



# How companies like Netflix replaced humans with predictive analytics

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Twenty years ago television networks collected viewer data through hosting focus groups. Based on randomly

chosen viewers' self-reported emotional responses to shows, networks would either push, delay, or cancel different series. This data was collected in what now seems to be a hilariously analog format: the network stakeholders watched viewers through one-way glass and had them report emotional responses via a dial. Termed Audience Dial Testing (ADT), this method for predicting a show's success started in the 1960's, and persisted for over 40 years despite its frequent failures — such as predicting that Seinfeld would flop.

Today, however, streaming platforms like Netflix, Hulu, and Amazon have eradicated ADT and replaced it with a much more reliant system: predictive analytics.

#### THE NETFLIX EFFECT

Netflix is positioning itself as "an American over the top content platform and production company. The key differentiator between Netflix and its competitors, though, is that Netflix measures everything, and uses predictive analytics to gauge the future success of the shows it invests in. That's why it outbid competitors for House of Cards (including AMC)

without even seeing a pilot. Using data points such as plot theme, viewership trends, director, and political climate, Netflix predicted that the show would be a success based purely on analytics — not personal opinions.

The video platform hasn't stopped at using predictive analytics for choosing shows, though: it also shows different users personalized content (such as trailers, suggested shows, and movie art) based on behavioral data to get them to watch these shows. The data used to inform what content viewers were shown went beyond genre tastes, into granular data such as volume, how often a user pauses, whether the viewer uses subtitles, and even data on users' tastes in pace and camera shots. These data points are not random; Netflix regularly tests the predictive viability of various metrics, and then uses those that are predictive in conjunction with others to constantly finesse its algorithm. In fact, the company runs several million A/B tests per day and measures the impact of these tests daily to optimize user satisfaction.

### Step by step: How Netflix actually gains user insights

Netflix collects data from two different verticals: viewers and the content itself. The company uses Al to A/B test interactions between users and genres of content in order to draw predictive conclusions about what shows and movies different users will enjoy (or at least, engage with).

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#### **Understand viewers**

To gain an understanding of your competitors' products, services, pricing, and features, companies need to collect insights from three key stakeholders in a 360 manner:

- Collect metadata on viewing behavior including how much users watch, when they watch, and what they watch.
- ) Use this metadata to create behavioral customer segments.
- Measure degree of engagement based on remote signals including raising/lowering volume, skipping forward, re-watching, and stopping before the end.
- Gauge viewer enthusiasm movie by movie.

### 2

#### **Understand content**

- Collect metadata generated from IMDB and movie credits including director, actors, length, and genre.
- Collect unstructured on-screen data including luminosity, movement intensity, sound intensity, and character vs. scenery intensity.

### 3

#### Actionable insights for future predictions

- Create micro predictions i.e. how a given customer will react to a specific piece of content. These predictions include the likelihood that the customer will watch a movie/TV show, the degree of engagement the customer is likely to exhibit, and the viewers behavior based on type of content (i.e. a customer is more likely to watch a TV series on weekdays and movies on weekends).
- Create macro predictions i.e. how an entire audience will react to a given piece of content. These predictions include how many views a show/movie will gain, how popular a show/movie will be, and which cohorts of viewers are most likely to engage with/ create buzz around a piece of content.



These two levels of prediction accomplish unique yet related goals: improved user experience and high likelihood of success for Netflix original content. In the end, though, the outcome is the same: higher user retention and acquisition, and thus increased revenue for Netflix.

"A third of your decisions are really great decisions, a third are not optimal, and a third are just wrong."

Ginni RomettyFormer IBM CEO



## How Netflix manages to test and analyze so much data

The Netflix content suggestion algorithm is generally considered the holy grail of personalization. But aside from the company's seamless workflow outlined above, the salient reason why it's so good at predictive is the degree of automation in this workflow. Using what the team terms the "Experimentation Platform," Netflix even tests the images associated with titles, sometimes resulting in 20% to 30% more viewing for that title. All of this testing is highly reliant on systems such as this platform, which automate the testing workflow and ensure that tests don't interfere with each other and pollute the data.

