CHAPTER THREE

RESEARCH METHOD AND OUTLINE PLAN
FOR PRESENT STUDY ON GEOGRAPHY OF CRIME

3.1. On Research Methodology:

Research signifies an academic pursuit to explore further after a target to know precisely, after a blueprint. Accordingly, a researcher defines the entitled problem, gathers data from properly selected source, develops and tests research assumptions, and creates conditions to present findings to know the unknown or explore causal relationships. Social science research, as an aid to construct theory, generally examines and investigates contemporary everyday phenomena, evaluate historical facts relevant to growth and change of the phenomena concerned, search for logical explanations of causality within a controlled situations to anticipate outcomes - to help developing theory and law for the removal of constraints affecting negatively the standard of social life (Johnson, 1981).

Researches on the geography of crime aim to unearth the causal relationship of crime, a sociopsychological phenomenon, with certain geographical parameters or spatial variables. Geographers confine their research on crime and criminal behaviour to probe in "how they get that way" (Taft and Ralph, 1964) in terms of the ecological correlates of the nature and an extent of crime, by using published crime statistics or "Crime Index". Though it is argued that reported statistics are "estimated to be less than half the actual number of crime" (Ennis, 1967) - as may be recorded by local population survey of criminal incidents.
All research methods give due importance upon 'control of the variables' and 'precision of measurement'. To ensure this, a geographer dealing with crime statistics generally utilise the advantage of moving from the data to theory, from particular facts to general law - using statistical tools geographers draw inferences to the parent population by inductive logic. A research proposition regarding ecological relations to crime rate, with reference to pattern or process, or perceived meaning of the 'space' of the dwellers (residents), is ascertained by testing the assumed relationship in between the rate and state or space variables - drawn by the researcher concerned. The said procedure is technically described as 'hypothesis testing'. Hypothesis may be presented by a 'model' that depicts diagramatically a set of variables in causal order - which has to be searched or verified. The variables concerned require to be operationalised by a suitable, instrument to collect data or measurable information about the variables by a suitable scientific method for the investigation (Karlinger, 1966; Babbie, 1973; Smith, 1975; Johnson, 1981).

The term 'variable', here, refers to any particular geographical or ecological characteristics that can assume a range of values or measures along a 'continuum. The said value may exist as cause (independent) or as effect (dependent) - a 'caused change', assumed by the investigator, over any condition or behaviour of the affected person.

In a study or research, the investigator probes a causal 'relationship' between two or more variables, after the research assumption(s). Relationships between two or more variables, with reference to incidents, maintain particular position - positive or negative, causal or non-causal - stated in model.
'Model' signifies a representation by a diagram which shows causal relationship and helps to depict a patterned relationship between cause and effect, as assumed and as traceable in the findings. The said patterned relationship can be visually presented by 'descriptive statistics' and patterns remain open to quantitative comparisons to draw inferences to verify research assumptions.

With reference to discussions, stated so far, an 'outline plan' has been developed for the present study in accordance with the following points:

(i) Context or frame of reference
(ii) Research assumptions or hypotheses
(iii) Operationalisation of variables
(iv) Procedure for collection of empirically sound information from representative sources by standard tools and techniques
(v) Treatment with the data
(vi) Data analysis techniques
(vii) Interpretation and conclusions with other comments
(viii) Reference Work (Bibliography).

3.2. Outline Plan for the Present Study:

(1) Frame Of Reference:

The need for active participation of professional geographers in the spatial implication of criminogenesis was sharply pointed out by quite a number of researchers since 1932, for example, Clyde (1932); Lottier (1938); Shaw and McKay (1942); Morrise (1957a and b); Pahl (1965); Scott (1970); Lee and Egan (1972); David and Scott (1973); Brantingham and Brantingham (1975); Harries (1980; 1974; 1971)
and Herbert (1982). "Historical growth, morphology and economic functions were foci of attention and its emphasis were on macro-patterns and processes and residential differentiation" (Herbert, 1982).

Geographers of current decades round the world may be found to express their eagerness to probe in the relationship between crime incidents and spatial characters by geographical methods to enrich crime prevention programme and surveillance aspects of criminal justice administration by creating 'secured environment'. The said 'environmental security initiative' has been described by Gardner (1978) as follows: "an urban planning and design process which integrates crime prevention with neighbourhood design and development".

The first Indian study in this area was conducted by Sivamurthy (1981) with reference to ecological aspects of crime in Madras City to provide guideline for improving surveillance to control crime rate by local police administration. The said study encouraged a Calcutta University researcher in Geography (Ghosh, 1988) to undertake a study on the ecological aspects of anti-social behaviour in the townships of Southern part of 24-Parganas district of West Bengal. The said study highlighted the dire need of improving the quality of life of the dwellers of rural and fringe area of the said administrative district and developing a need-based surveillance programme by integrating police and community effort.

