gb

« Back to talks

Structuring visual narratives to feed the curiosity

Mar 9, 2021

Presented for World Information Architecture Day's Delhi Chapter, this post is a transcript of a talk focused on using different journalistic frameworks to structure stories. The theme for the 2021 edition of the World IA Day was curiosity, so the talk focused on creating narratives in a way that fed the reader's curiosity. If you'd rather watch me speak on the topic, here is the video:

Visual Narratives to Feed The Curiosity - Gurman Bhatia, WIAD 2021 New Delhi

When Souvik first reached out to me to speak at World IA Day, he introduced me to the concept of Information Architecture. Prior to that, I had no idea of what the term meant. After all, I have two degrees in journalism and none in design or computer science.

I started reading up on the field and found this definition somewhere on the internet.

"Information architecture (IA) focuses on organising and structuring content in an effective and sustainable way."

Two words stuck out to me.

*"Information architecture (IA) focuses on **organising** and **structuring** content in an effective and sustainable way."*

Stories have a structure too! And there are several formulas/frameworks to these structures in news. And journalists have all these creative and fun terms for them. There are many many many frameworks, but here are a handful.


Over the years, I have noticed ways of incorporating these in visual and interactive stories. Since visual narratives on the web are about design and the story working in tandem, different structures can be used to create different kind of experiences for the reader.

The Inverted Pyramid
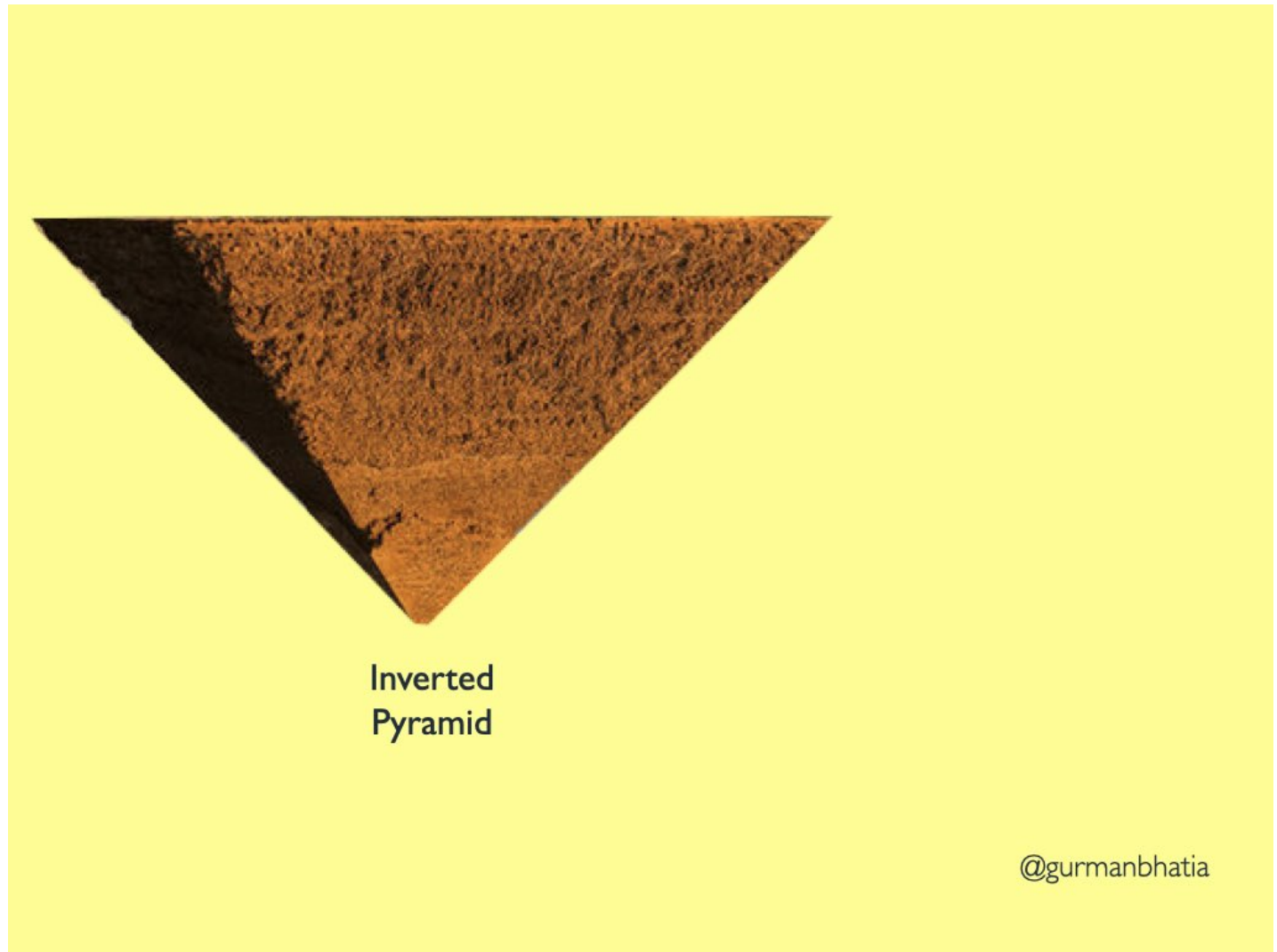
The inverted pyramid is a format used frequently in the news. The stories on the front page of a newspaper are most likely to follow this structure. It starts with the most important information on the top and as you move further in the story, the priority of the information decreases. With this structure, the reader can move away from the story at any point in time.
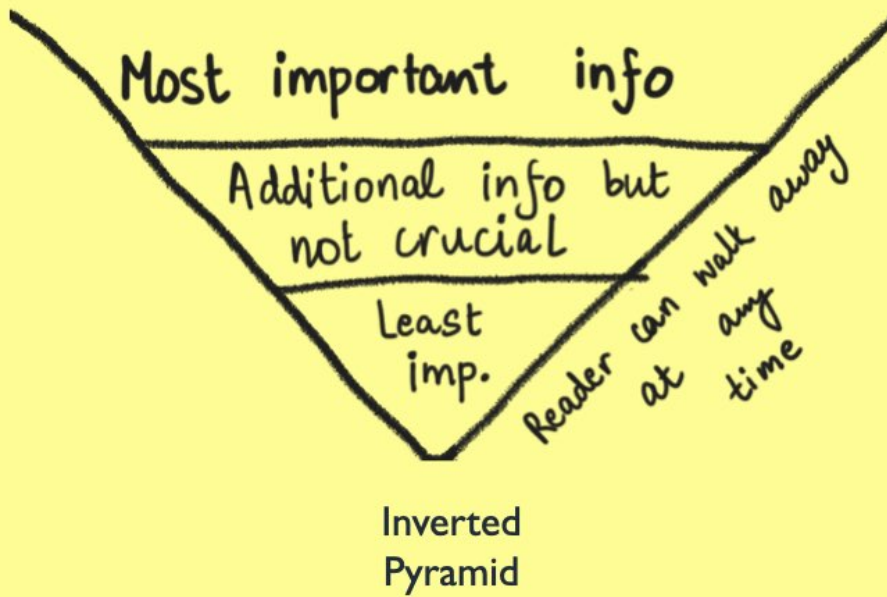
For this story about the Gujarat elections that I did at the Hindustan Times, the page starts with a headline and a visual that tells me what the story is about.

Winning a state election in Gujarat has become harder

By Gurman Bhatia and Samarth Bansal

With decreasing margins of victory, assembly elections in Gujarat are becoming a close contest.

Margin of victory (in %)

0   1   10   20   30   40   100%

1980   1985   1990   1995

1998   2002   2007   2012
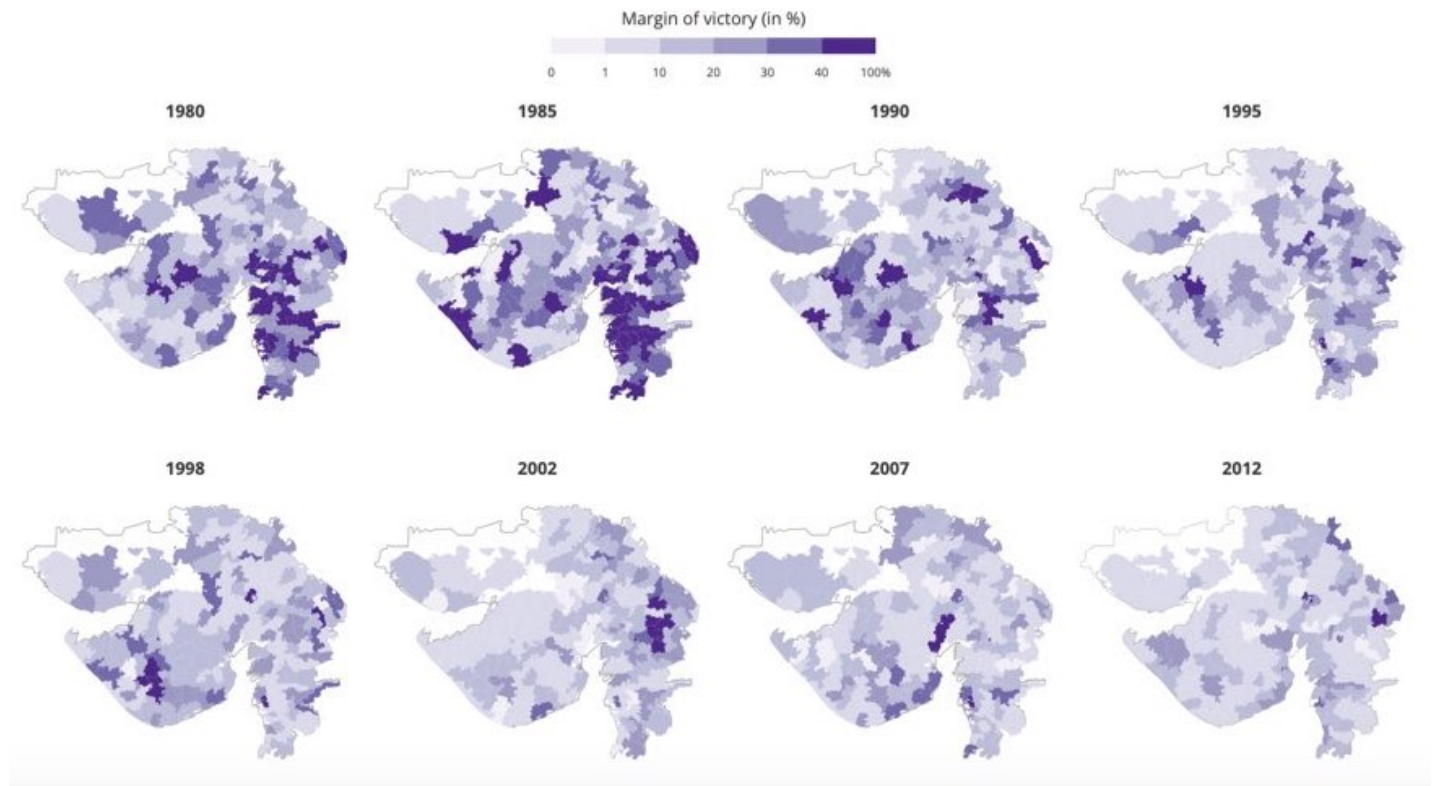
That is followed by a nutgraph (a paragraph outlaying the crux of the story) and key information illustrating that fact.

