

## CRIME SCENE INVESTIGATION



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# Crime Investigation – Classical.



- Third degree methods.
- Unwilling witnesses.
- Stock witnesses / Eye witnesses.
- Approvers.
- Delayed Processes.
- Threat by the accused.

# Denial of Human Rights..



..It is a common knowledge that the trial of criminal cases is unduly delayed because of the failure on the part of the prosecution to produce the Chemical Examiner's Report or the serologist 's report for lack of adequate capacity in the Forensic Science Laboratories.....

This contributes to the denial of human right to speedy trials...

--- Justice V.S.Malimath,  
Tiwari Committee

Report –  
-- NHRC 1999..

# Crime Investigation – Modern.



**Scientific  
Ladder to  
Justice**

- ❖ Respect to Human Rights.
- ❖ Evidence through infallible Scientific techniques.
- ❖ Scientific Aids through Forensic Science.
- ❖ Quicker processes.
- ❖ Independent from interested Witnesses.

# Human rights..

Universal declaration of Human Rights- 1948

UN Conference on Human Rights-1993

India ..Protection of Human Rights Act 1993

Art.21 : Right to Personal Liberty...  
- the need for speedy trial.

Art.20(3): A person accused of an offence  
shall not be compelled to be a  
witness against himself.

Evidence Act , Identification of Prisoners Act ,  
Sec 330,331 IPC

Amend. 2003... CrPC 292 .. FSD...



# FORENSIC SCIENCE



FORUM- a Latin word –means

“ Market place”

- a public place
- court of law..... Legal Science.

“Application of the laws of nature to the laws of human beings” – F E Camps.

It is a synthetic Science and it embraces all fundamental Sciences.



The Oldest traceable  
report of the Chemical  
Examiner's Laboratory ,  
Madras.....

**30th October 1849**

# Physical Evidences..

Blood, Blood Stains..

Tool marks..

Saliva..

Documents..

Semen, Seminal stains..

Foot prints ,Foot wear..

Skull ..Bones.. Ashes..

Debris of Expl. .. Fire..

Hair.. Fibers , threads ,ropes..

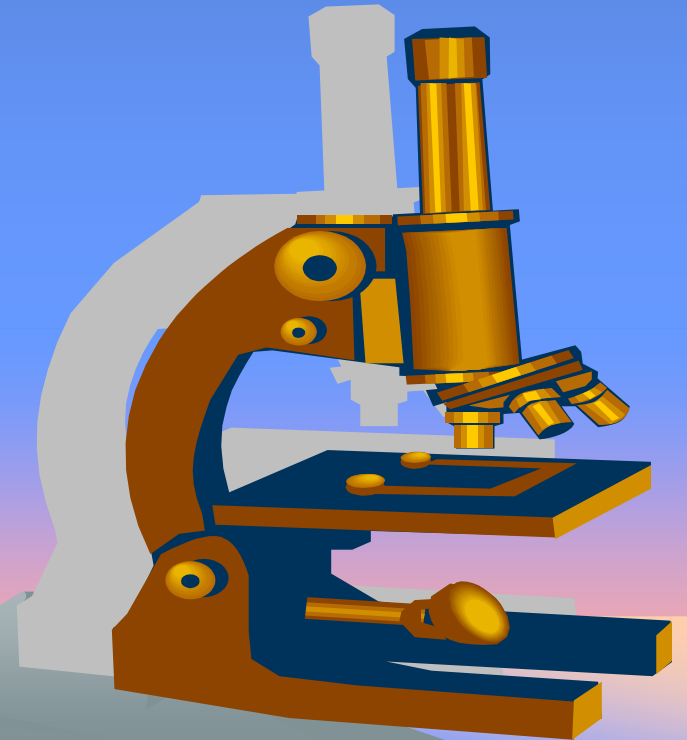
Glass..

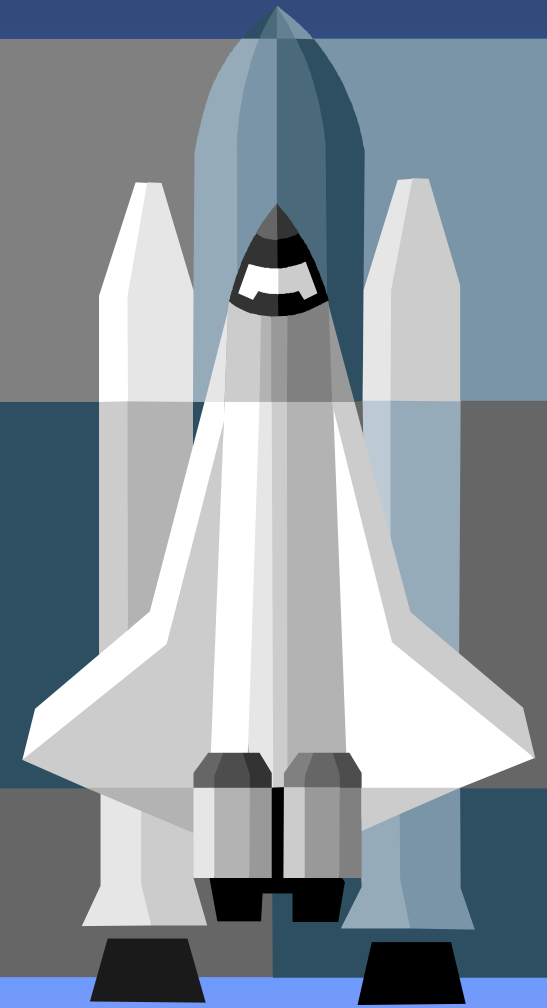
Paint , Skid mark..

Weapons..

Firearms ,firearm evidences..

Clothes..





..” Forensic Science begins at the crime scene .If the investigator cannot recognize physical evidence or cannot properly preserve it , for laboratory examination, no amount of sophisticated laboratory instrumentation or technical expertise can salvage the situation..”

- Richard Saferstein ( 2001 )

( Criminalistics : An introduction to Forensic  
Science – 7 th Edition)

# Scene of Crime..

## Search methods..



Strip method,  
Zone method,  
Spiral method,  
Grid method.....

## Purpose..

To locate ,identify ,preserve, transport..  
the physical evidences.. for lab .  
analysis.

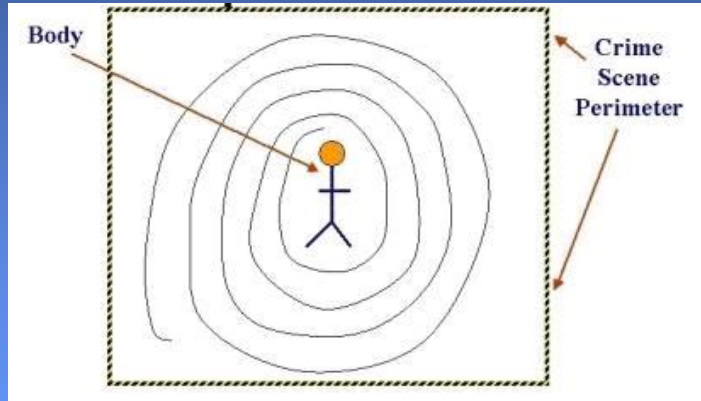
after reconstruction of crime...



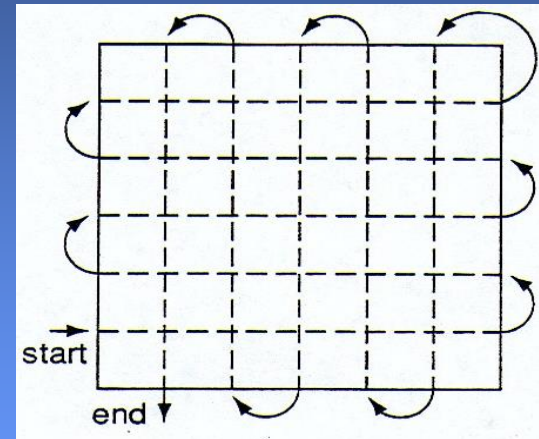
# Search for Evidence:

A pattern should be walked and location of evidence marked, photographed and sketched.

