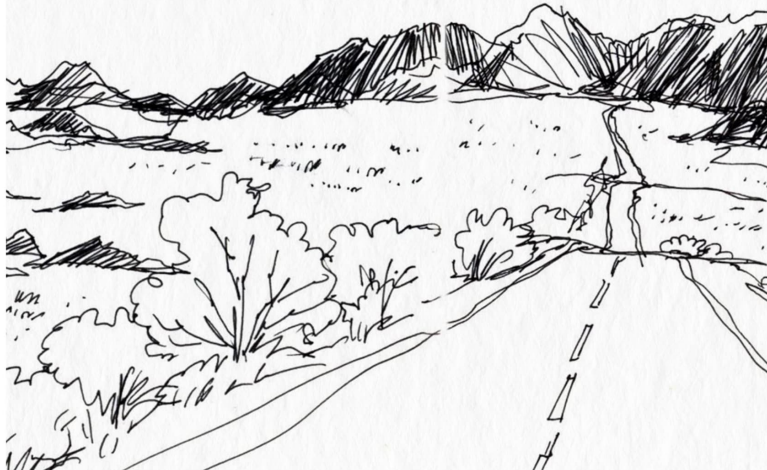


ON THE ROAD



What you will find in these pages...

The project highlights some of the road incidents and accidents from the last 5 years (2016-2021) in India. In these pages, you will find some curated accidents along with a description of their reasons. These accidents are presented as short vignettes. They span different cities and events. We have also presented the statistics and background data related to the accidents for better understanding. Several newspaper articles have been taken into consideration while compiling the holistic understanding of each accident. There are illustrations present on every page to support the main theme of the accident. We have covered the key themes of road accidents in its breadth in terms of causes, vehicles, people and how an accident emerges in various parts of the country.

What does this project convey?

The purpose of this project is to raise awareness of traffic accidents in India. While traffic accidents are a worldwide problem, India ranks first in road fatalities among 199 countries and is responsible for nearly 11% of accidental deaths in the world. The reasons for these accidental deaths include ignorance and disrespect for rules, the low literacy level of people, absence of strict enforcement of rules, improper construction and maintenance of road-related infrastructure, among many such challenges that plague our country.

Why is awareness of road safety important?

The life of an Indian is important. Road accidents claim a multitude of Indian lives. In a country such as ours, road safety must be considered at all times to ensure the safety of a vehicle's drivers, passengers, and pedestrians. When road safety is implemented properly and safety products used effectively, they can help save lives, prevent accidents and injuries, and maintain the optimal functioning of a society. There is a need for safety beyond safety posters. Creating awareness about road safety can go a long way in reducing the number of accidents in India.

What are the effects of road accidents?

Traffic accidents take a physical, mental and financial toll on all stakeholders. Drivers and passengers can suffer from minor bruises to broken limbs, whiplash, back and spinal injuries, paralysis and even death. Vehicles involved in traffic accidents are damaged and may require minor or costly repairs, or may even be totaled and no longer drivable. Other consequences of traffic accidents can include emotional and mental distress as people may suffer from post-traumatic stress from their involvement in an accident or because they have lost a loved one. Accidents can have a major impact on the life of the dependants if the sole bread-earner of the family is lost.

How to engage with the project...

Every accident is presented as a short vignette and is spread out in 2 pages, structured as left and right pages of a book: Left and Right. The left page contains the details about the accident and the right page contains its reasons, explanation and statistics. Illustrations serve to strengthen our message and enable you to visually connect to the main idea. All the references are mentioned on the last page along with their page numbers. This pamphlet is made keeping a general audience in mind. So, it is accessible and understandable for everyone.

Please spread the message for road safety in India! The life of every Indian is valuable!

To cite this project:

Khetan, R., Rathod, H.D., Monda, S., Kant, V., On The Road. Human Factors and Sociotechnical Systems Studios. Retrieved from https://homepages.iitb.ac.in/~vivek.kant/Indian_Disasters/casestudies.html

In 2015, six engineering students were killed when the car they were traveling in collided head-on with a tanker lorry on the National Highway in Chathannoor town in the early hours of the morning.

According to witnesses, the car was **moving at a high speed** and while overtaking another vehicle, rammed into the lorry on the opposite lane. All six young people **died on the spot**.