What can you take from this? That automating real-time data collection for constant A/B testing allows you to analyze and gain insights that can inform highly impactful business decisions (like investing in a new show). When you can make both macro and micro conclusions about your users you can ensure that what you give them will satisfy their needs.

### Replacing human emotion with data

The implications of the Netflix algorithm expand far beyond binge-watching Mare of Easttown. Any

company can implement a similar system of predictive analytics to make smart investment decisions and give users content that is statistically likely to be engaging. The more data one has, the easier it is to automate the process of identifying patterns. And companies that leverage behavioral data to make predictions will gain a similar market advantage to Netflix.

The Netflix model also demonstrates the implications of constantly iterating on cohorts, user tastes, and audience preferences. Netflix never stops testing and never stops incorporating new metadata into its insights. Over time, people change on both a personal level and an audience level. Netflix is poised to keep its hold on user tastes even as they evolve over time. It is this attention to behavior that makes the company stand out.

That said, many leaders and companies default to instinct or opinions over data. Less than 0.5% of all data is ever analyzed and used, and as former IBM CEO Ginni Rometty pointed out, "a third of your decisions are really great decisions, a third are not optimal, and a third are just wrong." The focus groups of the past may induce familiarity-based nostalgia, but the reality is that an algorithm is better at predicting behavior than an executive is. This doesn't mean we should do away with humans and let robots run the world, of course. It means only that a healthy interaction between code and analysts can result in more user friendly and audience pleasing products.



## What is the next generation advertising platform?

In 2004, Mary Meeker, American VC and thought leader on the Internet and new technologies, predicted that internet advertising was under monetized compared to print newspapers and that data-driven targeted user advertising would expand -- and we all know how that ended up. Today, we ask the same question, but looking at 2020 and beyond: in a world increasingly impacted by wearables, smart speakers, and data privacy concerns, what will the next gen advertising platform be?

To answer this question, NewtonX conducted a comprehensive survey with hundreds of individuals in media, marketing, and advertising. The subjects of this survey ranged from entry level employees with titles such as "Community Manager" to C-level executives at multi-billion dollar corporations.

#### 1. COMMERCIALS ARE DYING, SUBSCRIPTIONS ARE GROWING

When it comes to product purchases, many are evolving from buying to subscribing via services like Netflix, which, at 207 million subscribers in Q1 2021, saw 22 percent growth, and Spotify, which, at 158 million subscribers, saw 21 percent growth. Newcomer Peloton had 1.67 million subscribers.

up from just 172,000 subscribers in 2017, which marked a whopping 870 percent growth. Subscription services are appealing because they offer access, selection, price, experience and personalization.

#### 2. THE LESS DIVISIVE, THE BETTER

Facebook, Instagram and YouTube are struggling with divisive content. Brands are on the lookout for places to advertise that won't land them in hot water. In recent months, brand trust and safety has shot to the top of the priorities list for advertisers and publishers.

### 3. PLATFORMS ARE STARTING TO DEAL WITH BAD CONTENT

Big advertisers like P&G cut millions in digital ad spend because of brand safety concerns—and Unilever has also threatened to reduce ad spend on tech platforms that don't combat divisive content.

As a result, platforms have started to take action. That includes Google/YouTube, which now removes millions of videos flagged by algorithms. Millions more videos were de-monetized for misleading content tagging.

### 4. CONSUMERS PREFER SELF-DISCOVERY, EVEN IF AIDED BY ADS

The way consumers discover products is also changing, fueled in part by Facebook and Instagram, which feature ads in feeds.

Social media is driving purchases as well—Facebook leads the way with 78 percent of survey respondents saying they have discovered products on the platform, followed by Instagram and Pinterest with 59 percent, Twitter with 34 percent and Snap with 22 percent. What's more, 55 percent of respondents said they have purchased a product online after a social media discovery.

# Competitive benchmarks 2.0: How direct access to data is changing the industry

aspects of your competitors' products.