Elections in Gujarat have become more competitive over the last sixty years, as indicated by a narrowing of the winners' margins of victory, a Hindustan Times analysis of Gujarat election data shows.

The median margin of victory — that is, the difference between the votes received by the winner and the runner-up as a proportion of total valid votes polled — was 22.2% in 1962. In 1995, when the BJP first came to power in the state, the figure reduced by half to around 12.96%. In 2012, it further slipped by two percentage points to 10.72%.

Every other element dives deeper and gives additional information. Here is the distribution in a histogram.

Fewer seats have a high margin of victory

Each block represents a constituency won by a particular party

■ BJP   ■ Congress   ▦ Other
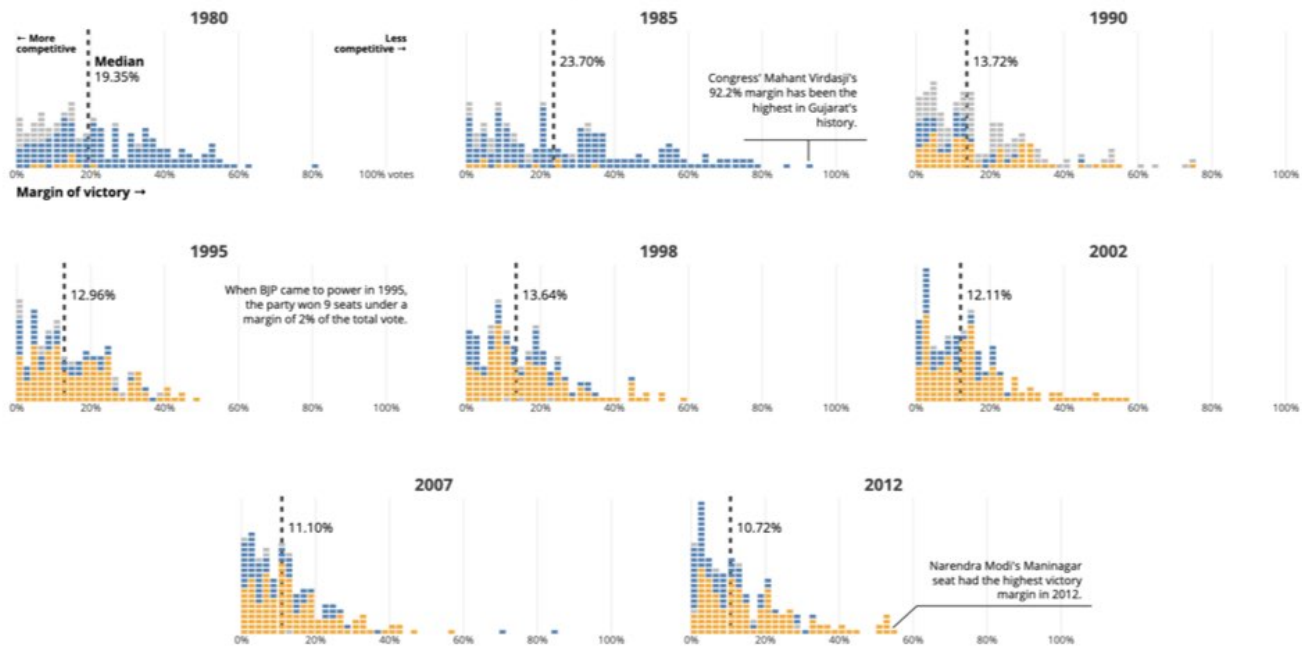
Source: Election Commission of India (ECI)
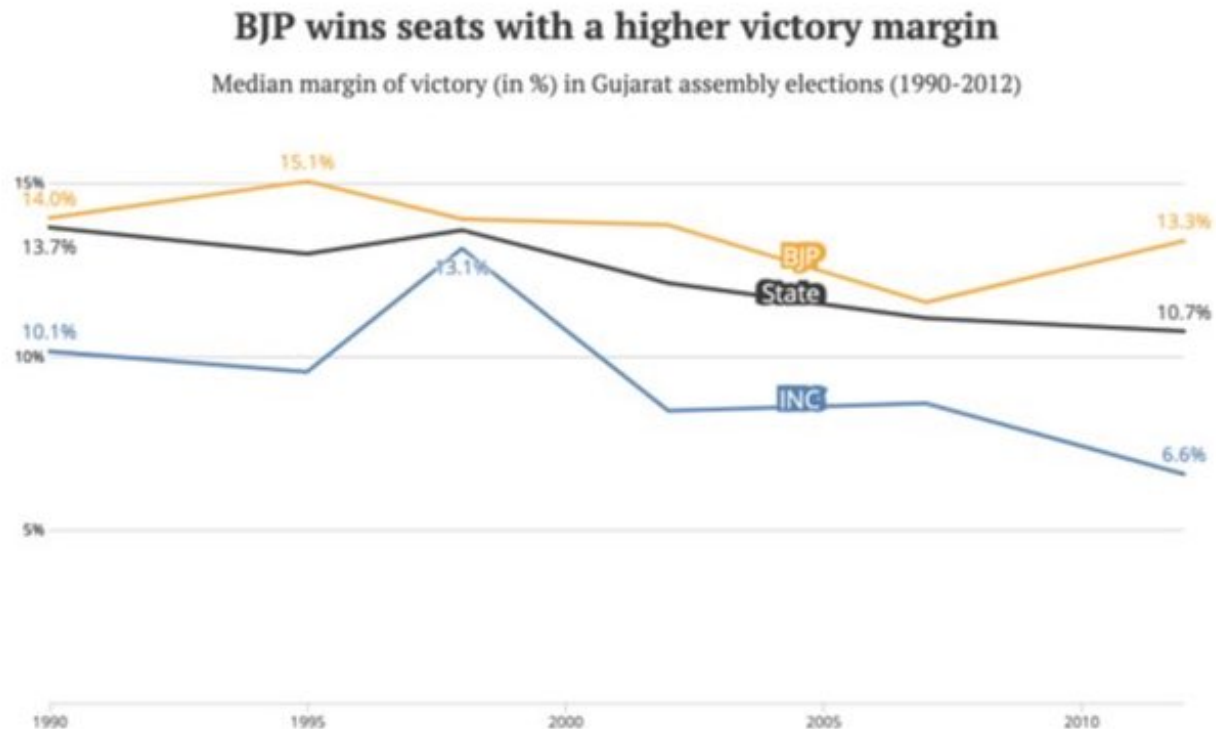
@gurmanbhatia

Then some quotes from candidates...

Further, eight seats in 2012 had a winning margin of less than 1% of the final vote. Of the eight, the Congress won six; the BJP and the NCP got one each.

One such seat was Kalol in the Gandhinagar district, where the Congress's Baldevji Thakor beat the BJP's Atulbhai Patel by just 343 votes. In 2007, Patel won the Kalol seat while Thakor won from another constituency—Kadi. This year, both names will appear on the ballot for Kalol again.

And party trends...

When the BJP wins in Gujarat, it does so more decisively as compared to the Congress, data shows. In 2012, for instance, among seats where the BJP candidates came first, the median margin of victory was 13.3%. For the Congress winners, the median margin was just 6.6%, almost half that of the BJP's winners.

BJP wins seats with a higher victory margin

Median margin of victory (in %) in Gujarat assembly elections (1990-2012)

Source: Election Commission of India (ECI), HT Analysis

Ending with specific examples of seats that have had consistently high or low margins.

Two constituencies near Ahmedabad, Ellis Bridge and Naroda, and two near Surat, Chorasi and Surat City West, have been strongholds of the BJP for the last two decades. In all elections since 1995, these four are the only seats where the margin of victory has been among the top 20 victory margins statewide.

...
"These are seats in the Hindu heartland," Jani said. These seats represent the "typical upper-caste Baniya areas" — comprising of the urban business class BJP supporters, she added.

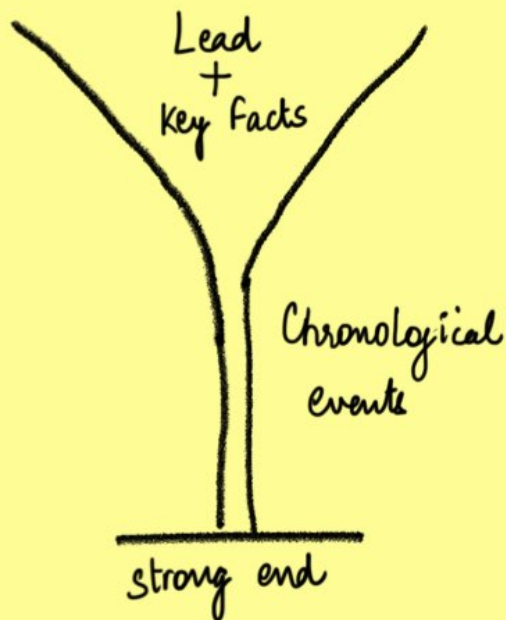*In the Dehgam constituency, the fight has consistently been tough since 1995. The BJP won the seat*

in 1995 and 1998, but since then, the Congress took over. The last election from this seat was won by the Congress's Kaminiben Rathore with a margin of just 1.8%.

The Martini Glass

Time to pour some drinks...

