

# Study of an Accident Case through Scientific Observation and Forensic Science Techniques

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**Abstract:** *In Haryana, India in the winter season, three persons of same village, under the influence of liquor, travelling in a car collided with a tree during the night. The car was brought to the village by towing but the rope was broken when they reached the village. All three get out of the car for their respective houses; whereas one was found dead lying in the street near the car in the morning. The parents of the deceased alleged that their son was murdered and his dead body was thrown in the village. Scene of crime team rushed to crime spot. Based on observations, photographs and scientific reconstruction of the incident (i.e. influence of liquor, speeding car, foggy night time, bad road conditions, unclear and raised soiled brim of the road, it appears that the driver of the car lost control at the spot and applied brakes but due to speed of car and road conditions; the car went skidding and consequently the front middle portion of the car banged into the giant tree receiving damages in the front side matching in height with damages on the bark of tree and resulting into the fatal accident. In the reconstruction, it was observed that when the car went skidding on the raised brim of the road of the road the car was tilted on right side as driver side of the car would be on low lying area and the person on left front seat might also tilted towards driver side over the gear lever and when the car banged into the tree the person seated behind might have bounced on the left seat with great pressure and might have struck to the person seating on the left front seat through the gap between the two front seats; in this process the back support of left front side seat was bent forward and the deceased received the injuries mentioned in the post mortem report. The accused persons were also subjected to questions on Polygraph machine and they were proved innocence.*

**Keywords:** Forensic, Accident, Crime scene, Polygraph, Haryana

## 1. Introduction & History of the Case:

In Haryana three persons of same village were travelling in car and their car was collided with a tree during the night. The car was damaged and at the time of incident all three were stated to be under the influence of liquor. The car was brought to the village by towing with another vehicle of the same village crossing from the spot of incident. The tow rope was broken when they reach in the village and left the car at the same spot. All three get out of the car for their respective houses; whereas one was found lying in the street near the car in the morning and was taken to hospital where declared dead. The parents of the deceased alleged that their son was murdered and his dead body was thrown in the village and it was not an accidental death. There was suspicion and therefore the scene of crime team was called to reconstruct the incident and find out whether it was an accident or not.

The Car (Make: Maruti Alto) and the spot of incident was also observed for the detection of physical evidence for the reconstruction of the incident.

## 2. Material and Methods

1. Team of forensic experts observed the crime scene and reconstructed the crime through scientific examinations and techniques by collecting all of the available information and evidence that is gathered from a crime scene. 2. The person under question was subjected to Polygraph test using Computer Polygraph System (CPS-II) of Stoelting Co., Illinois USA by using sensors for measuring Respiration – Throat and Abdomen, Galvanic Skin Resistance, Blood pressure and Plethosymograph. The test started with pre-test

interview to gain some preliminary information about the background and personality of the subject person so that control questions and irrelevant questions can be prepared. Then the person is explained about the tests procedures so as to remove prejudiced fear about the test and instrument. During the polygraph test, the person was subject to stim test in which the subject person is made to lie which is tested on the polygraph machine if it is able to report the response or the answer as lie. The whole questions asked from the subject involved irrelevant question and control questions (that most people answer lie e.g. have you ever told a lie?).

## 3. Results and Discussion

### A. Examination of Car

Black colored car of make Maruti Alto was examined through forensic methodology in custody of investigative officer with following observations:

- The car was parked in damaged conditions.
- All the tyres were noticed to be inflated. The front bumper, bonnet and both side front panels were noticed to be damaged. A piece of front registration number plate was observed to be broken and missing. On the back side of the car no fresh damages/dent could be noticed.
- The width of front side of the car was noticed to be 53” wide. Front bumper was observed to be cracked in the middle portion i.e. between width 16” to 32” upto height 28” and bent on the inner side towards the radiator and the radiator also noticed to be dented on the middle portion i.e. matching to the bumper in width. The front bumper was detached from left side. Pieces of bark of the tree were noticed on the damaged middle portion of the bumper of the car. Pieces of grass and shrubs were noticed to be entangled under the bumper.

- Bonnet of the car was noticed to be dented backward and upwards in the middle portion.
- One broken piece of the plastic rope was observed to be tied to the towing hook under the front bumper of the car.
- Front windscreen was noticed to be having cracks.
- Dash board of the car was observed to be having damages. The plastic cover of the utility box in left portion of the dash board was broken and detached.
- The steering wheel of the car was observed to be in damaged conditions and bent downwards.
- The back side seat was missing and a cloth was kept for seating purpose. The right side portion of back support of

- the left front seat was bent in front direction that indicates that something struck to this portion of seat from back side with great force.
- A pair of rubber slippers was lying in front of the left side front seat.