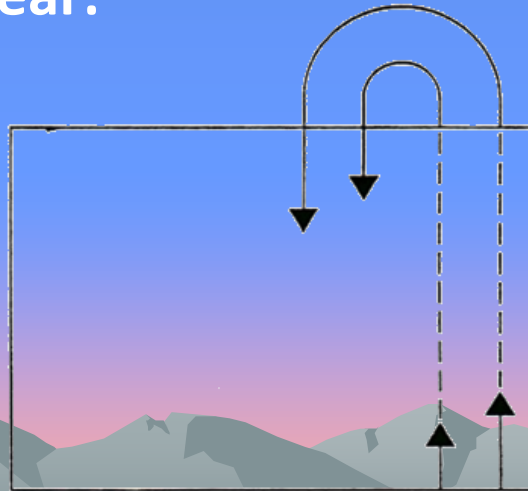
## Spiral:



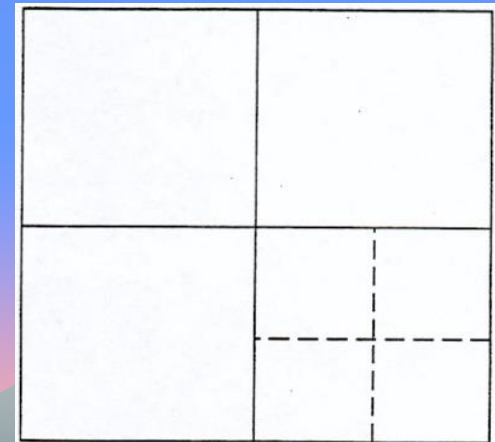
## Grid:



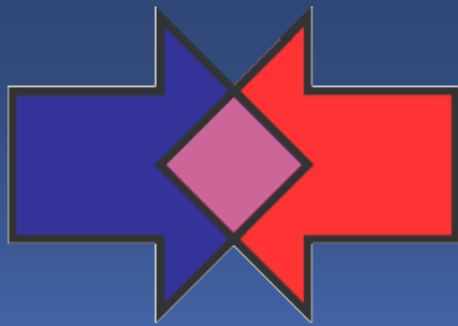
## Linear:



## Quadrant or Zone:



A flashlight or black light may be used to help find trace evidence.



# THE LOCARD EXCHANGE

Dr. Edmond Locard:

Every criminal can be connected to a crime by small particles carried from the scene.

- Whenever 2 objects come in contact with one another, a cross-transfer of physical evidence can occur.
- The intensity, duration, and nature of the materials in contact determine the extent of the transfer.



Edmond Locard, also known as the "Sherlock Holmes of France" came up with a principle that states that every contact by a criminal leaves behind a trace.

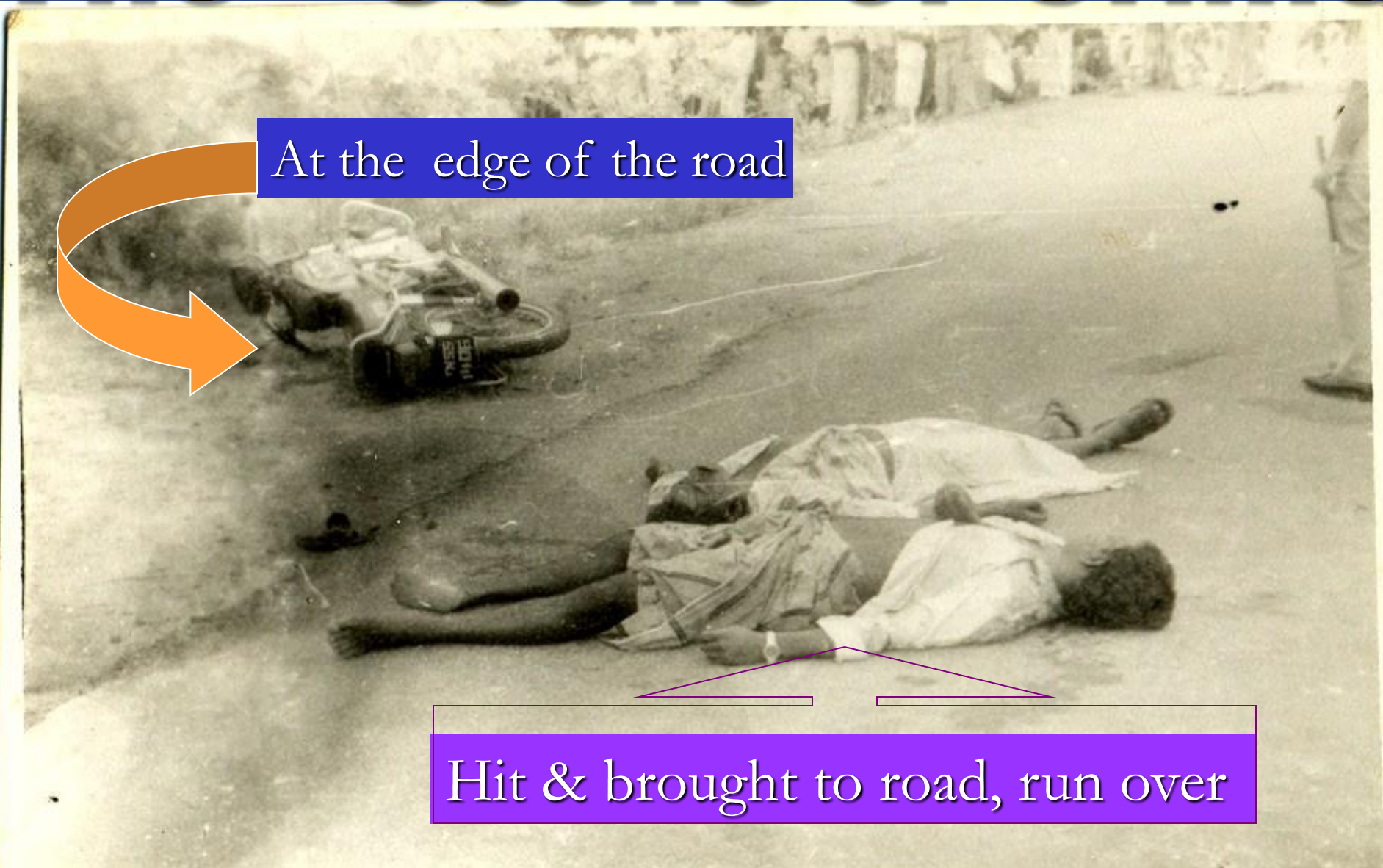


# Evidence Log & Chain of Custody

- Each person who comes in contact with a piece of evidence must use proper procedure and protocol in order to maintain responsible handling of evidence from crime scene to courtroom in order for the evidence to be **admissible** in court.

| EVIDENCE                               |              |
|----------------------------------------|--------------|
| Submitting Agency _____                |              |
| Date Collected _____                   | Time _____   |
| Item # _____                           | Case # _____ |
| Collected By _____                     |              |
| Description of Evidence _____<br>_____ |              |
| Location Where Collected _____         |              |
| Type of Offense _____                  |              |
| CHAIN OF CUSTODY                       |              |
| Rec. From _____                        | By _____     |
| Date _____                             | Time _____   |
| Rec. From _____                        | By _____     |
| Date _____                             | Time _____   |
| Rec. From _____                        | By _____     |
| Date _____                             | Time _____   |