Martini glass

@gurmanbhatia

The Martini glass structure starts with the inverted pyramid and follows it up with chronological events and a strong ending.
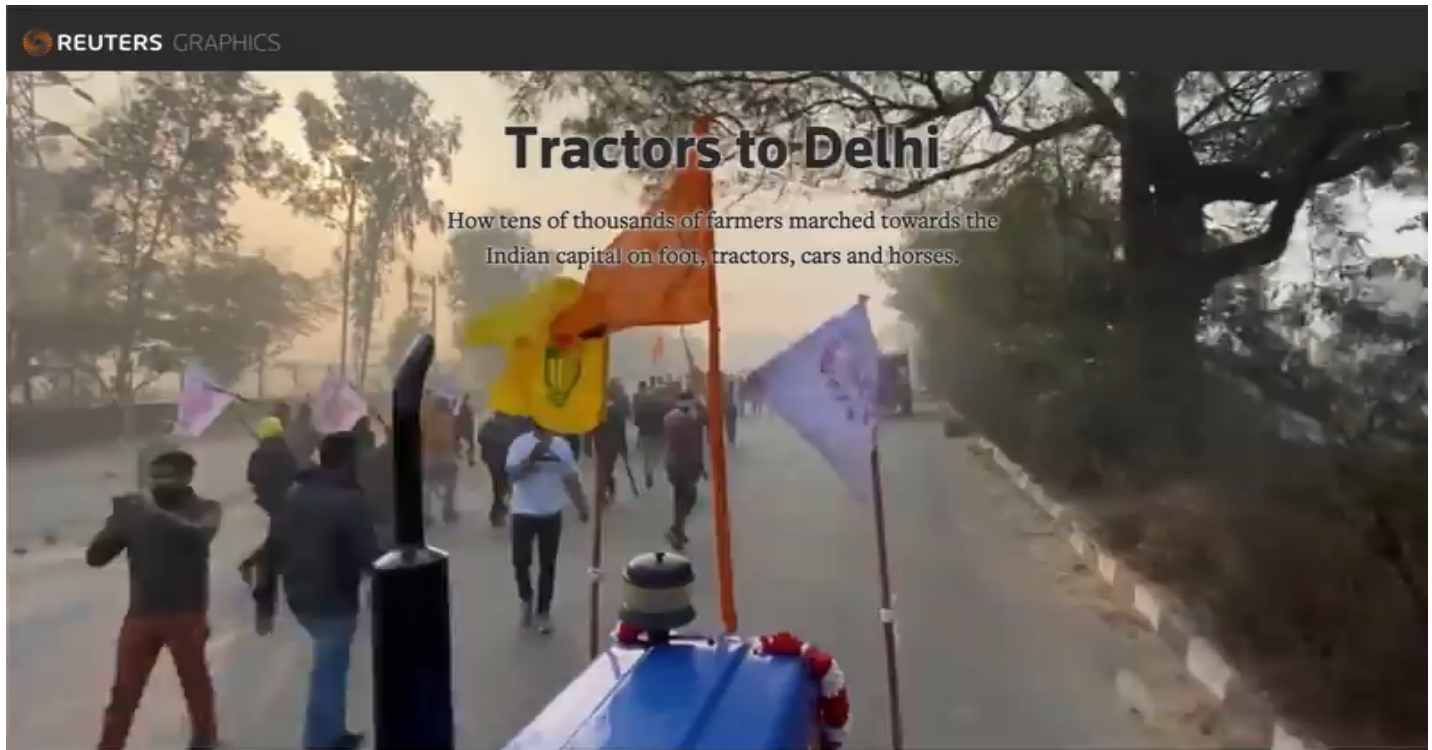
To illustrate this, I am going to talk about this piece about the events of the tractor rally in Delhi on January 26, 2021.

The piece starts with the key facts and then tells a straight up chronology of what happened using photos, maps and words.

Tractors streamed out of Singhu on the northern outskirts of New Delhi, where thousands of farmers have been protesting for the last two months. Devjyot Ghoshal / Reuters

By **Gurman Bhatia** and **Anand Katakam**

But towards the end, you have this uber long line of tractors to show the scale of lining up 7,000 tractors - a number the police said were present on one of the starting points. It is a strong visual ending.

How big were these protests

People and tractors had been arriving at Delhi's borders from several parts of the country for the past several days. At Singhu, one of the three entry points, the police estimated that 6,000-7,000 tractors had gathered, the largest of the three contingents. However, farmers unions said as many as 200,000 tractors had gathered for the rally across the outskirts of the city.

Agriculture employs about half of the workforce in India's population of 1.3 billion and unrest among an estimated 150 million landowning farmers is one of the biggest challenges to the government of Prime Minister Narendra Modi since he came to power in 2014.

Scroll down to see the scale of lining up 7,000 tractors which the police stated were present at one of the entry points.

4 meters
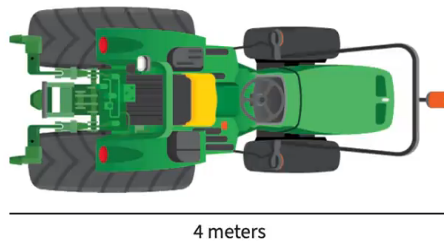
Length of a cricket pitch

Do you **explain or help the reader explore**? To answer that question, we spill our martini!
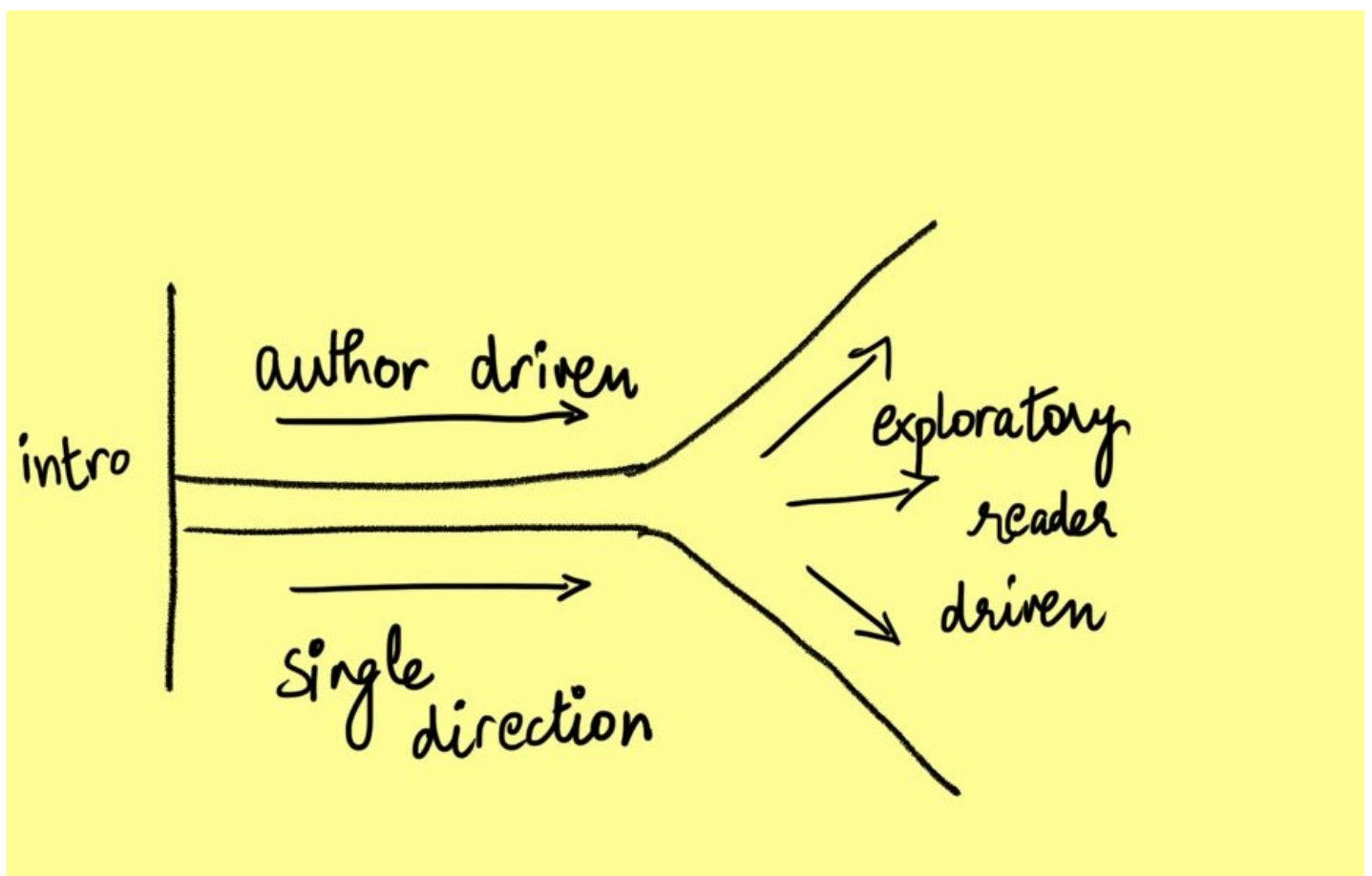
Adapted from Narrative Visualization: Telling Stories with Data (Edward Segel and Jeffrey Heer)

Often, one way to tackle the challenge is - **explain and then let the reader explore.**