No blood or any other physical evidence could be noticed in the car.

	
<p style="text-align: center;"><b>Photograph-1</b></p> <p>Front portions having the damages mentioned above.</p>	<p style="text-align: center;"><b>Photograph-2</b></p> <p>The back side of the car having no fresh damage/dent.</p>
	
<p style="text-align: center;"><b>Photograph-3</b></p> <p>The right side of the car having above mentioned damages.</p>	<p style="text-align: center;"><b>Photograph-4</b></p> <p>The left side of the car having above mentioned damages.</p>
	
<p style="text-align: center;"><b>Photograph-5</b></p> <p>Damages on the dashboard and steering wheel as mentioned above.</p>	<p style="text-align: center;"><b>Photograph-6</b></p> <p>The back side seat was missing and a cloth was kept for seating purpose. The right side portion of back support of the left front seat was bent in front direction that indicates that something struck to this portion seat from back side with great force.</p>

**B. Examination of Road near the crime spot**

The place of accident was a metalled road approx. 18 feet wide. The following observations were made to describe the road conditions and also depicted in the photographs given below:

- On western side of the spot on the road there were agricultural fields and on the eastern side one house was observed.
- The road was not maintained and carpeted as lot of potholes along with lot of loose gravel and sand noticed on the road. In case of braking of any vehicle the tyres would not grip properly the road because of the mentioned road condition.
- Soiled Brim of road having margin approx. 6' wide was made on both side of the road and it was noticed to be not maintained as a number of bushes/shrubs along with other wild vegetation of considerable height were grown upto the border of metalled road.
- The metalled road was observed to be having no curve at the spot therefore the view of both side upto long distances was very clear.

- The spot was observed at a distance approx. 200 meters in the southern direction from the T junction on the road of village named Thillod.
- Skid mark of length approx. 40 feet were observed along the westernside of the road upto a giant tree grown approx. 7 feet away from the western border of the road. The skid mark began from the edge of the western border of the road and observed to be ended just infront of the mentioned giant tree. The shrubs and vegetation were observed to be uprooted upto the giant tree.
- The approximate circumference of the giant tree was 21 inches. The bark of the tree infront of skid mark was observed to be missing between heights 8 inches and 20 inches from the ground level. One broken piece of front registration number plate was found lying near the base of the tree. Pieces of bark and shrubs were observed to be entangled in the front damaged portion of the car.
- The western side soiled brim of the road was elevated and having a slope towards the border of the road.

The above observations of the spot are depicted in the photographs given below:





Both accused were brought to Forensic Science Laboratory, Haryana to check veracity of their statement.

They were asked following questions:

- 1) Have to planned about to murder the deceased by giving liquor?
- 2) Have murdered the deceased by giving liquor?
- 3) Have tried to mask the murder of deceased through accident.?
- 4) Have ever threatened the deceased to murder him?
- 5) Had you any quarrel with deceased on the night of his death?
- 6) Have you thrown the deceased near the accidental car?
- 7) Do you had any personal animosity with deceased?

Both accused persons answered “No” to all the above questions. All the physiological parameters i.e. blood pressure, respiration and galvanic skin resistance were normal on the response of both accused persons. That proved that they have not murdered the deceased.

**Conclusion**

On the basis of above scientific observations, photographs and reconstruction of the incident (i.e. influence of liquor, speeding car, foggy night time, bad road conditions, unclear and raised soiled brim), it appears that the driver of the car lost control at the spot and applied brakes but due to speed of car and road conditions; the car went skidding and consequently the front middle portion of the car banged into

the giant tree receiving damages in the front side matching in height with damages on the bark of tree and resulting into the fatal accident. In the reconstruction, it was observed that when the car went skidding on the raised soiled brim of the road the car was tilted on right side as driver side of the car would be on low lying area and the person on left front seat might also tilted towards driver side over the gear lever and when the car banged into the tree the person seated behind might have bounced on the left seat with great pressure and might have struck to the person seating on the left front seat through the gap between the two front seats; in this process the back support of left front side seat was bent forward and the deceased received the injuries mentioned in the PMR.

The accused persons were also subjected to lie-detection test in Forensic Science Laboratory, Haryana, Madhuban. They were asked various questions relating to allegations and they answered no. The truthfulness of their responses were verified by the polygraph machine.

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