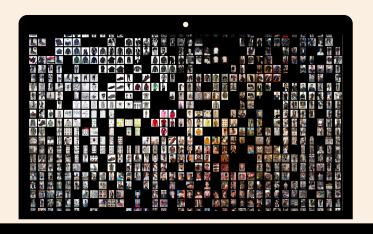
of top Pinterest searches are unbranded.

85%

of Pinners say Pinterest is where they go to start a new project. 80%

of weekly Pinners have discovered a new brand or product on Pinterest.

METHOD



For this exercise, we used a node.js-based library that mimics Pinterest users' queries and extracts all digital objects (data + metadata) that appear as outcomes displayed in a frontend built on React. In this case, the three queries used were "women," "queer," and "men."; in the default location. Data retrieved was limited to 2,000 pins for each keyword, resulting in a database of 6,000 pins.

Databases are then processed using a natural language dictionary that counts and classifies words according to some of their grammatical properties (adjectives, nouns, etc.).

Images, on the other side, are organized according to similar color patterns in a mosaic graph. The purpose of this visualization is to detect look-alikes among the digital objects.

O1 WOMEN

This section presents data visualizations encompassing search results for queries that include "women" (as a keyword) related metadata.



"WOMEN" PINS



The mosaic view represents a zoomed-in portion of the pins corpus. Images were classified according to similar color patterns.



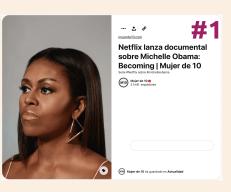
This visualization displays hierarchically structured data and a related quantitative dimension. It is composed of an area divided into small cells representing the last level of the tree structure, computed using the Voronoi tessellation. The cells' size depends on the quantitative dimension. Furthermore, it depicts the thirty most frequent bigrams appearing in the titles of each of the 2,000 pins collected using "women" as a keyword.

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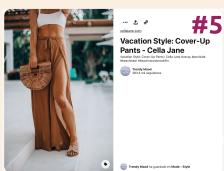
This word cloud visualization represents the 200 most repetitive pin sources. The URL size is proportional to the source frequency (repetition).

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MOST POPULAR PINS











These are the five most frequent pins suggested by Pinterest on each query, classified according to source popularity.

O2 QUEER

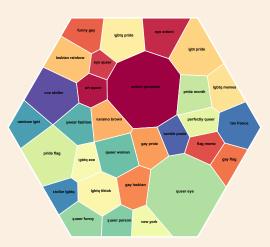
This section presents data visualizations encompassing search results for queries that include "queer" (as a keyword) related metadata.



"QUEER" PINS



The mosaic view represents a zoomed-in portion of the pins corpus. Images were classified according to similar color patterns.



This visualization displays hierarchically structured data and a related quantitative dimension. It is composed of an area divided into small cells representing the last level of the tree structure, computed using the Voronoi tessellation. The cells' size depends on the quantitative dimension. Furthermore, it depicts the thirty most frequent bigrams appearing in the titles of each of the 2,000 pins collected using "queer" as a keyword.

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This word cloud visualization represents the 200 most repetitive pin sources. The URL size is proportional to the source frequency (repetition).

MOST POPULAR PINS











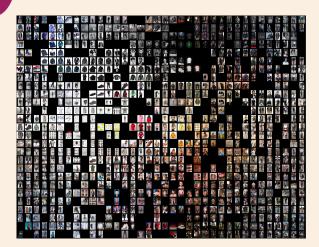
These are the five most frequent pins suggested by Pinterest on each query, classified according to source popularity.

O3 MEN

This section presents data visualizations encompassing search results for queries that include "men" (as a keyword) related metadata.



"MEN" PINS



The mosaic view represents a zoomed-in portion of the pins corpus. Images were classified according to similar color patterns.



This visualization displays hierarchically structured data and a related quantitative dimension. It is composed of an area divided into small cells representing the last level of the tree structure, computed using the Voronoi tessellation. The cells' size depends on the quantitative dimension. Furthermore, it depicts the thirty most frequent bigrams appearing in the titles of each of the 2,000 pins collected using "men" as a keyword.