# The Scene of Crime

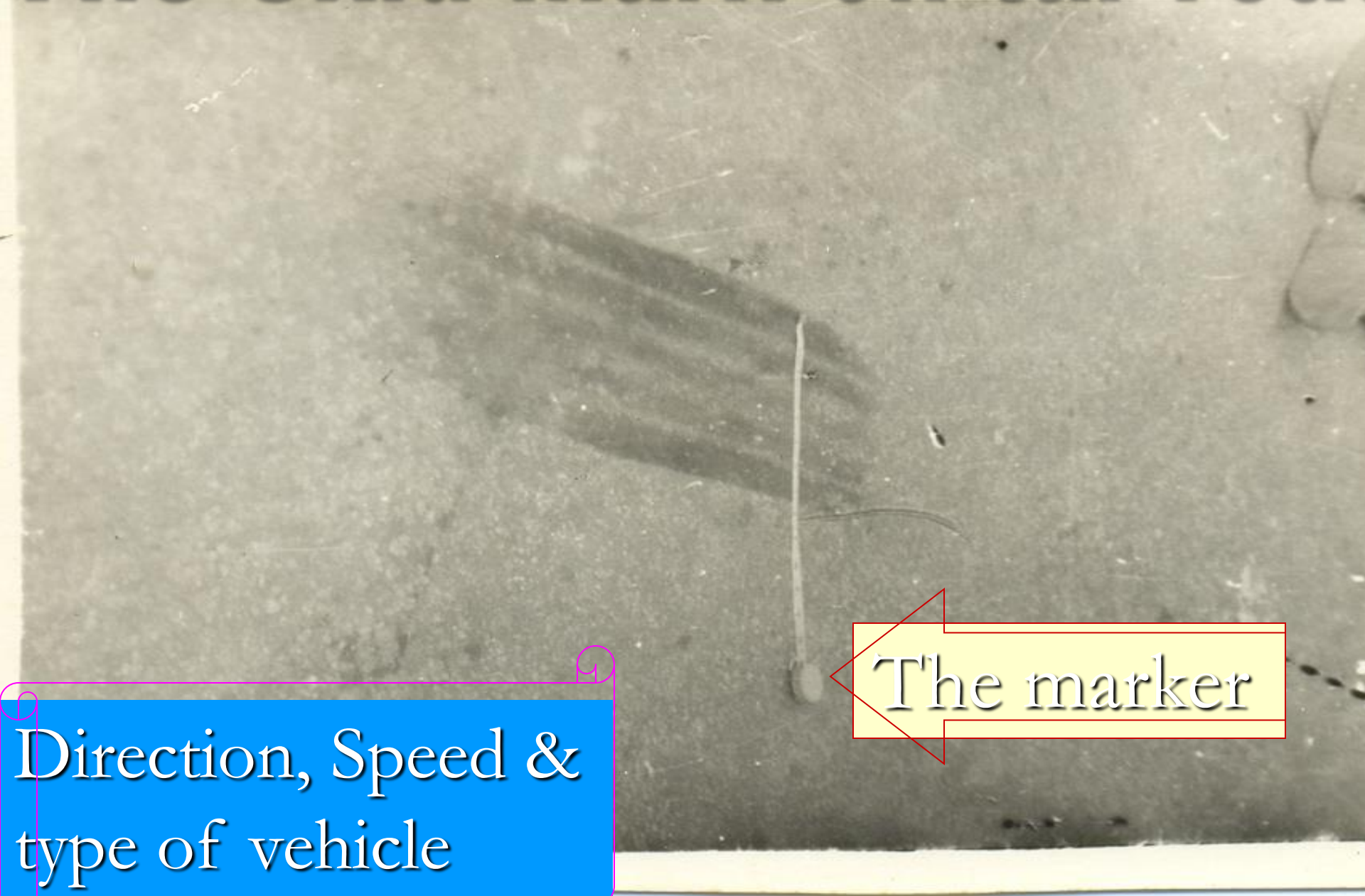


At the edge of the road

Hit & brought to road, run over

The victim aimed at & the innocent accompanied...

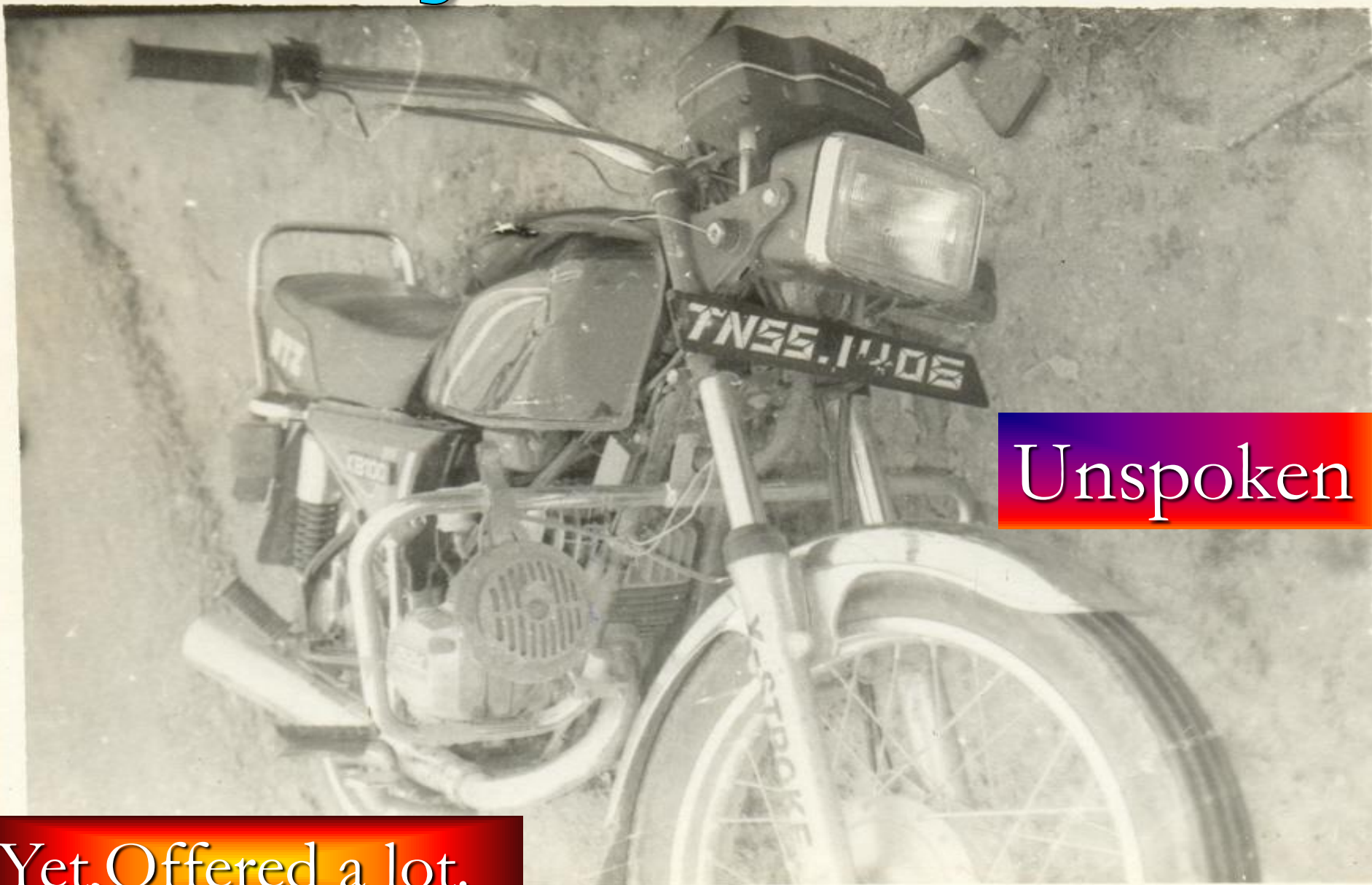
# The Skid mark on tar road



The marker

Direction, Speed &  
type of vehicle

# Motor Cycle of the victim



Unspoken

Yet, Offered a lot.