In this story by my colleagues Manas Sharma and Simon Scarr, they start with explaining the science of herd immunity and the impact of factors such as social distancing and vaccination.
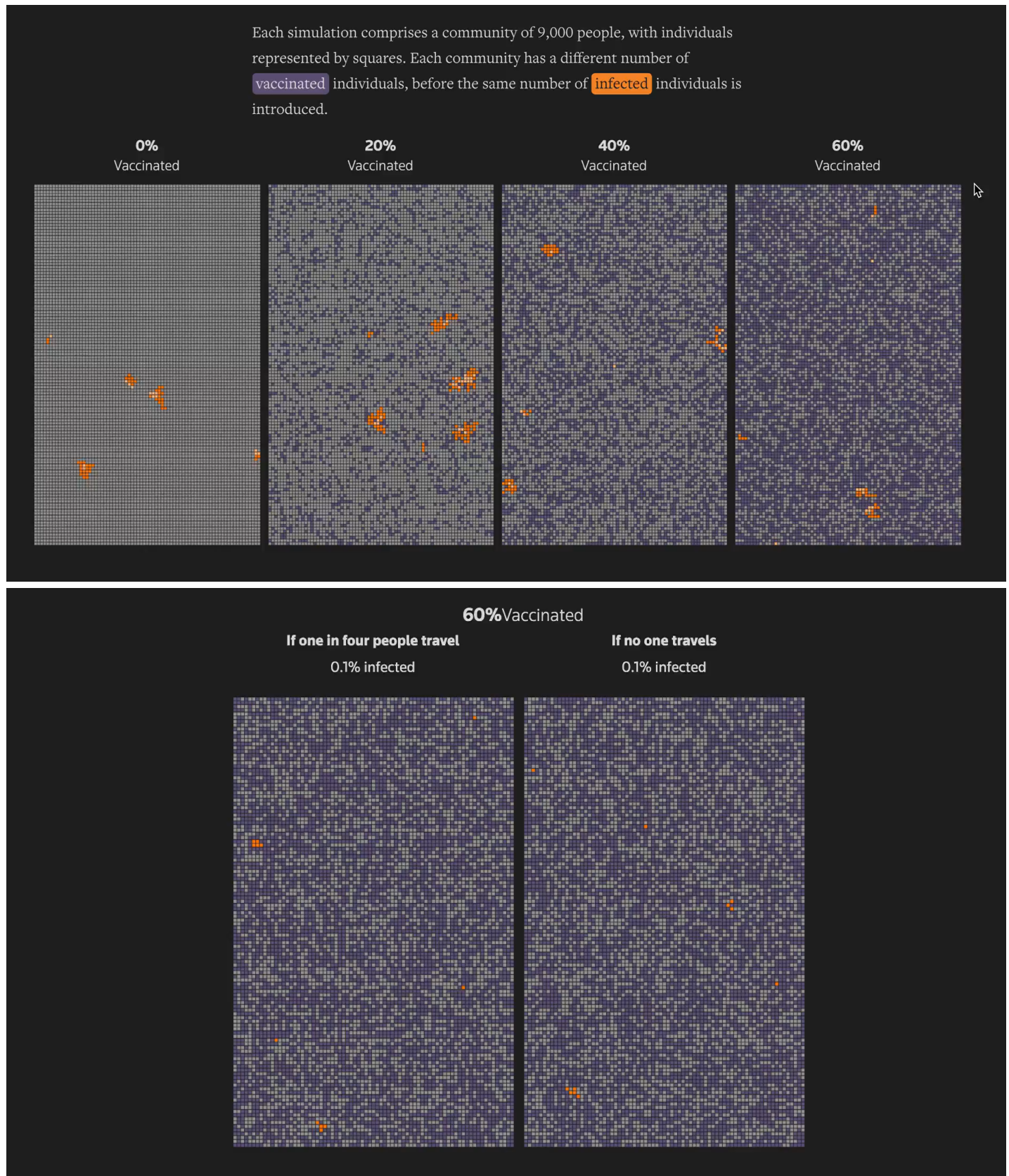
But towards the end, they let you play with the variables to simulate how they might effect the spread.
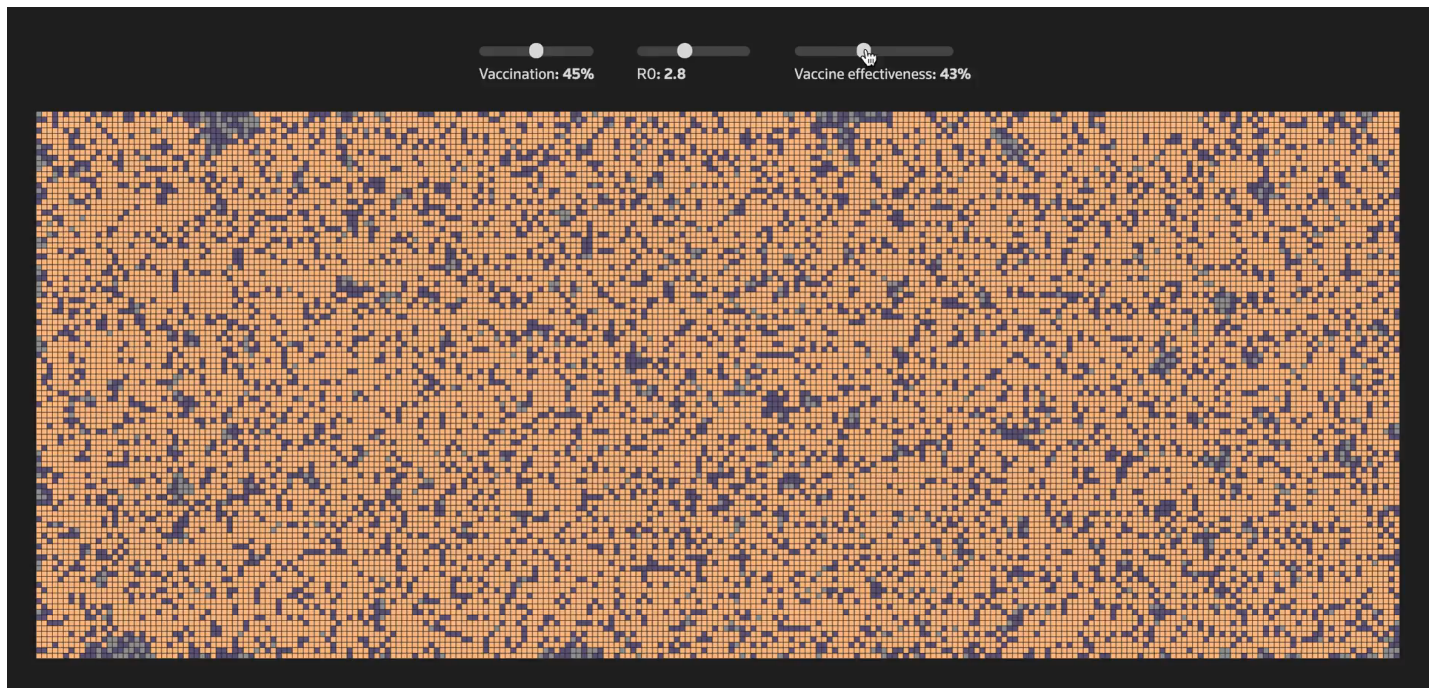
Similarly, in this story about access to different subjects for government schools in Delhi, I break down the problem as a user scrolls.

ht CLASS of 2018

meet the students   about the project
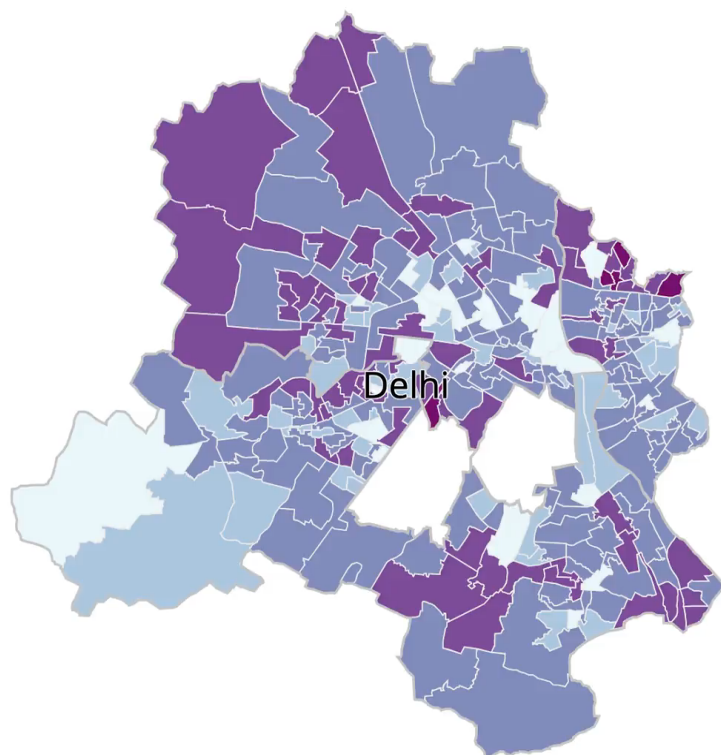
How hard is it to find a good government school in your neighbourhood

By Gurman Bhatia

June 8, 2017
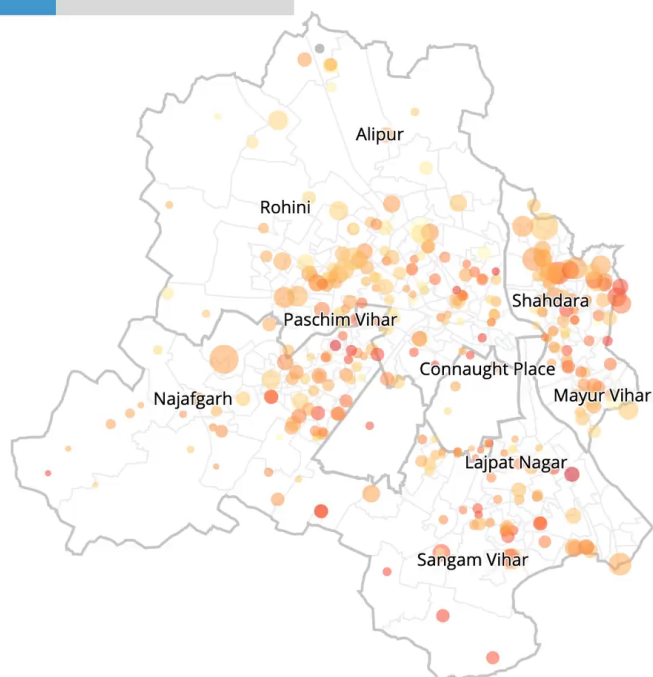
f share   🐦 tweet

Scroll to continue ⌄

Delhi

But in the end, I give you variables to play with and see them reflect on the map.

352/1009

For a [boy ⌄] who wants to study [commerce ⌄], these are the choices.

Similar to Class 9, several schools have a low transition from Class 11 to 12.

← High transition   Low transition →

Note: The map excludes 5 schools that were bifurcated in 2015-16 and all schools that did not have enrollments in 2014-15.

Alipur

Rohini

Shahdara

Paschim Vihar

Connaught Place

Najafgarh   Mayur Vihar

Lajpat Nagar

Sangam Vihar

But dashboards are just exploratory and interactive... right?

Not necessarily!

Dashboards can also be a mix of narrative and exploration. Take for instance, the Reuters COVID-19 dashboard. The beginning of the page is just a bunch of headlines about some interesting trends in the world.
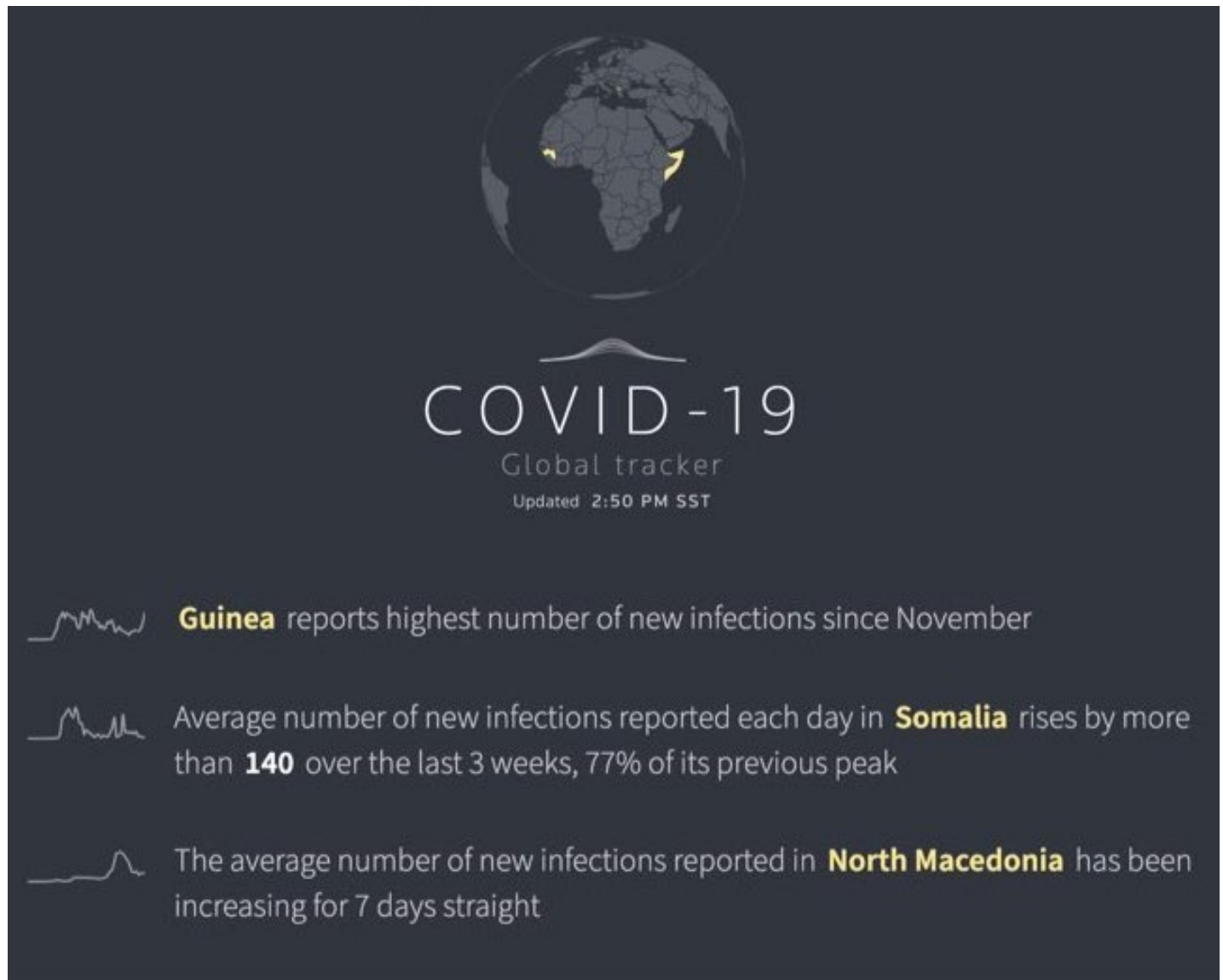

But almost every explorable section is rife with *"smart text"* (see highlighted boxes), that changes based on the numbers and what they are saying.