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This word cloud visualization represents the 200 most repetitive pin sources. The URL size is proportional to the source frequency (repetition).

MOST POPULAR PINS

What To Wear For A First

You're Trying Too Hard

Date Without Looking Like

... <u>†</u> &







These are the five most frequent pins suggested by Pinterest on each query, classified according to source popularity.

The 10 Best-Dressed Men

GQ Magazine ha guardado en Best-Dressed

of the Week





CONTRAST: W+Q+M

This section presents data visualizations contrasting search results for queries that include "women," "queer," and "men" (as keywords) related metadata.

PIN SOURCES

breakfastwithaudrey.com.au marieclaire.com deeprootsathome.com southernliving.com justfashionnow.com southermanig.com. jenniferriza.com vogue.com.au fromluxewithlove.com microdeer.com.classyyettrendy.com.vehairstyles.com shopdeltablue.com iamandco.comnrscasual.com ew.com boredpanda.com twixnmix.tumblr.conyesmissy.com hellobombshell.com styleblueprint.com www.mic.cumbic.com/gesmissy.com neurous/migstent.com/ hoffbaseharvest.com/pustle.com/ hoffbaseharvest.com/ pustle.com/ amalitail.com/ instyle.com/ pustle.com/ pus avorystore.com refinery29.com rystore.com reiniery29.com theeverygirl.com people.com chicpursuit.com yourtango.com eneral.com ladydecluttered.com ris.com zaful.com prettydesigns.combuzzfeed.com cellajane.compadfyessentials.com shopymax.com wmagazine.comjoshowsuits.com thesun.co.uk hisugarplum.com whowhatwear.com stunningstyle.com merricksart.com maridfashion.com bedazelive.com wellandgood.com purewow.com alfemminile.com alexawebb.com extrapetite.com flashbak.com alfemminile.com alexawebb.com hadviser.com maisondecinq.com|abellesociety.com/wman-delice.com chaylorandmads.com|abellesociety.com/wman-delice.com allure.com/zen.yandex.ru handylittleme.comwattpad.comosmopolitan.com 50isnotold.com camillestyles.com/arkspurhouse.com loverlygrey.com/divaglamup.com laurenmcbrideblog.com eluxemagazine.com latest-hairstyles.com alexandradecurtis.com funkyforty.com weddingdressesguide.comblog.pearlandcreek.com weudingdressesgulde.com/mg.pearlandcreek.com the-wardrobe-stylist.com bglh-marketplace.com/mg-tyliscom petiteinparis.com/mstagram.com/sug-petitedressing.com petiteinparis.com/mstagram.com/sug-petitedressing.com mydno;wear.com/ducky.com straightastyleblog.com laderse-theme mydno;wear.com/ducky.com straightastyleblog.com kadence-theme.mystagingwebsite.com

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"Women"

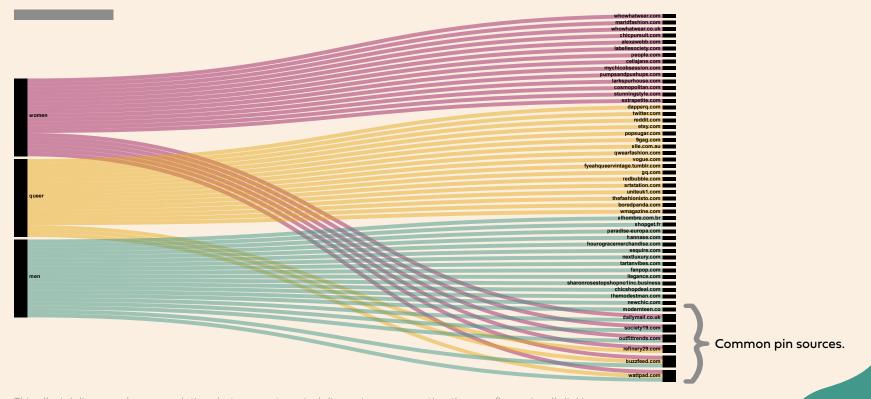
'Oueer'