# The Weapon



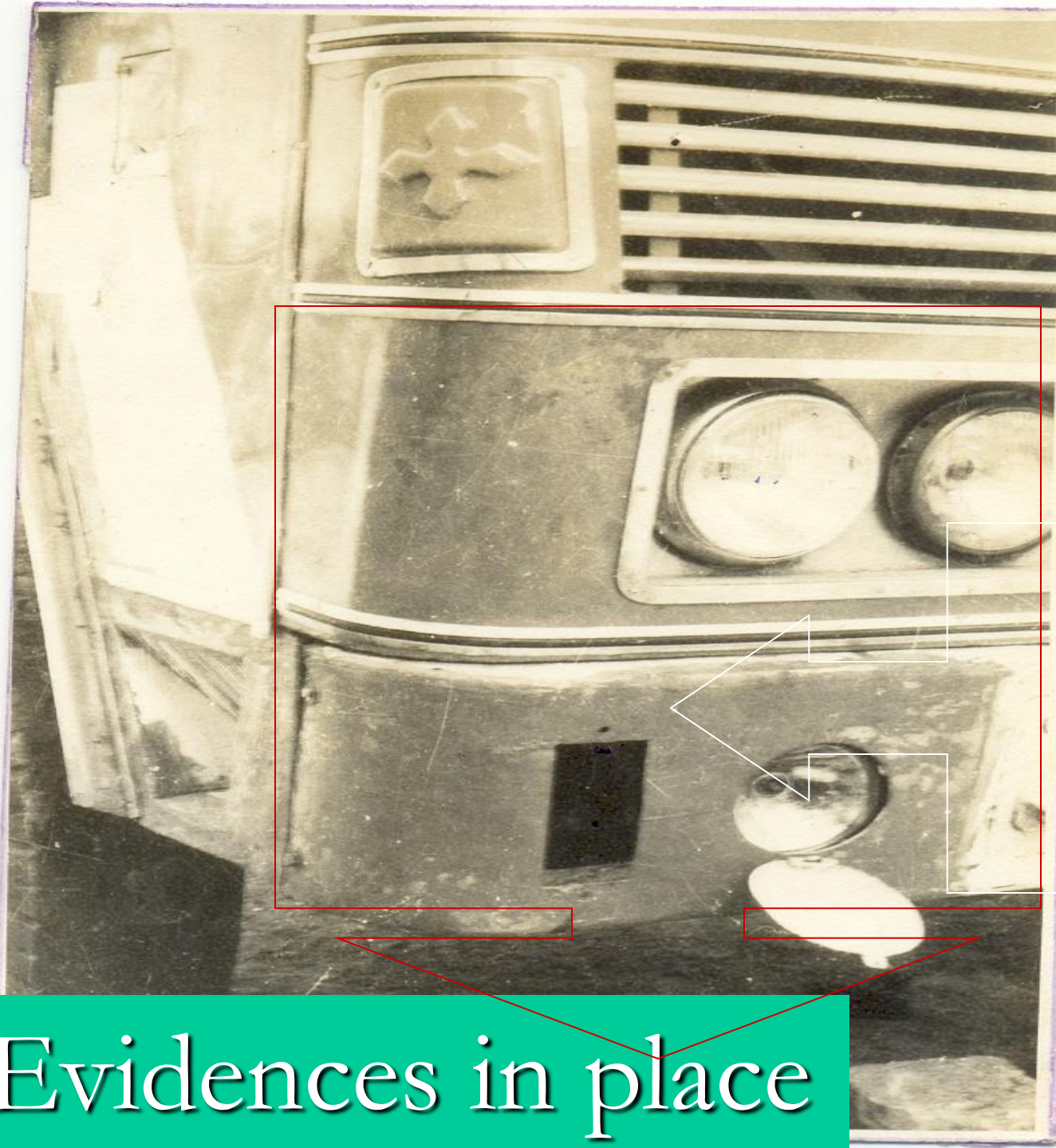
Purchased  
for the  
purpose

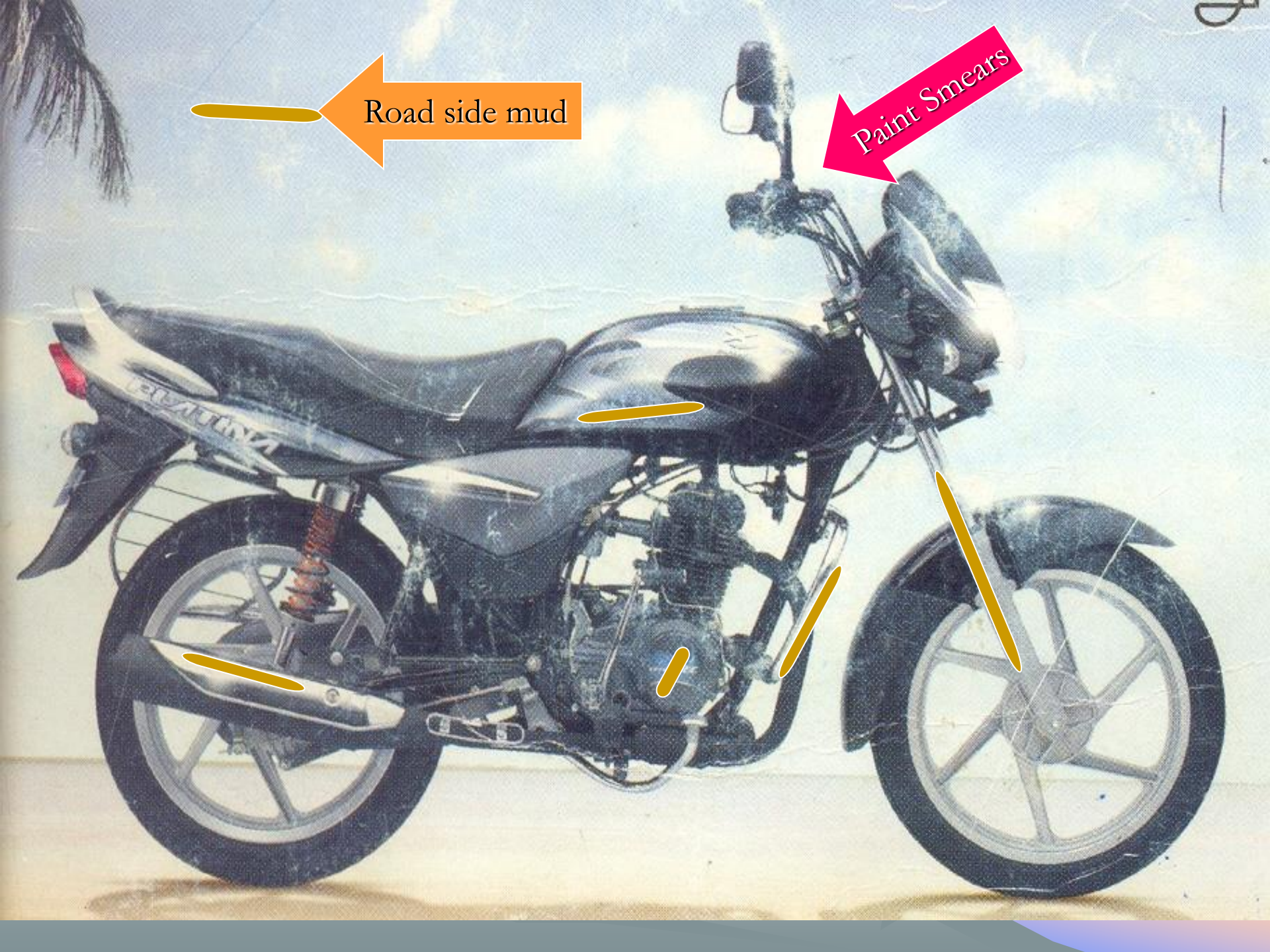
Unmoved ; yet , revealed the story

**Area  
of  
hit**

Front  
Right  
Corner

Evidences in place



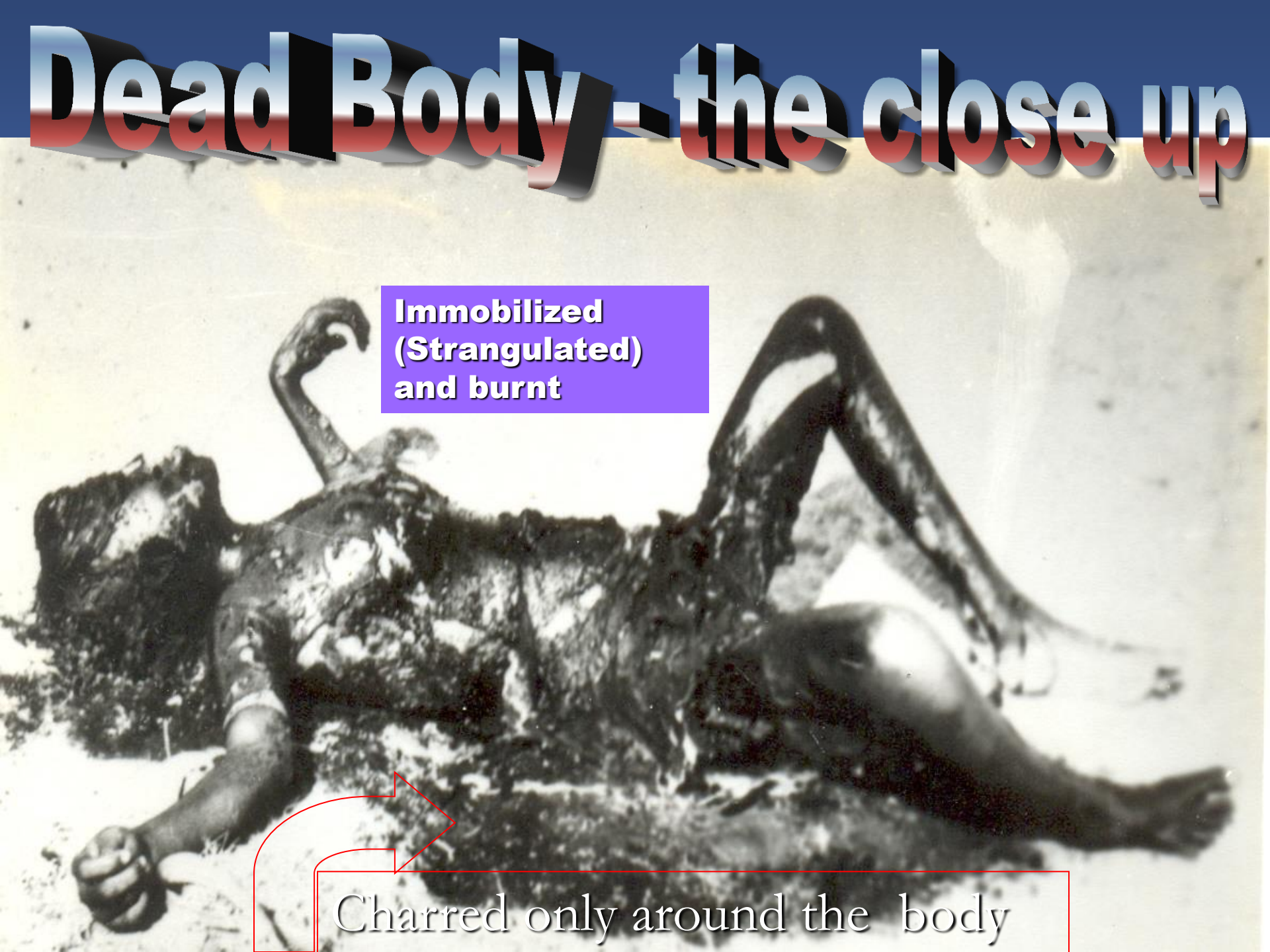


Road side mud

Paint Smears

# Dead Body - the close up

**Immobilized  
(Strangled)  
and burnt**



Charred only around the body

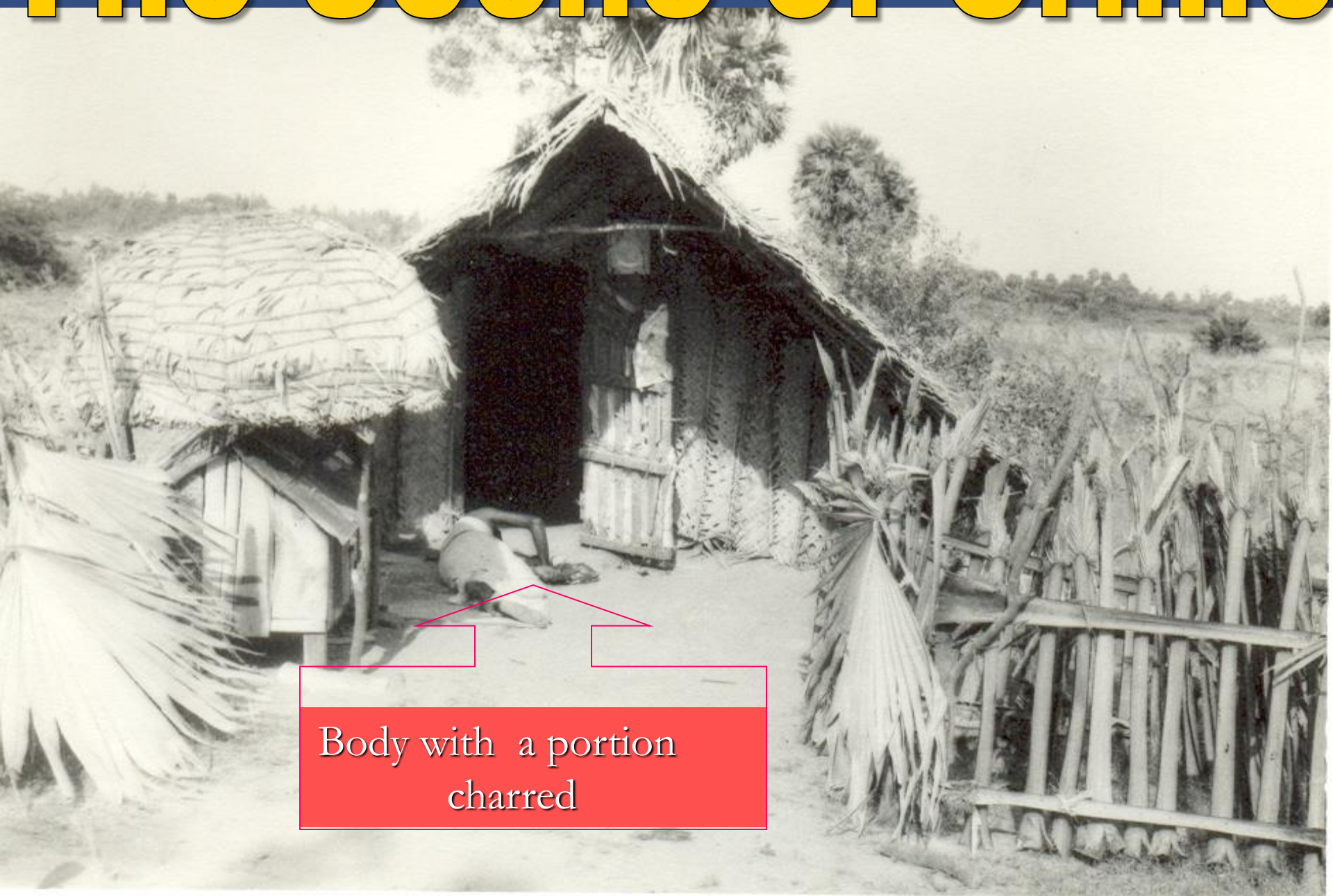
# Foetus - Fully developed male

Seven months old



Convicted to Die /Died to convict