Global daily statistics

COVID-19 infections are still rising in **46** countries. There have been at least **112,971,000** reported infections and **2,611,000** reported deaths caused by the new coronavirus so far.

New reported infections
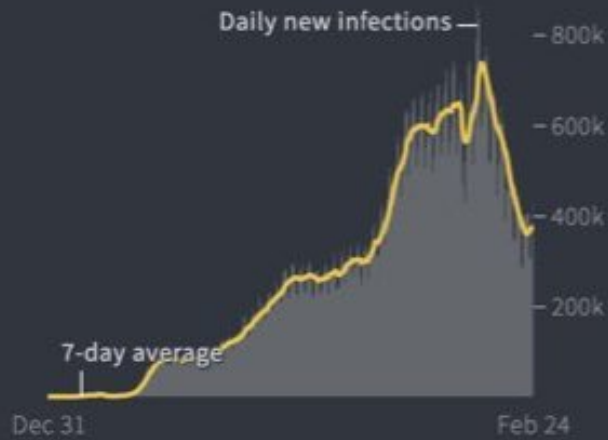
Reported deaths
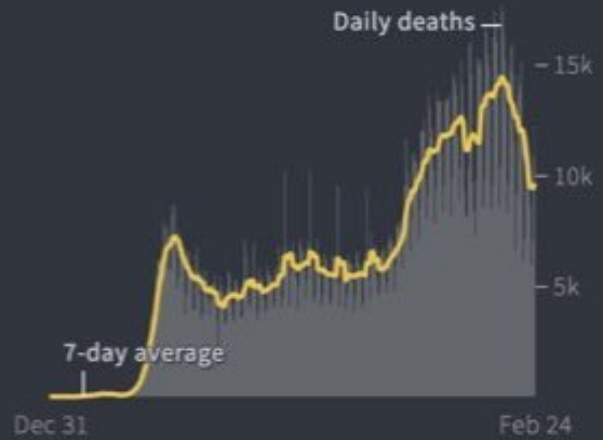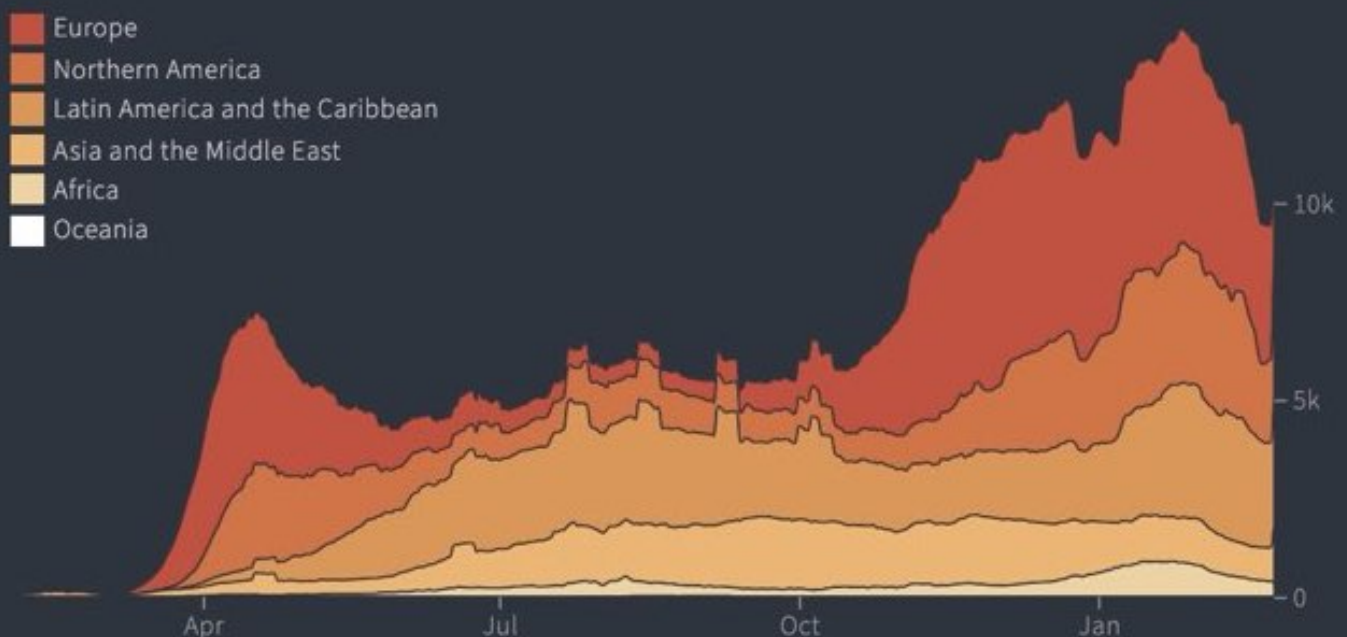
You will also see lots of explanations of what the data may or may not be able to tell us. Explaining limitations of your data, is another important aspect of communicating with dashboards.

Who's at the peak?

COVID-19 has hit some countries far harder than others, though differences in the way infections are counted locally make it impossible to make a perfect apples-to-apples comparison.

We want to know where infections are trending up or down relative to the size of the outbreak in each country. So in these charts we use a rolling 7-day average of the new infections countries report each day and compare where that average is *now* to where it was at its *peak*.

The percent of that peak a country currently reports gives us a better idea of how far it is from containing the spread of the virus relative to the worst days of its outbreak.

💡 What you need to know

These charts emphasize the countries that are in the *worst stage* of their outbreaks, rather than the ones that are reporting the *most* infections. Keep in mind that the comparison will be affected if a country changes the way it reports or counts COVID-19 infections. Changing the count may mean the peak point of comparison would have been higher or lower if the country reported infections *then* the way it does *now*.

Countries near their lowest daily average reported infections

Countries near their highest daily average reported infections

13 countries are still near the peak of their infection curve
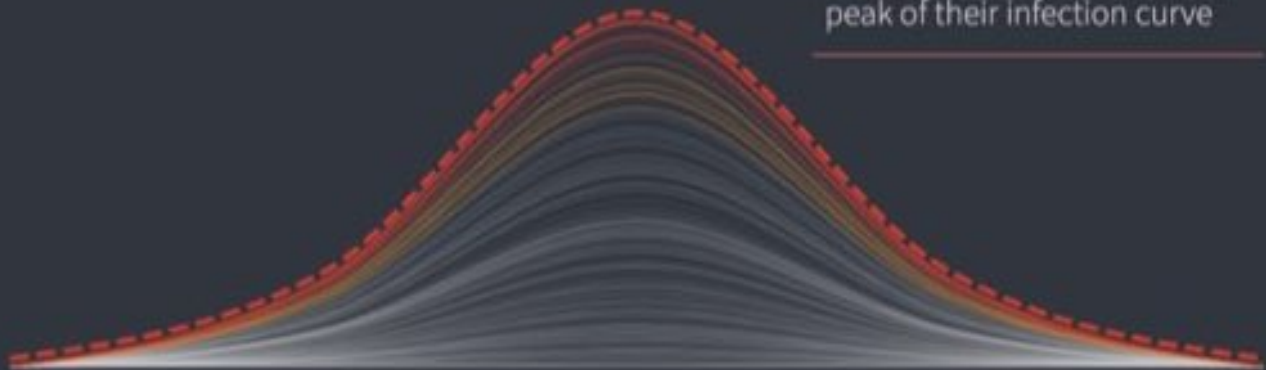
Where to use words...

You want to **words to compliment the visual elements** enhancing the picture without describing what the reader can see herself.

@gurmanbhatia

From The Elements and Structure of Narrative, Steve Buntly

The Diamond

@gurmanbhatia

anecdotal
example

nut graph

general detail

background

back to
anecdote

@gurmanbhatia

A lot of journalistic stories start with an anecdote. Take for instance, this Pulitzer Prize winning story. Anecdotes help the reader focus on one story, acting as a *hook* into the article. On the other hand, outlaying the facts right at the top can sometimes overwhelm the reader.

In this piece about the female solo diminishing from Bollywood songs, I start with a specific visual hook.
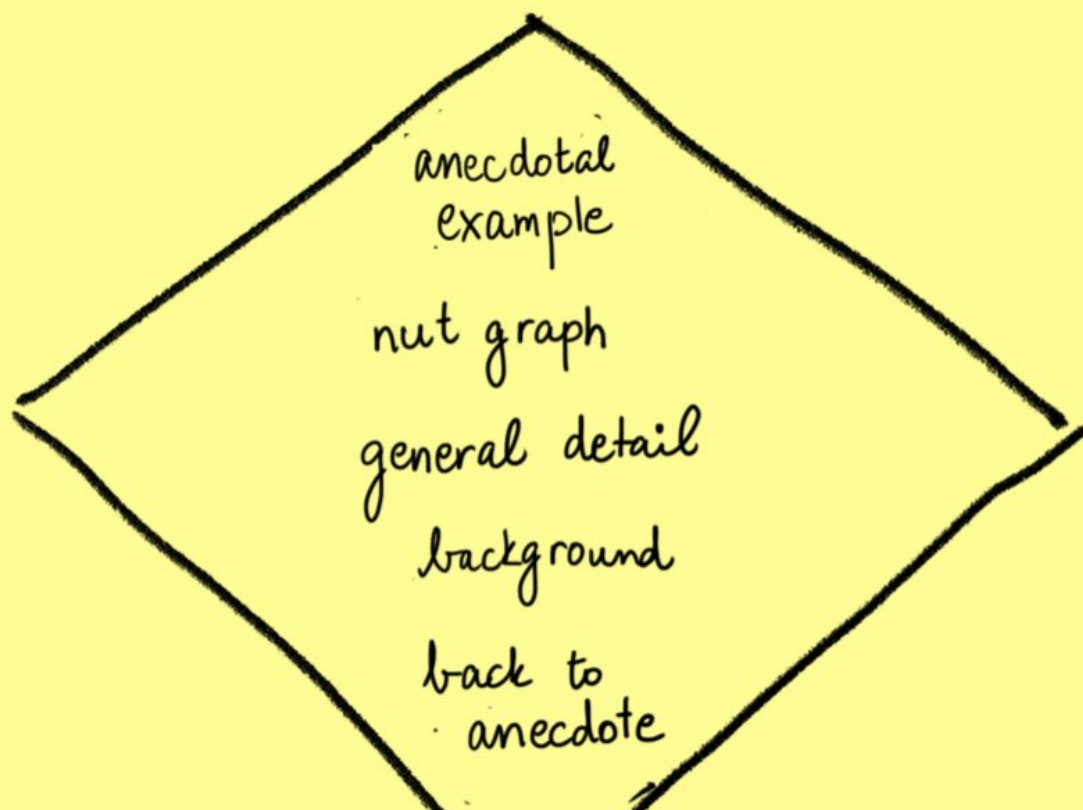
Solo songs sung by women in 2017 vis-a-vis solo songs sung by men.