Competitive feature benchmarking informs business stakeholders on how to sell more effectively, finesse messaging, and tweak pricing to be as competitive as possible. A good competitive feature benchmark report reveals where competition is strong, where it's weak, where adjusting a feature could offer a competitive advantage, and what customer sentiment is on

That said, getting an unbiased, accurate, and comprehensive report is easier said than done. Traditionally, there are three potential routes that businesses take: market research reports, consulting services, or an internal sales/marketing team soliciting feedback from customers. As the table below demonstrates, however, each of these routes has problems with either bias, access, or both.

78%

of Facebook respondents said they have discovered products on the platform

59%

of Instagram and Pinterest respondents said they have discovered products on the platform

34%

of Twitter respondents said they have discovered products on the platform

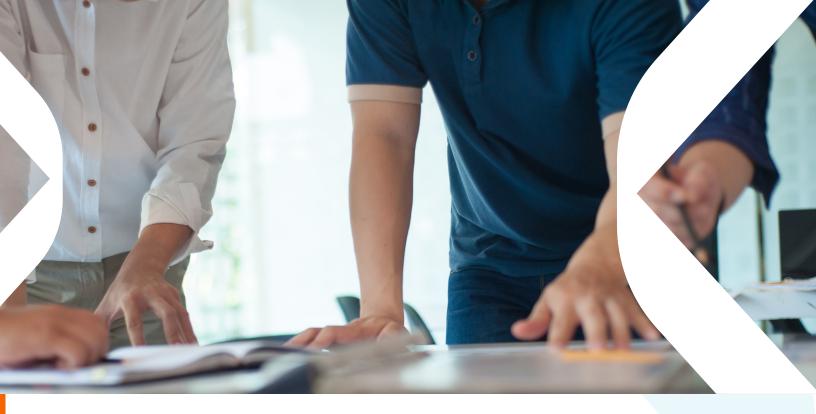
22%

of Snap respondents said they have discovered products on the platform

55%

of respondents said they have purchased a product online after a social media discovery

	Data Bias	Data Access
Consulting Firms	Firms are paid based on engagement time. They are incentivized to please the client with the date, form a flattering narrative, and keep the client.	Consulting firms rely mostly on their own consultants and partners for expertise.
Market Reports	Market research reports gather broad insights on the industry, but are not specific to the client's needs.	Data consists mostly of compiled secondary sources that are synthesized and consolidated.
Internal Marketing Teams	The sales representative will be biased toward information making their job easier or making them look good — generally driving price down.	Sales and marketing representatives only have access to current customers or competitors.



## How to use B2B executive surveys for competitive feature benchmarks

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Competitive benchmarks should consist of a combination of qualitative and quantitative data. For instance, it's

important to know a certain number of quantitative data points such as sales volume, pricing or promotions (such as determining if your competitors charge clients prorated amounts or have package deals). In addition to this, however, you want qualitative data — how happy are customers with certain features? Which features are easiest to sell? Which features are customers most unhappy with? To get answers to the qualitative and quantitative questions that companies have for feature benchmarking, you need to speak with stakeholders in key categories. Here's what these stakeholders would look like for each element of a competitive benchmark:

- High-level market scan: former heads of marketing and/or sales at the market leader company. These people know the market leader's products, the competitors, the distributors, and the available features on the industry landscape inside-out.
- Precise feature analysis on a specific brand: Former heads of product at the competitors or

- a distributor who distributes the features for the feature benchmark
- ) Precise feature comparison: large survey of customers for a "voice of customer report" on sentiment of various features.
- Advertising/positioning: former head of advertising or marketing at each competitor, or a senior ad executive from a large agency that worked with the industry leaders.

Executive B2B surveys collect insights and data from large sample sizes of each of these groups. Unlike market reports, expert surveys use data taken straight from the source: customers, employees, and distributors. Additionally, because expert surveys do not rely on networks for contacting members of each data source, they can access a large enough sample size of unbiased respondents to ensure the accuracy of the data. This gives companies valuable information on how they should position themselves vis a vis pricing, messaging, and product roadmaps.

The most important aspect of a robust competitive feature benchmark is getting comprehensive, accurate data from the right sources. And the best way to do this is to leverage the power of B2B survey providers like NewtonX.

To learn more about how NewtonX can help your company perform a comprehensive and precise feature benchmarking report, please reach out to newtonx.com/get-in-touch.

### **Newton**X

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