"Men"

BIGRAMS

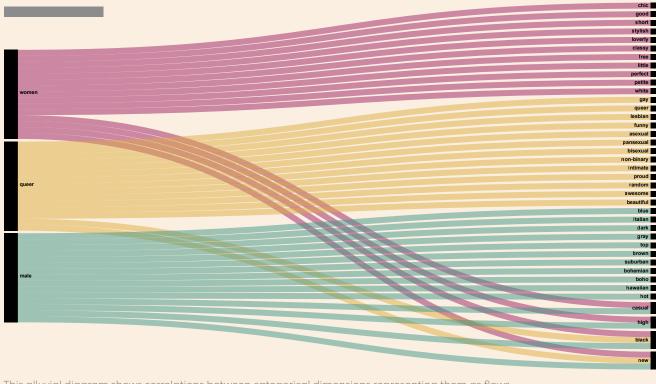


PIN SOURCES



This alluvial diagram shows correlations between categorical dimensions representing them as flows, visually linking gender with **recurring pin sources**. Each rectangle represents a unique value in the selected dimension; its height is proportional to its value. Correlations are represented with curved lines whose width is proportional to their value.

ADJECTIVES



Common adjectives within pin titles.

This alluvial diagram shows correlations between categorical dimensions representing them as flows, visually linking gender with **recurring adjectives found in pin titles from the collected corpus**. Each rectangle represents a unique value in the selected dimension; its height is proportional to its value. Correlations are represented with curved lines whose width is proportional to their value.

NOUNS



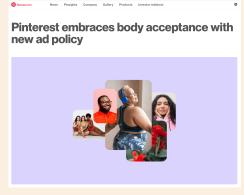
This alluvial diagram shows correlations between categorical dimensions representing them as flows, visually linking gender with **recurring nouns found in pin titles from the collected corpus**. Each rectangle represents a unique value in the selected dimension; its height is proportional to its value. Correlations are represented with curved lines whose width is proportional to their value.

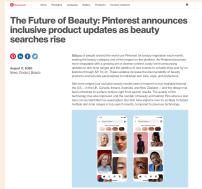
Common nouns within pin titles.

CONCLUSIONS

KEY FINDINGS

- Aside from georeferenced biases (which were not contemplated for this exercise), Pinterest search algorithms do a good job representing diversity in fashion-related content. This can be confirmed by recent company efforts, such as a <u>feature that lets users filter pins by hair texture</u> or the action of <u>banning all weight-loss ads</u> on its platform.
- Daily Mail UK, Buzzfeed, Society19, Wattpad, Outfit Trends, and Refinery29 are the primary sources for pins served using gender-related keywords. In addition, these websites function as hubs where fashion articles and pictures are taken from to be shared on Pinterest.
- If, as Pinterest reports, 80% of weekly Pinners have discovered a new brand or product on that platform, these web sources must be considered when trying to position a new fashion brand on Pinterest.
- A more profound discussion of these topics can be relevant if replicating this exercise on other social media platforms such as Instagram or TikTok.





CONCLUSIONS

In The Lonely Selfie King: Selfies and the Conspicuous Prosumption of Gender and Race, authors Williams and Aldana (2015) quote Judith Butler (1999) to argue that the "rationality that contributes to the way individuals categorize sex, gender, and sexuality is culturally constructed." By repeatedly performing gender roles, selfie-takers (authors set as an example) produce new social norms and rituals. The more "likes" actors have, the more likely they are to re-prosume similar gender presentations.

In the same direction, our perspective emphasizes the dynamics through which search algorithms produce a "technological unconscious" (Beer, 2009), or a force that has been shown to palliate consumers' agency significantly and might contribute to their techno-social reproduction by amplifying cultural biases regarding gender and fashion clothes consumption, for example.



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