Consider songs that were sung by **only** women in 2017.

"Sunn Bhavara" Bairaagi (Female Version) Barfani (Female) Be Still My Heart Bloody Hell Chori Chori Dekho Aise Dekha Na Karo Commando (English Version) Commando (Title Track) Daata Tu Dil Diyan Gallan (Unplugged) Dil Hua Besharam Din Shagna Da Ek Dooni Do Do Dooni Char Ek Jindari Ghungta Gudgudi Gulbadan Hawa Hawai 2.0 Holi Khelein Ishq De Fanniyar (Female) Ishquiya Jee Ve Sohaneya Jigi Jigi Jogi (Aakanksha Sharma Version) Kanha Khol De Baahein Laila Main Laila Le Li Jaan Maana Ke Hum Yaar Nahin Main Hoon Saath Tere (Shivangi Bhayana Version) Main Kaun Hoon Manva Likes To Fly Meet (Female) Mere Miyan Gaye England Mere Rashke Qamar (Version 2) Meri Pyaari Ammi Nachdi Phira Nazm Nazm (Female Version) O Re Manwa Oye Firangi Phir Bhi Tumko Chaahungi Pinjra Tod Ke Prem Mein Tohre Prem Mein Tohre (Reprise) Pyar Ho (Redux) Rafu Rozana Sajna Sohne Jiha Sapne Re Shimmy Shake Soja Zara Stay a Little Longer Tera Noor Tu Banja Gali Benaras Ki (Asees Kaur Version) Yeh Ishq Hai (Female Version) Zinda

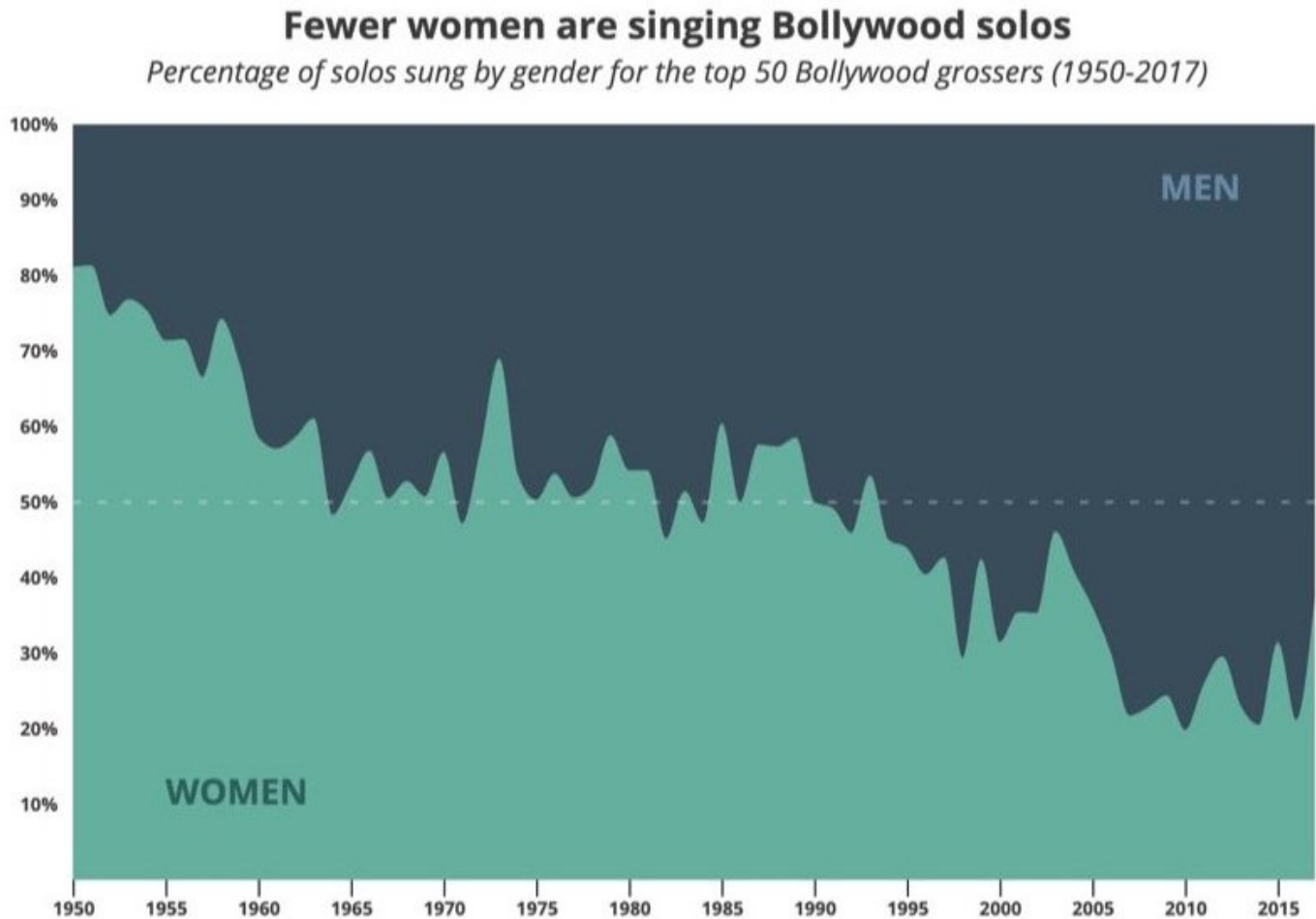Now look at the ones that were sung by only men. It's more than twice as many.

"Enna Sona" Aazaadiyan Alvida Alvida To Nahin Angry Mix Baaki Rab Pe Chhod De Baarish (Atif Aslam Version) Ban Ja Rani Bandook Meri Laila Baras Ja Barfani (Male) Bura Na Mano Bholi Hai Chal Tu Apna Kaam Kar Chal Tu Apna Kaam Kar (Version 2) Chulbuli Darasal (Music By: JAM8) Daru Vich Pyaar Dhingana Dil Diyan Gallan Dil Kya Kare Jab Kisi Se Kisi Ko Pyar Ho Jaye Dum Dum Dum Dum (Punjabi) Dum Dum (Reprise) Fakiri Farrata Feel The Rhythm Galti Se Mistake Ganpati Aarti Ghammar Ghammar Gussa Haareya Hawayein Hawayein (Film Version) Hind Mere Jind Holi Ki Pichkari Hoor Hum Nahi Sudhrenge I'll Miss You Ik Vaari Aa Ik Vaari Aa (Jubin Version) Ishq De Fanniyar (Male) Jaane De Jay Jaykara Jhumritalaiyya Jogi (Shafqat Amanat Ali Version) Jolly Good Fellow Josh Mein Julia Jung Hai Humri Aatankwad Se Kaabil Hoon (Sad Version) Kaavaan Kaavaan Khali Khali Kuch Din Kuch Nahi Kuch Nahi (Encore) Kuch Nahi (Reprise) Laddoo Lambiyaan Si Judaiyaan (Music By: JAM8) Main Agar Main Agar (Film Version) Main Hoon Main Hoon Saath Tere Manzoor Hai Meet Mera Intkam Dekhegi Mera Intkam Dekhegi (Anand Raj Anand Version) Mere Rashke Qamar Mere Rashke Qamar (Remix) Mon Amour Murshida Musafir Naach Meri Jaan Nazm Nazm Nazm Nazm (Male Version) Noor E Khuda O Re Rangreza Oh Ho Ho Ho Pal Bhar (Chaahunga Reprise) Panchi Ud Gaya Parinda Parinda (Search) Phir Wahi Phurrr (Film Versiom) Postman Rabba Meray Haal Da Mehram Tu Radio Radio (Film Version) Raina Rangdaari Roke Na Ruke Naina Saanson Ke Sachin Sachin Sadda Move Safar Sahiba (Male Unplugged) Sahiba Russ Gayiya Sam Dham Sarkar Trance Seedha Saadha Seedha Saadha (Reprise Version) Sexy Baliye Shakti Shivam Simran Suit Suit Suno Ganpati Bappa Morya Swag Swag Rebirth Teen Kabootar Tere Dil Mein Tere Dil Mein (Club Mix) Thamba Thank U For That The Poster Boys Anthem Tinka Tinka Dil Mera Tinka Tinka Dil Mera (Film Version) Toilet Ka Jugaad Tu Banja Gali Benaras Ki Tu Banja Gali Benaras Ki (Shafqat Version) Tu Chale Toh Tu Hi Hai Tu Jit Jawna Tu Mera Bhai Nahi Hai Tujhe Paa Ke Yeh Ishq Hai Zinda Hai

@gurmanbhatia

You see the nutgraph after that.

Bollywood music albums didn't always look like this. We analysed more than 24,000 Bollywood songs from the 50 highest-grossing movies of every year since 1950 and discovered that the share of songs being sung by women is constantly declining.

And a chart to bring that point home...