# The Scene of Crime



Body with a portion  
charred

# Charred areas

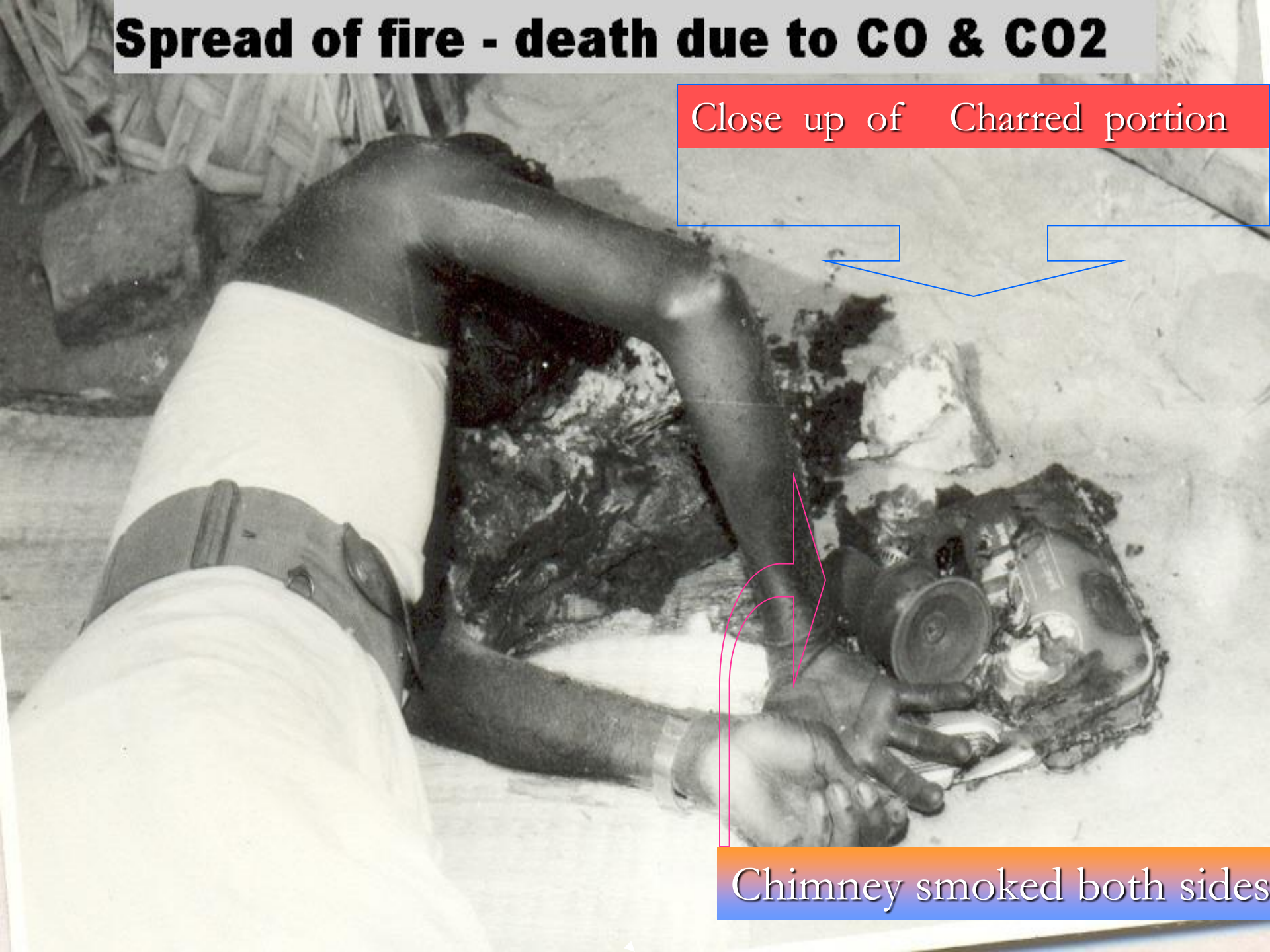
Head and others including lamb



# Spread of fire - death due to CO & CO2

Close up of Charred portion

Chimney smoked both sides



..Gives.. Genetic Information  
**DNA**.. Hereditary traits... Inherited  
from parents ..Biological blue print  
of life.. Resist putrefaction... **UNIQUE**



## Sources of **DNA**

Blood ,Semen ,Saliva ,Urine ,Tissue,  
Bone ( marrow) ,Hair ( root ,shaft)  
Tooth (pulp)..