The driver of the lorry, said he braked and stopped the vehicle immediately after he **saw the car entering the wrong lane**.

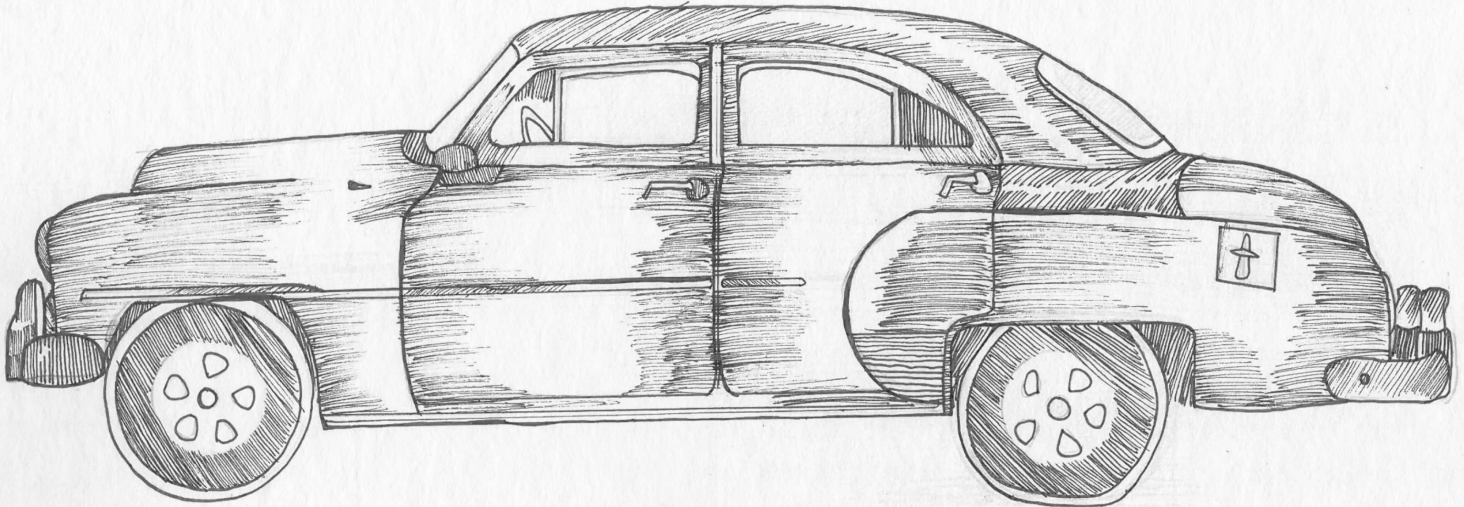
Some of the bodies were disfigured beyond recognition.

Speeding is the **leading cause of death** on India's roads.

According to the Ministry of Road Transport and Highways, **44.2%** of fatal road accidents in 2015 were a direct result of excessive speed.

The higher the speed, the greater the impact and the greater the likelihood of serious injury and death.

However, awareness of these limits is extremely low, resulting in speeding being a major problem on our roads.



In 2017, a 25-year-old plumber died after he was hit by a Thane Municipal Transport (TMT) bus on the Station Area Traffic Improvement Scheme (SATIS) bridge.