Fewer women are singing Bollywood solos
Percentage of solos sung by gender for the top 50 Bollywood grossers (1950-2017)

And then lots of context and background information to explain in detail what is happening.

hindustantimes   f 🐦

Fewer women are singing Bollywood solos
Percentage of solos sung by gender for the top 50 Bollywood grossers (1950-2017)
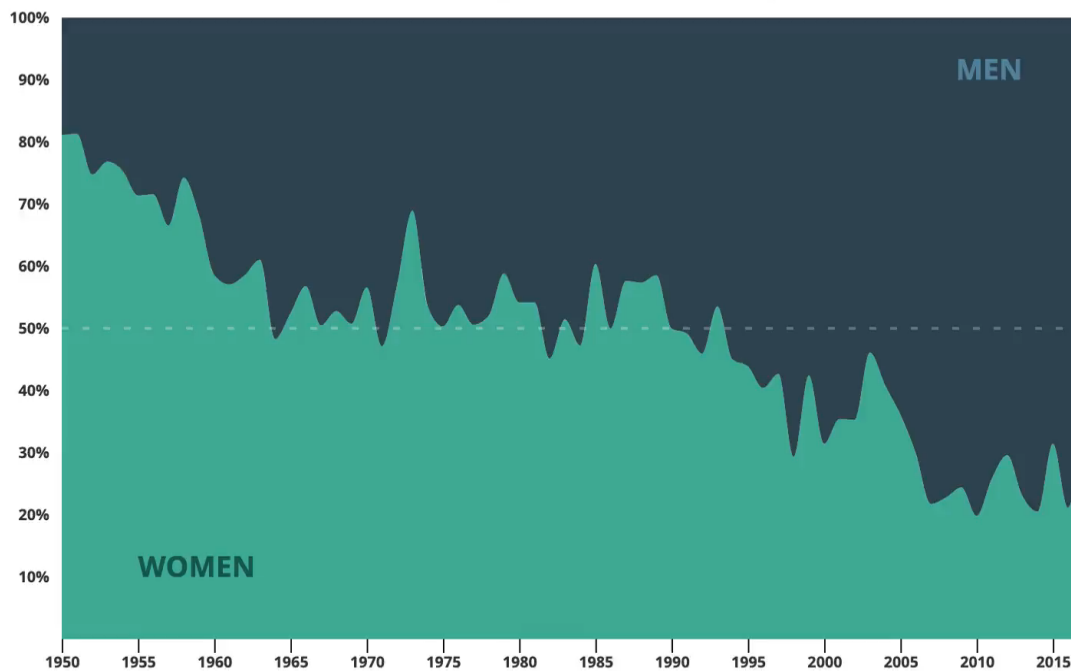
Source: Hindi Geetmala, Wikipedia, HT Analysis

From the 1950s to the 1970s, when Lata Mangeshkar and Asha Bhosle
dominated all of Bollywood music, very few competitors existed. In the earlier

Followed by an attempt to answer the question - *"So what led to an explosion of songs that were sung only by men?"*

Here is one of the many possible reasons...

Recently, Bollywood storylines have given more prominence to women. But that doesn't necessarily translate to more female songs because lip-sync is not as popular as it used to be. So even in female-centric films like Queen and Kahaani, there aren't many songs sung by women.

And flows easily into another specific example...

Kahaani 2, the thriller from 2016 with a female protagonist, does not have a single female solo; contrast that with three solos sung by men. Yet there is also 2017's Lipstick Under My Burkha, where every song is sung by only women.

Anecdotes are ways with which we zoom in to a data point. That storytelling technique is compelling because instead of overwhelming the reader with a lot of information, we present one data point. But that has a limitation of hiding the overall picture...

So... should one **zoom in or zoom out?**
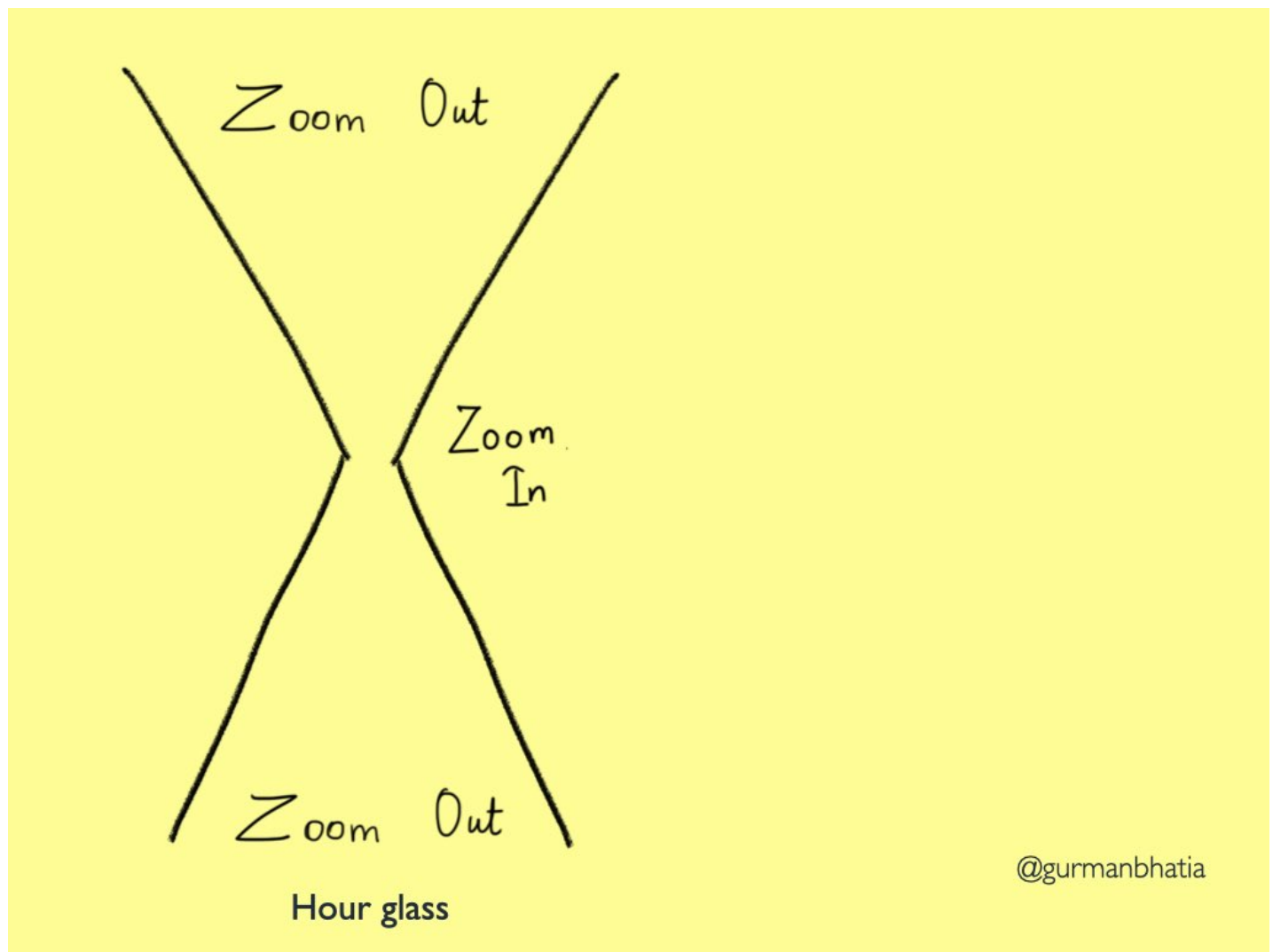
To answer that question, I present the hourglass!

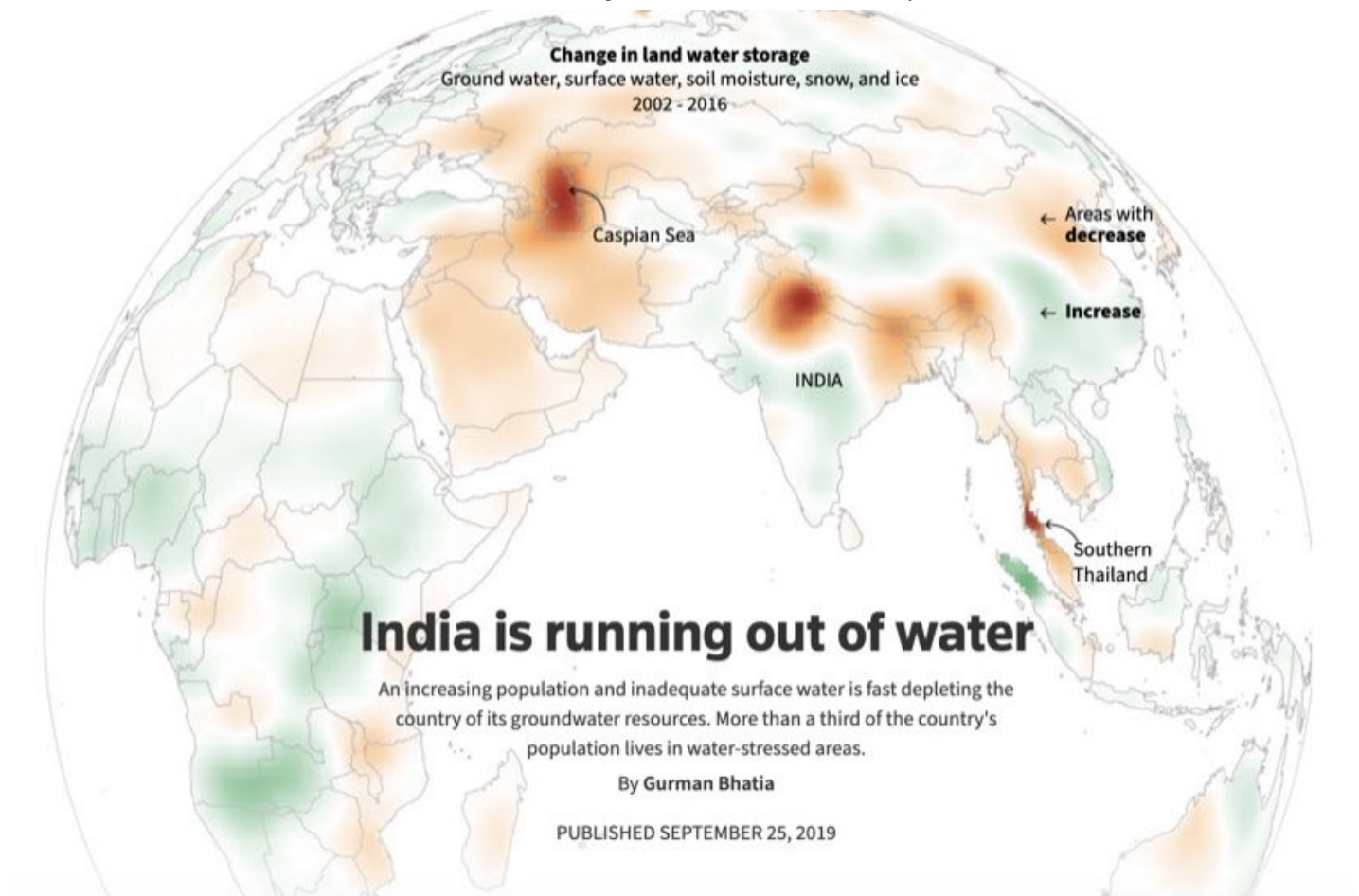## Hour glass

Here is a modified version of the original hourglass. Zoom out in the beginning, zoom in and then zoom out again.