# The Scene of Crime/Hit&Run



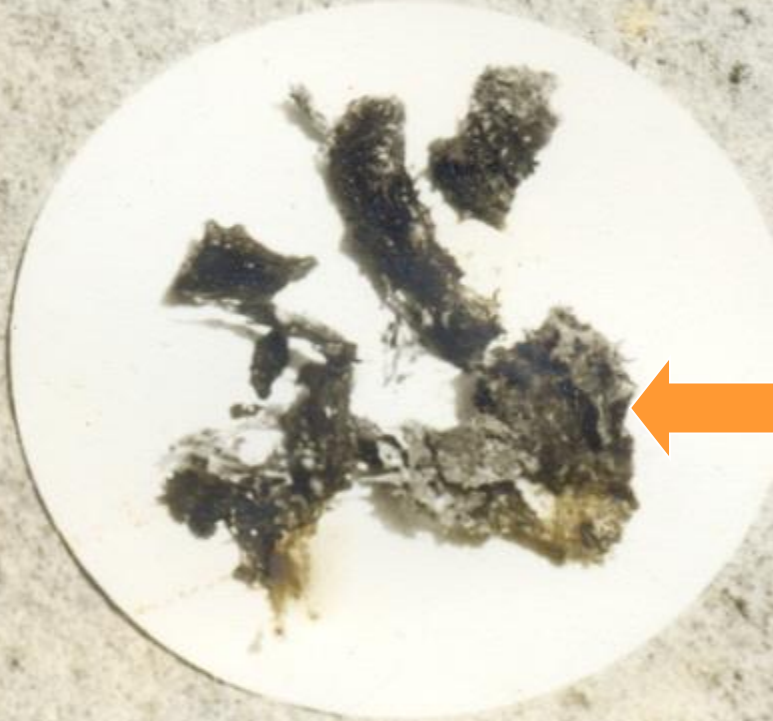
↑  
The Milk Vendor – Stomach Burst

# Suspected Lorry



Found thoroughly washed

# The Evidence-Flesh pieces



Recovered from  
between the  
rear right wheels

# Bones with bangles



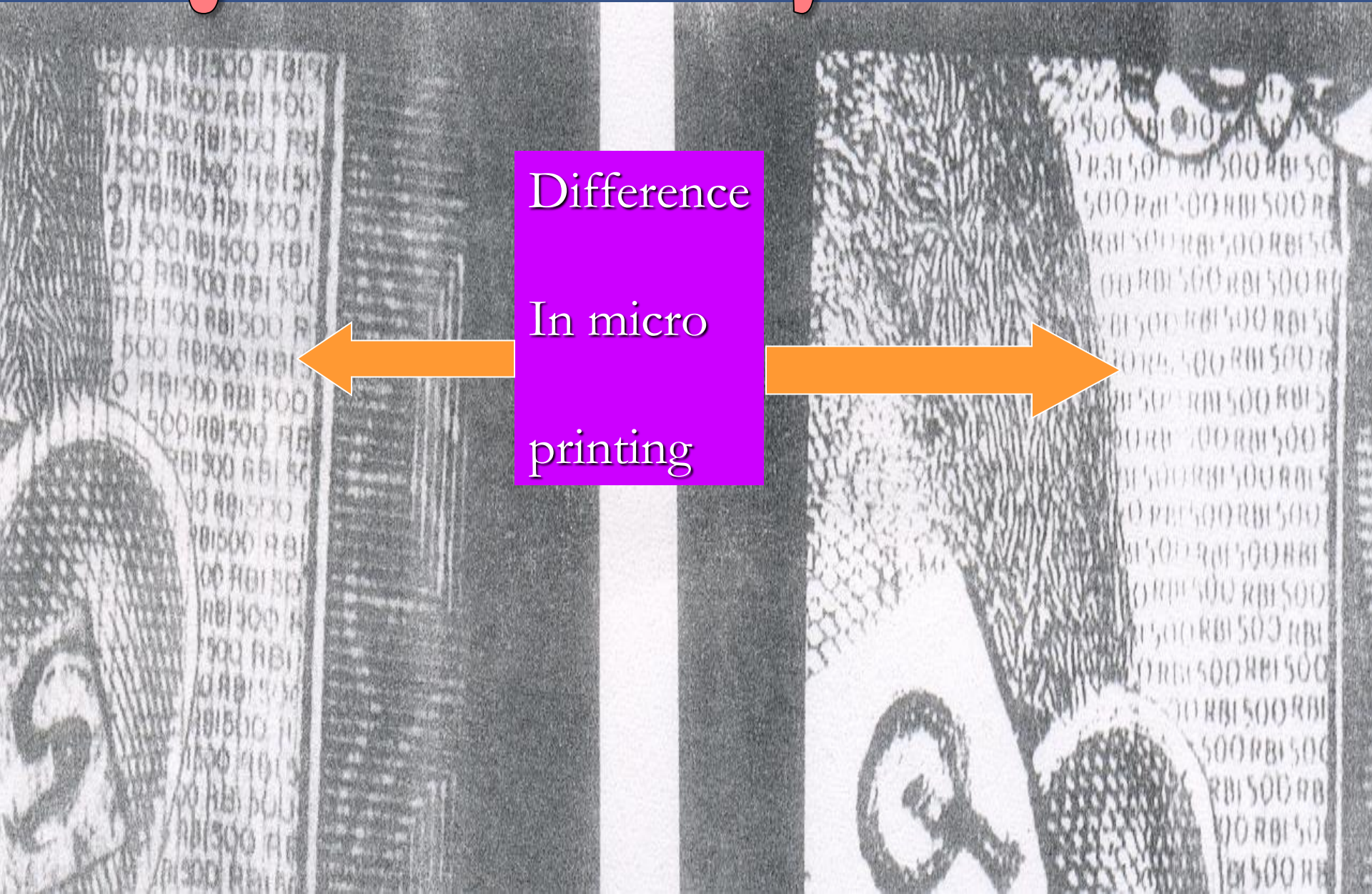
# Neck with the rope



Strangulation with rope

A case of murder for property

# War against the Economy- The Counterfeit



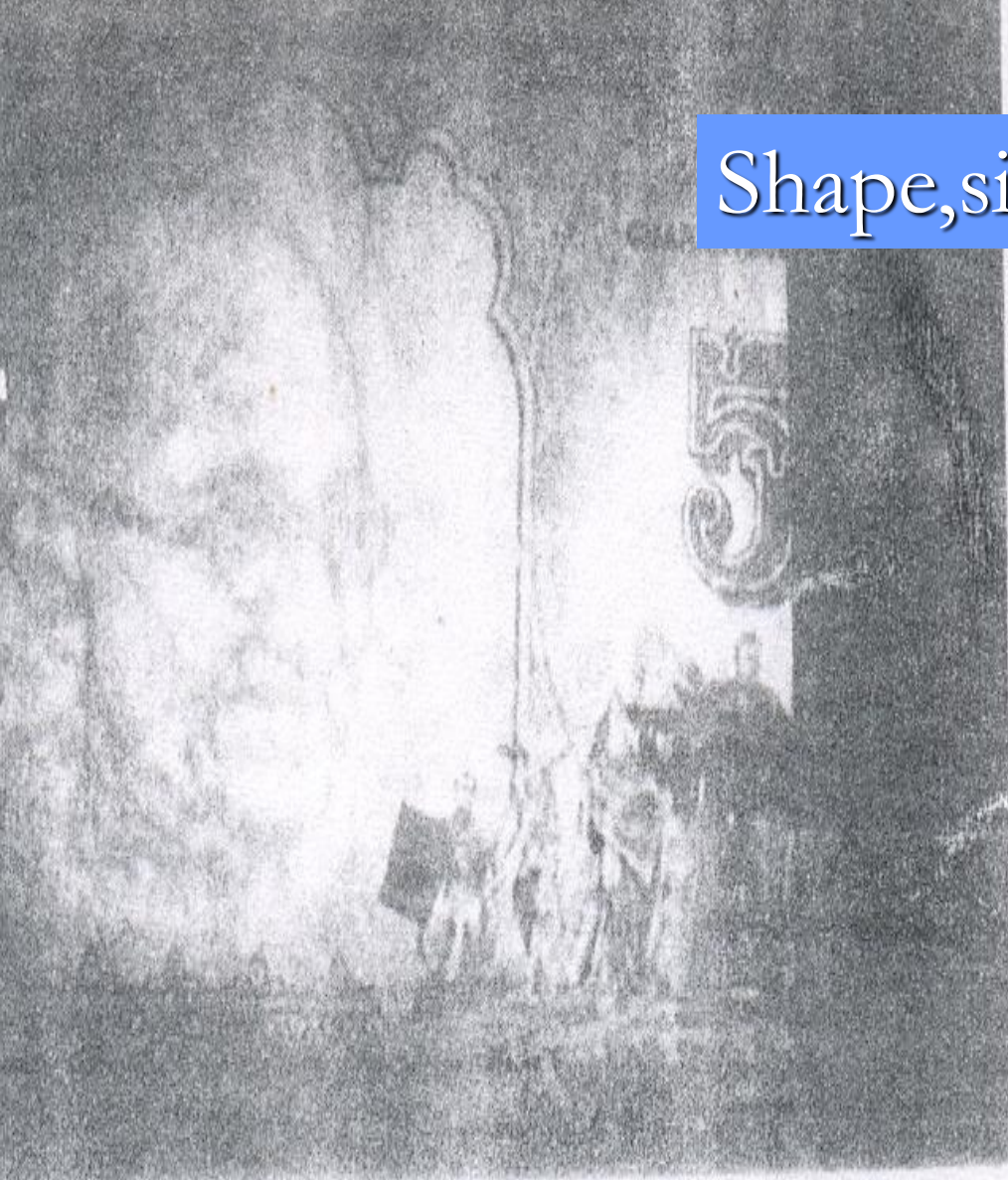
Difference

In micro

printing

# Water - loo on the water mark

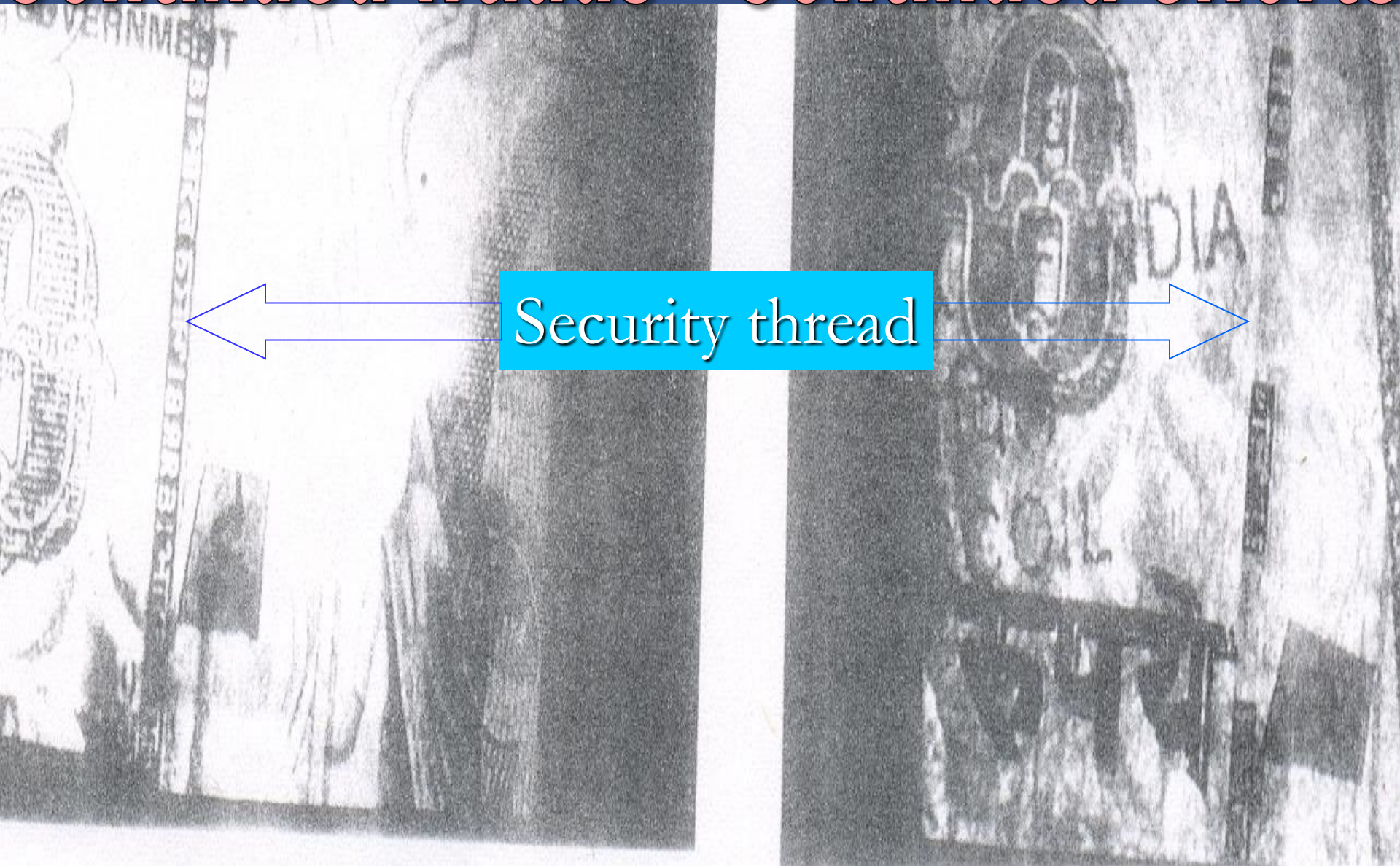
Shape, size, quality..