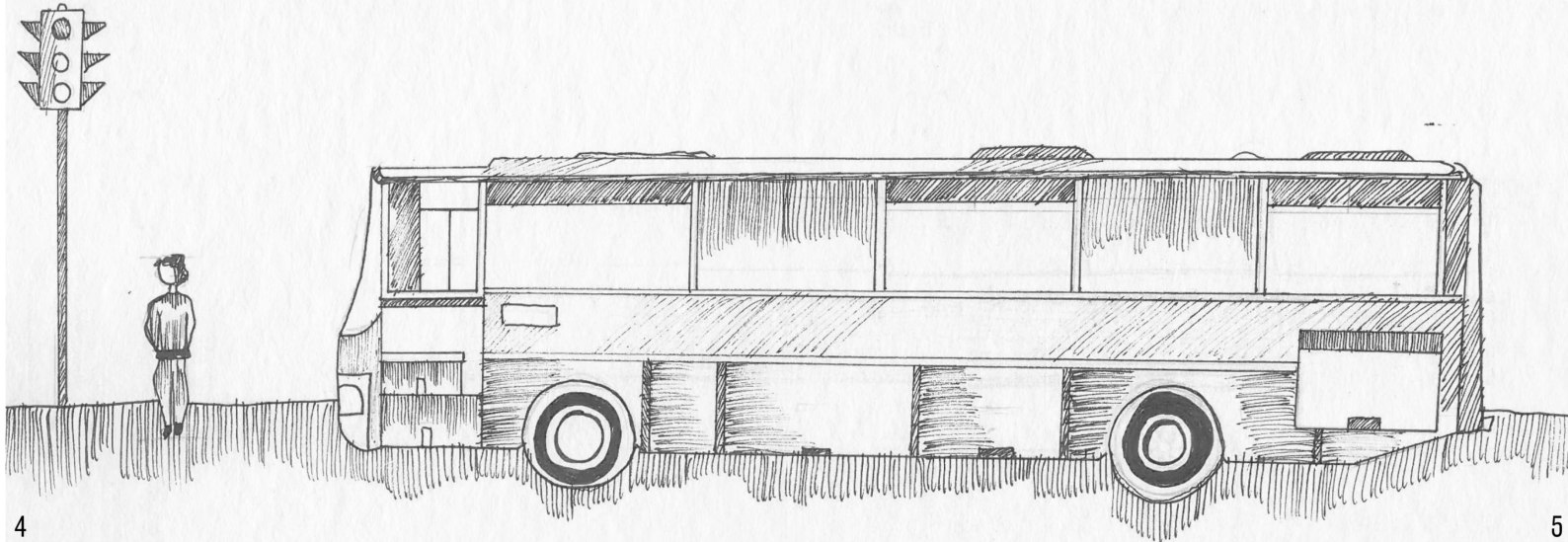
He was walking on the bridge from the station when the TMT bus rammed into him from behind, seriously injuring him.

He was **bleeding profusely** when he was found. He succumbed to his injuries at the Civil Hospital.

Such incidents have been a common phenomenon for many years.

While we struggle daily to avoid traffic jams, pedestrians are equally challenged because there is **no space to walk**.

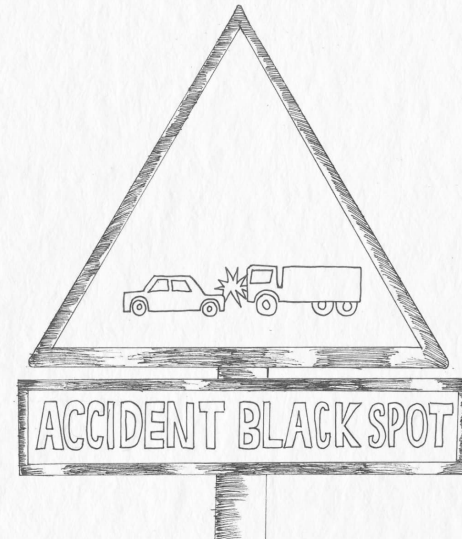
Other problems pedestrians face on a daily basis include inadequate zebra crossings, over bridges and subways, encroachment by vendors and auto wallas, and the lack of pavements in many places, making city roads a deadly place for pedestrians.





It was a very tiring day for Hyderabad police in 2019 when **four different road accidents occurred in a single day**. A 35-year-old lady on a scooter was hit by a speeding truck. She was wearing a helmet, but it was **not strapped in properly**, so it fell off during the impact. Furthermore, a 20-year-old was killed when he was hit by a **speeding public transport bus**. In the third accident, a 25-year-old student was killed by a speeding lorry. Likewise, two elderly women were injured when the Honda city car hit them and went on to hit the road median. Due to a large number of casualties, traffic police **discovered 80 accident blackspots** in the city.

Black spots **account for 90% of road accidents** in the country and the short and long term measures taken by the Ministry of Road Transport and Highways (MoRTH) to curb accidents at such places are of great importance. As per the Ministry's Protocol for identification of black spots, an accident black spot is a road corridor of about 500 m long on which either five road accidents, involving fatalities and grievous injuries, had been reported during the last three calendar years or 10 fatalities during the last three years.



Exploring the streets of Goa on a motorcycle might be in every youngster's bucket list, however, things can turn fatal in a matter of seconds.