This story about groundwater in India starts with a globe to show you the global situation and why this story is important.
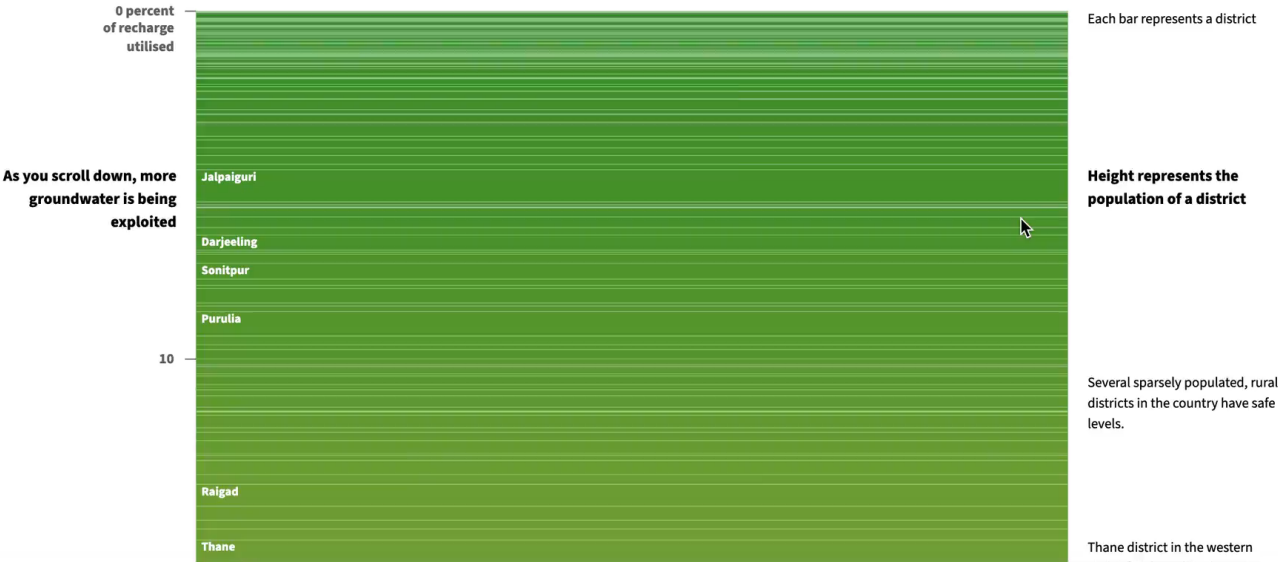
That's followed by a zoomed in preview by district. You scroll to see what the best and worst performing districts are.

REUTERS GRAPHICS

Government data released in July 2019 shows that in 2017, 109 districts out of the 684 for which
data was available, used more groundwater than what was replenished by both natural and
artificial processes, a measurement known as groundwater "recharge".

DISTRICT-WISE POPULATION AND GROUNDWATER UTILISATION IN INDIA (2017)

Colour represents percentage of the groundwater recharge utilised

0 percent
of recharge
utilised

Each bar represents a district

As you scroll down, more
groundwater is being
exploited

Jalpaiguri

**Height represents the
population of a district**

Darjeeling

Sonitpur

Purulia

10

Several sparsely populated, rural
districts in the country have safe
levels.

Raigad
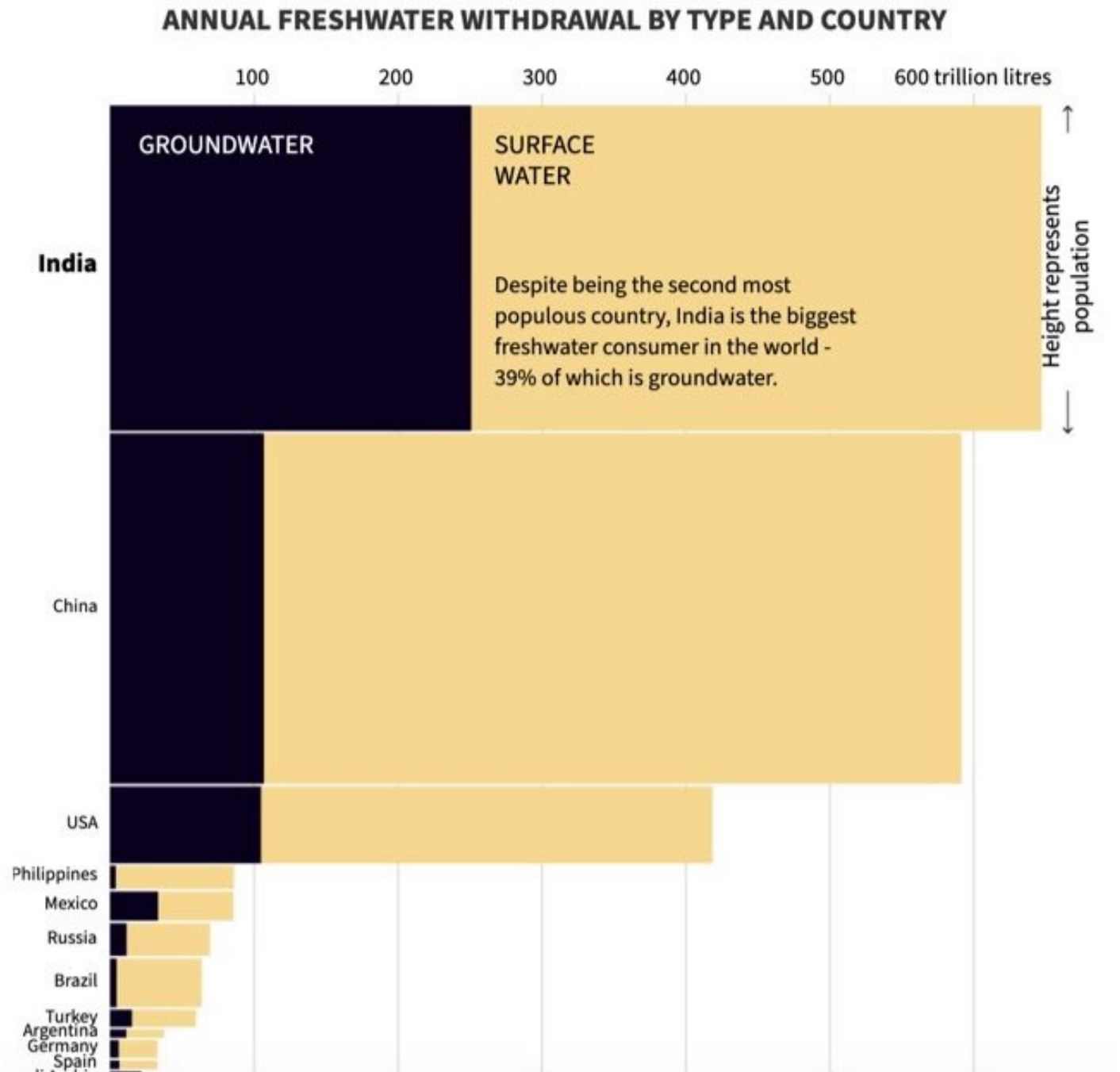
Thane

Thane district in the western

Then you zoom out to the state level.

POPULATION AND GROUNDWATER UTILISATION IN INDIA BY STATE (2017)

Each block represents a district with available data. Width represents population.
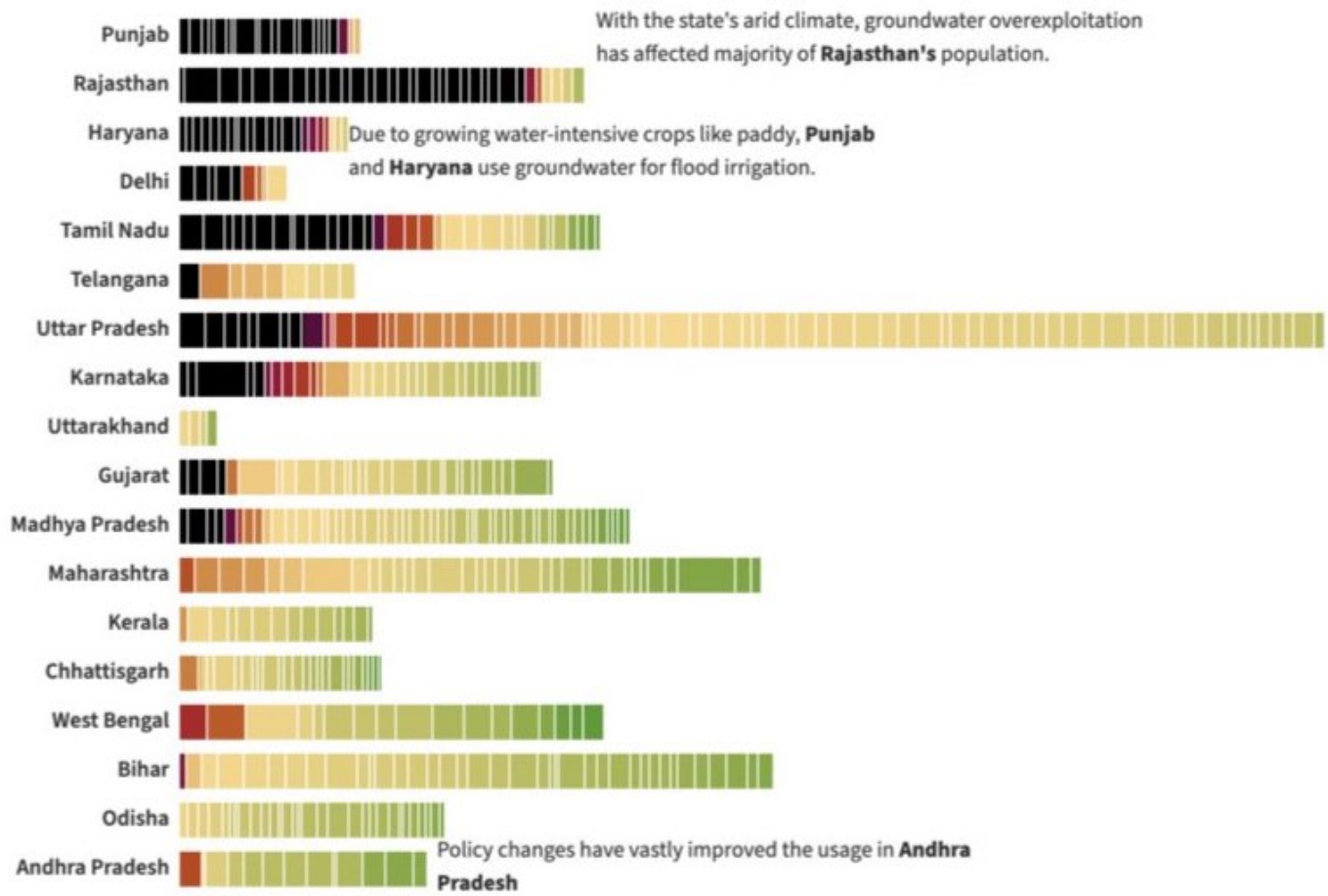
And ultimately back to the national level.

ANNUAL FRESHWATER WITHDRAWAL BY TYPE AND COUNTRY

India

GROUNDWATER

SURFACE WATER

Despite being the second most populous country, India is the biggest freshwater consumer in the world - 39% of which is groundwater.

Height represents population

100   200   300   400   500   600 trillion litres

China

USA

Philippines
Mexico
Russia
Brazil
Turkey
Argentina
Germany
Spain

To summarise...

The whole shpeel breaks things down to four key decisions:

1. The order of elements

2. Explore or explain

3. Visuals or words

4. Zoom in or zoom out

And when optimised, those decisions can help you bring curiousity in the readers' experience.

Four takeaways:

1. Structure in a way to **hook the reader in the beginning**. Or to leave an **impact in the end.**

2. **Explain to pique their curiosity**, and then let the reader **explore to feed their curiosity**.

3. Use words to **compliment the visual** elements

4. Zoom out for the **overview and context**, but zoom in to **satisfy the curiosity**.

Gurman Bhatia

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