In this connection Smith (1986) has described four distinct phases, viz.,

1. To locate the origins and correlates of deviance with a view to reforming the adverse social and environmental conditions of crime-prone neighbourhood. A striking geographical dimension (Clifford Shaw, 1931; Henry McKay, 1942) - as the distance from the central part of a business district
increased the offenders' residence rates were found to decrease. Homes of convicted offenders clustered disproportionately into three central wards of Liverpool (Bagot, 1941).

(ii) To understand the meaning and implications of perceived 'defensible space' as explored by Jacobs (1961), Angel (1968), and Newman (1972). To evaluate the capacity of physical design to provide surveillance for residents and their agents, to form impression about 'Safe Zone' or 'Unsafe Zone' and to study the influence of neighbourhood on particular type of crime-rate - "critical intensity zone for a particular crime type" to suggest necessary public intervention.

(iii) To explore offenders' perception of space to their advantages and disadvantages to commit certain types of crimes, e.g. for burglary (Repetto, 1976).

(iv) To justify the influence of environmental independent variables like household and householders' composition over the rate of violent and property crime incidents as dependent variables (Ronek, 1981).

In an Indian city, Sivamurthy (1988) has observed that "the occurrence of house-burglary in different parts of Madras City is highly dispersed because the residential colonies are dispersed in the city".

(2) Rationale for Present Study:

In 1947, following the Partition of Bengal, physical forms of urbanisation started running ahead of an adequate system, in West Bengal, for the distribution of resources in undivided district 24-Parganas particularly. The situation became critical when the border areas of the district - adjacent to East Bengal - and the
City of Calcutta became overpopulated by the millions of Hindu refugees, from East Bengal (then East Pakistan and now Republic of Bangladesh), for safe shelter and rehabilitation. The situation became more complicated and problematic in 1953—when, under the directive of Central Government, the Government of West Bengal launched the Community Development Programme by selecting certain areas of the District as Community Blocks for development abruptly, i.e., without preparing proper infrastructure. As a result the predominantly rural 24-Parganas district did not get the opportunity to improve the quality of village life truly while some of its rural towns and fringes around the Calcutta City (adjacent to 24-Parganas) were turned to unplanned urbanised sectors.

Consequently, within a short span, in the whirlpool of a continuous low quality of social life the socio-economically drifted *Petite bourgeoisie* refugee families became proletarianised and which created sufficient adverse circumstances for the infusion of slum sub-culture to victimise their younger generations.

"Besides, a number of deserted areas at the vicinity of district towns develop squalors due to overcrowding and unhygienic quality of living, of an emerging deviant group. Spread of the said camouflaged sub-culture, thus, helped to generate criminogenic propensities in the population of affected areas— as reflected in the rate of crime and delinquency and other deviant behaviours. Administrative authorities gradually became anxious to tackle law-and-order problems of the border areas, towns and sub-divisions—which earned notoriety as dens for smuggling, illegal trade and commerce, and several cognisable offenses and corrupt practices" (Bose, 1985).

All these gradually raise a question in the inquisitive minds of applied geographers leading to envisage the need for probing the causal relationships between
spatial peculiarities, concomitant socio-economic condition, and growing rate of crime. Accordingly, present study has been planned to probe in the said causal relationship between spatial characteristics and crime rates of the district 24-Parganas (North), under the following title:

"A Study on the Socio-Geographical Variables With Reference to Cognisable Crimes in the Towns of North 24-Parganas, West Bengal."

(3) Major Considerations:

(a) Crime-rate to be collected from the recorded data available in the police bureau to depict crime patterns in the macroscopic and microscopic area-units of the territory and identify risk areas in the light of: (i) overall crime-rate for a span, (ii) particular crime-rate, and (iii) rise and fall in the rates of crime and delinquency.

(b) Ecological analysis to examine the relationships between Police data and Census data. By using Regression model attempts will be made to examine the influence of independent variables like demographic, socio-economic distance and land-use over crime-rates as dependent variables, area-wise and police station-wise.

(c) Risk-related crime rate for an area will be ascertained by using the method (Harries, 1980) given below:

\[ R_{rx} = \frac{C_x}{100000 R_{ux}} \]

where \( R_{rx} \) is the risk-related rate for crime type \( x \); \( C_x \) is the frequency of crime of type \( x \); and \( R_{ux} \) is the number of units at risk in a specified area.

(d) Poor environment hypothesis rests on two major ecological determinants, viz., (i) adverse living conditions and (ii) socio-economic circumstances. Involving few indicators, after the findings of Cardiff study, it assumes
positive relationship with high unemployment, excess of males, unaccomplished social class status, broken home and shared dwellings while negative relationship with accomplished social class and good housing conditions (Herbert, 1982). The said assumed relationship with poor environment may be illustrated after Rutter and Madge (1976) in a framework of a "cycle of poverty", given in Diagram 1.