In 2019, a 23-year-old resident of Navelim lost control of his 2-wheeler and lost his life.

The 2-wheeler lost balance when it hit a coconut tree and the man landed on the road with severe head injuries.

Heavy rains in Goa **leave the roads in very bad condition.** The police registered the case as an **unnatural death.**

In Goa, citizens have expressed concern over road construction, especially when heavy rains littered roads with potholes or submerged them.

Data from the Union Ministry of Road Transport and Highways (MoRTH) shows that citizens' fears are not unfounded.

The condition of roads is the **cause of nearly one-third of accidents** that occur in Goa. Sufficient studies have not been carried out by the state to arrive at the right kind of material for roadworks for Goa's climatic conditions, even though many options are available today.



Early in the morning of May 2021, a civil contractor was cycling with his family on the Sion-Panvel Highway in Navi Mumbai.

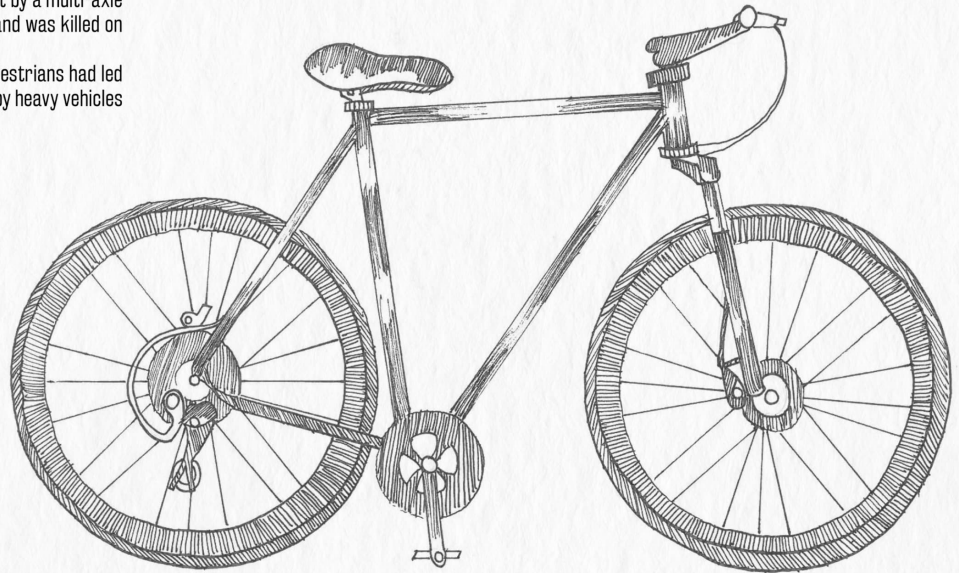
While entering a merger between two roads, he was hit by a multi-axle trailer. He was **dragged by the trailer for 20 meters** and was killed on the spot.

The **lack of proper infrastructure** for cyclists and pedestrians had led to many such incidents. These highways are frequented by heavy vehicles and cyclists are usually at a loss.

Pedestrians account for 47% of fatalities on Mumbai roads, while **bikers and cyclists comprise 41%** of these fatalities.

Due to the numerous restrictions and the fact that the local trains were closed, people tend to use their private vehicles to travel to work, which leads to more accidents.

The government needs to focus more on improving infrastructure for cyclists and pedestrians, and also encourage citizens to use public transport more frequently.



At 10:30 PM on a night in August 2021, when a curfew was in effect in Bangalore, an SUV rammed into a motorcycle.

Two carpenters were returning home from work. Rules in Bangalore are strict, yet both of them **were not wearing helmets** which ultimately led to their demise.

The SUV driver was allegedly driving **under the influence of alcohol**. Due to the pandemic, the police had **stopped** putting up roadblocks and **checking for alcohol consumption** by mouth devices.

Head injuries are a major cause of death, injury and disability among users of motorized two wheel vehicles.

The lack or inappropriate use of helmets has been shown to increase the risk of fatalities and injuries resulting from road crashes involving motorized two-wheelers.

Although this has been made very clear, people have not been serious about wearing helmets.

Non-helmeted users of motorized two-wheelers are **three times more likely** to sustain head injuries in a crash compared to those wearing helmets.