# Counterfeit using paper...

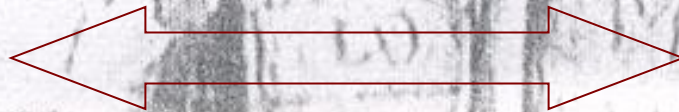


# Continued frauds - Continued efforts



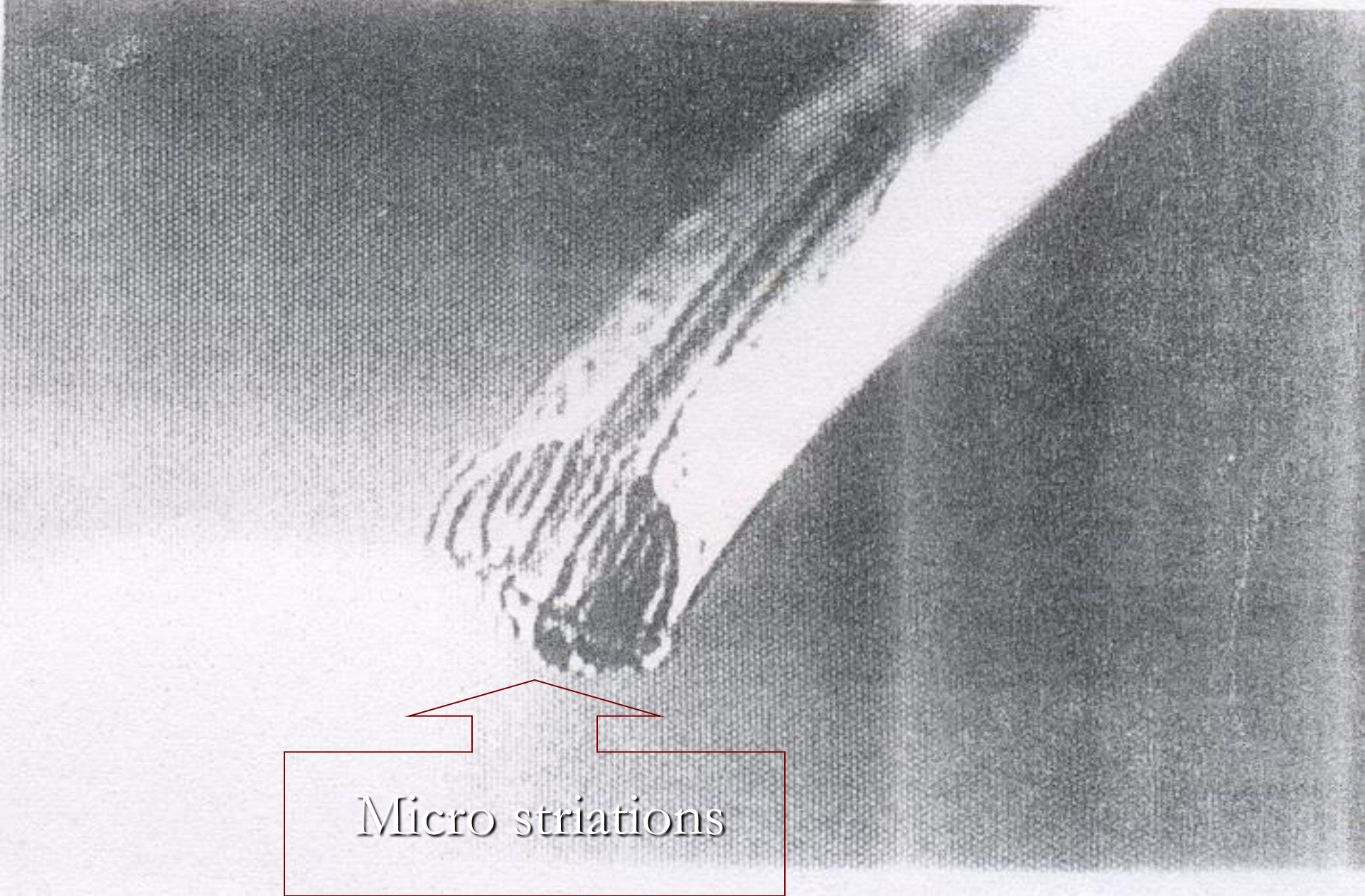
# Power theft - shocking result

Marked  
difference



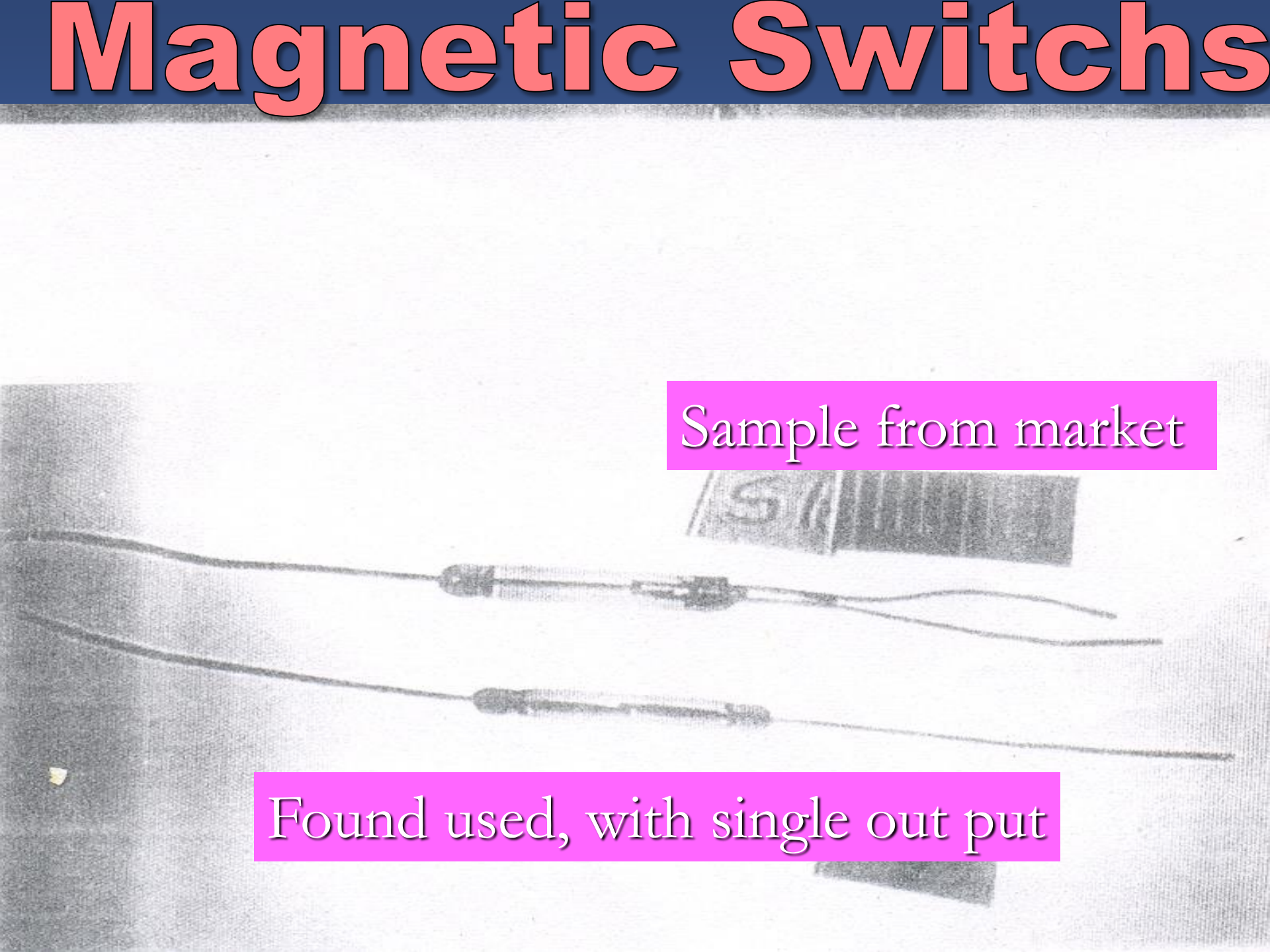
Duplicate sealing pliers

# Cut wire - exposing tool mark



Micro striations

# Magnetic Switchs

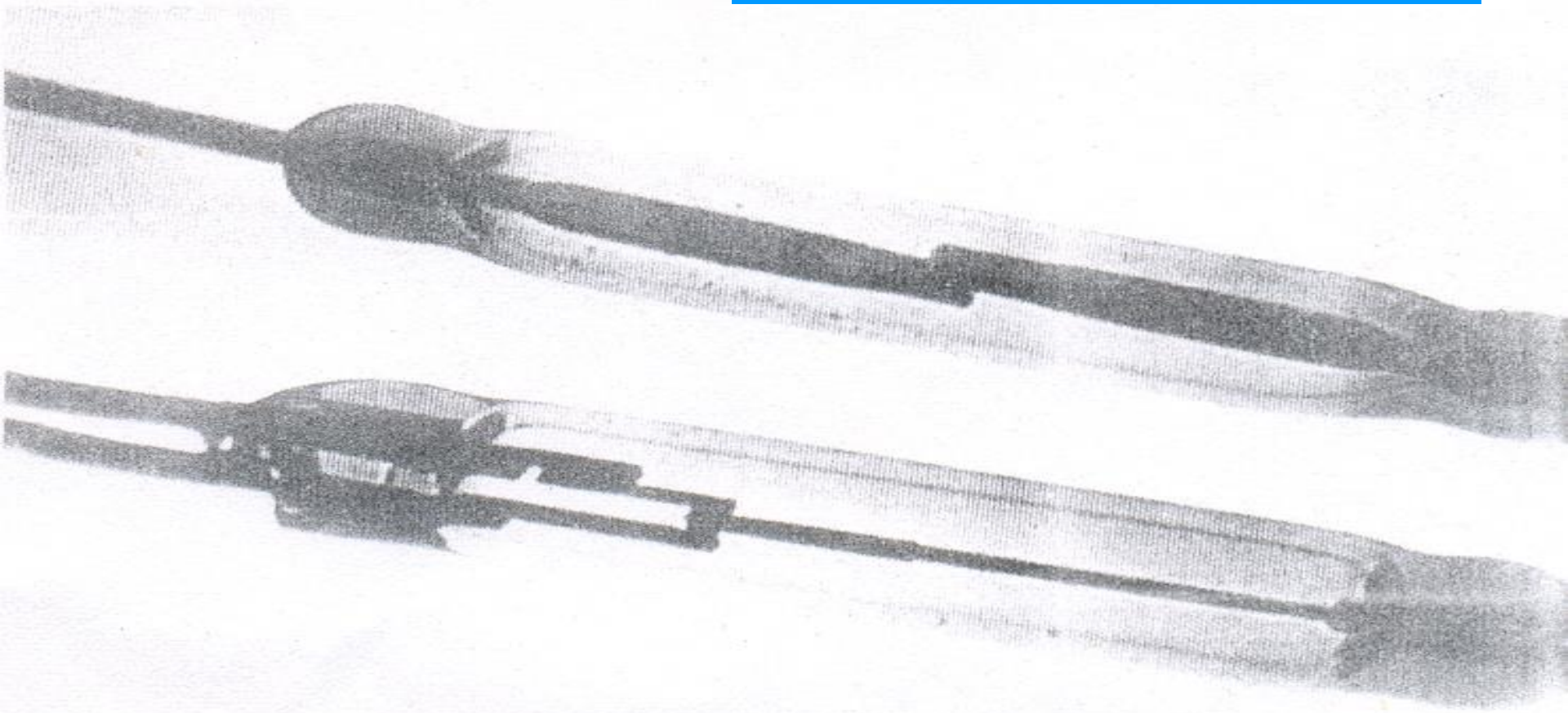
The image shows two magnetic switches against a light background. Each switch consists of a thin wire with a small, dark, cylindrical component in the middle. The top switch has a label with the letter 'S' attached to its wire. The bottom switch is similar but lacks a label. The wires are thin and slightly curved.

Sample from market

Found used, with single out put

# Magnetic Switches.

Large samples



# Finger Print..

Chinese potters used FP-2000 yrs.ago.  
known back to 17<sup>th</sup> , 18<sup>th</sup> centuries...

1853-Sir William Herschel- Admr. of Bengal..  
used first in Personal Identification..

3 – Types :-Patent,Plastic,Latent.

Devoped:-Physical - Dusting

Chemical methods-Iodine fuming.

Visualized –Spl.lighting-Oblique...

First FPB-1897-Bengal..India..



## In the words of Richard Saferstein .....

Forensic Science is the application Science to Law.... Begins at the scene of crime.

If the investigator cannot recognize physical evidence or cannot properly preserve it for laboratory examination, no amount of sophisticated laboratory instrumentation or technical expertise can salvage the situation... First officer..to take steps to preserve and protect the area to a greater extent possible..

Record the scene .. Photography.. Videography.. Conduct a systematic search, sub divide the scene-spiral search..grid method..strip or line search..zone search.. Separate containers for items..maintain chain of custody..Crime scene safety.. Latex gloves, shoe covers,plastic masks/respirator, goggles ...