Behind the scenes

Identifying the Themes

We started with an analysis of official year-wise reports from the Ministry of Road Transports and Highways (MoRTH) and highlighted various themes and trends. These included public roadway infrastructure, a multitude of vehicles ranging from buses to bicycles, lack of protective equipment such as helmets, drunk driving, lack of maintenance, black spots on roads, over speeding, among many other challenges. Based on these themes, we tried to capture a majority of these in each of our recounting of accidents and accompanying illustrations.

Developing concepts and narrative

After identifying the broader trends, we sifted through newspaper reports to narrow down key ideas that needed to be highlighted. We developed our narrative along the lines to bring awareness of key reasons, modes of activity and challenges that culminate in road accidents and hamper public safety. In our initial concepts, we highlighted those cases which showed accidents that might have been prevented with proper procedures, equipment or infrastructure. For example, on 26 November, 2019, the city of Hyderabad saw 4 different road accidents in a single day. A lady was hit by a speeding truck while riding on a scooter, a student was killed by a speeding lorry, another student died in an accident involving a bus, and two elder women were injured when a car hit them. All of these accidents led to the police discovering 80 accident blackspots that reported five or more accidents in the last three calendar years. In our narrative, we presented such accidents and incidents as the flow of events based on news reports. The aim was to portray the incidents and accidents from a holistic viewpoint to highlight the reasons behind their emergence. We substantiated our narrative with visual portrayals throughout the piece.

Developing the final design

In order to complete our design work, we made the creative choice of using a black-and-white color palette. The black and grey theme was also inspired by the asphalt which is used to construct roads. Further, this palette was also selected due to the grim nature of the subject being portrayed.

We first created initial sketches using pencils and details, shadows and highlights were infused with the help of black micron-tip pens. A scribble style of etching was used to give the images a nice rustic and grunge feel.

The drawings were handmade on paper and then digitally scanned versions were used while creating the final output. Images that have been shown depict the central piece of the major motif that served to reinforce the key idea of each story.

Landscape mode was selected to provide a more broad scope to depict the incident and reasons thereof. The text on the right displayed the accident whereas the text on the left portrayed the reasons. Paper textures and sans-serif fonts with condensed x-height and a column layout were used to provide a feel of a newspaper report.

Each page was divided into a 3x3 grid layout with 40 points space left on all sides as margin. The text was placed in the vicinity of the intersection of horizontal and vertical lines of the grid to give it more visual importance while reading. In the placement of the image, the idea is to place it in one row leaving the two remaining rows empty to create a balance with the text. This provides a ratio of 2:1 between the text area and the image area to provide visual balance.

Conclusion

This project aimed to bring to light the issues related to road safety that might seem trivial to the general Indian population but persists as part of our everyday life. We hope that by addressing these issues we will try to take the movement of road safety in India forward.

References

<https://morth.nic.in/road-accident-in-india>

Page 2 & 3:

<https://timesofindia.indiatimes.com/city/thane/pedestrian-dies-after-being-hit-by-tmt-bus/articleshow/59611700.cms>

Page 4 & 5:

<https://timesofindia.indiatimes.com/india/6-kerala-engineering-students-die-in-car-crash/articleshow/45723352.cms>

Page 6 & 7:

<https://timesofindia.indiatimes.com/city/hyderabad/3-killed-2-injured-in-4-separate-road-accidents/articleshow/72267434.cms>

<https://www.thehindu.com/news/national/kerala/black-spot-management-crucial-to-road-safety/article25527946.ece>

Page 8 & 9:

<https://timesofindia.indiatimes.com/city/goa/youth-dies-in-accident-at-navelim/articleshow/84623297.cms>

<https://timesofindia.indiatimes.com/city/goa/nature-of-roads-responsible-for-1/3-of-accidents-in-go-centre/articleshow/85936530.cms>

Page 10 & 11:

<https://www.indiatoday.in/cities/mumbai/story/civil-contractor-mowed-down-by-trailer-while-cycling-in-navi-mumbai-1809207-2021-05-31>

Page 12 & 13:

<https://timesofindia.indiatimes.com/city/bengaluru/drunken-dj-at-wheel-of-suv-mows-down-2-bike-borne-car-penters/articleshow/85161008.cms>