Education alone will not guarantee the success of crime scene investigation or evidence collection. Experience,perceptive skill, persistence and precise judgment are all ingredients, essential to the make up of the successful investigator and evidence collector...It would be impossible to list all the objects that could conceivably be of importance to a crime; every crime scene obviously has to be treated on individual basis, having its own peculiar history, circumstances and problem...just as important, a qualified evidence collector cannot rely on collection procedures mentioned from a pamphlet but must be able to make innovative, on the spot decision at the crime scene..

From the experience ..... Step in to SOC at the earliest and Study in detail.

Identify the physical evidences.( Always carry necessary instruments/ implements)

Preserve them suitably.( Always carry packing materials).

Achieve reconstruction.

Follow up the case for chain of custody, early report..

Maintain liaison with Pathologist, Law Officer, Lab.Scientists.

Achieve good results , above all Professional / Personal Satisfaction.

Finally wait, wait , wait, be waiting like a crane for a stuffy fish , for a case to prove you.



## The Story of Success

The heights attained by great men reached and kept were not attained by sudden flight . But, they, while their companions slept, were toiling upward in the night.

----- Long Fellow.



**Thank ' U ,**

# Acknowledgement

- ❖ The Presentation is being used for educational and non commercial purpose
- ❖ Thanks are due to all those original contributors and entities whose pictures used for making this presentation.

❖ **P.Siva kumar M.Sc.,M.S.,Assistant Director (Retrd), RFSL, Thiruchirappalli**