Diagram One: Cycle of Poverty

- POVERTY
  - Lack of occupation skills
  - Poor educational opportunities
    - Low aspirations
    - Weak moral values
    - Pro-delinquent attitude and supportive behaviour
  - Low or Irregular Wages
    - Unemployment
  - Stressful and Unhealthy living environment
    - Poor accommodation
    - Low Housing Quality

(e) Meaning of Space to a group of dwellers can be explored by a structured questionnaire consisting of enquiry areas, after Herbert and Evans (1974), related to (i) perception of the area, (ii) parents' educational orientations and interests, (iii) modes of children's punishment for misbehaviour, and (iv) recurrence of activities conducive to crime and delinquency.

Bose (1985) has developed a model to explain the interrelations of the above areas in qualifying a space on the basis of responses given by a group of perceptors (Diagram 2). The said model has been developed with the following rationale, relevant to present study:
Diagram Two: Perceived Meaning Of Space (Bose's Model)

- Lack of Job opportunities
- Poor dwelling conditions
- Lack of educational And Vocational opportunities
- Lack of urge and pursuit for a decent employment
- No skillful employment
- Earning by any means
- Unemployed
- Family permissibility to delinquency (low morality)
- Unemployment
- Laxity in behaviour control in family milieu
- Vocational unfitness
"Perception and attitudes of good citizens of a locality about their own residential area reveal the meaning of the Space in their cognition. The said possibility is utilised by the researchers dealing with geography of crime to identify ecological characteristics where delinquent sub-culture can grow under the lax social permissibility of behaviour and practices conducive to antisocial behaviour" (Ghosh, 1988).

(f) Antecedents for the present study relates to undercurrent of some ongoing social change caused by dysfunctions in the social system of the selected area under study – the Northern Administrative Division of 24-Parganas district which became a separate administrative entity about a decade only. The area earned notoriety for overpopulation, high rates of illiteracy and unemployment in the settlement areas occupied by East Bengal refugees, and steady rise of cognisable and Special Act offences.

Thus an urgently built-in environment for a growing community life, with certain typical ecological features, became the dwelling places for both socially accomplished and unaccomplished groups having common cultural and geographical histories of living in undivided Bengal.

"Under the whirlpool of swiftly changing patterns of social life in the modernised physical setting, in course of time, the advantaged group is gradually developing with all social accomplishments while the disadvantaged group is gradually nurturing in them antisocial habits, tendencies and practices. In brief, the former aspires to live with a 'quality of life' while the latter remains deprived of such perception and aspirations" (Chosh, 1988).

Amongst a good number of such 'Spaces', in West Bengal, North 24-Parganas district is one of them.
Spatial Characteristics of the North 24-Parganas, upto the end of the fourth decade of current century remained predominated by a vast 'not built-in' rural territory - particularly on the north-eastern and eastern sides. Its western periphery was well-known as oldest industrial belt and the fringes between the said industrial belt and Calcutta City remained occupied by the garden-houses of Wealthy Calcuttans of early 20th Century for their week-end resorts and parties for enjoyment.

After political independence of India, under Community Development Projects of 1953, efforts to convert undressed rural environment into properly dressed one could not pay due consideration to some important infrastructural reconstruction for developing an ecology for healthy community life. As a result, gradually a disharmony in the local community life grew up in the newly built-in Space and gave rise to a dimension of socio-cultural dichotomy with two extremes. Along the said dimension there were pockets where in the midst of a permissible social climate antisocial attitude and behaviour got indulgence in the dwelling places of under sophisticated section of the new settlers - living in a least modified ecological condition, not befitting to need-based welfare or quality of life of a minority group, irrespective of caste, creed, and religion. As the unhealthy ecological conditions varied spatially so the nature and distribution of crime rates varied also with reference to spatial peculiarities both at the macro and micro levels.

(g) Hypotheses to be verified rest mainly on the knowledge that the incidence of cognisable crimes signify the influence of geographical peculiarities of 'Space' and undercurrent of dysfunctions of some social systems - emerged out of ongoing social changes in the 'Space' concerned. Specifically, the following
major research hypotheses have been developed for verification with reference to available local data:

Hy 1: In a defined macrospace within the North 24 Parganas density of different cognisable crimes show no variation over a span of time.

Hy 2: Three cognisable dangerous crimes in the micro-spaces under rural and urban areas within the district bear no relations with (a) population density, (b) percentage of illiteracy, and (c) percentage of unemployment.

Hy 3: Density of dangerous cognisable dangerous crimes of a micro-space varies as its distance varies (near and far) from the administrative H.Q. of the district.

Hy 4: Perception and altitude of good citizens about their own residential space and neighbourhood reflect a 'meaning of the space' in relations to its criminogenic characteristics.

(h) Data to reflect the nature and characteristics of the Variables shall be collected from the following sources:

Ecological Variables (Independent):

(i) Geographical descriptions of the 'Space' will be collected from the published maps and reports of the State or Central Government.

(ii) Demographic, socio-economic, literacy-illiteracy, employment-unemployment, and land-use will be collected from the published Census Reports or District Gazetteers - available in the market as current edition of Govt. Publications.

Crime-rates/Statistics (Dependent):

(iii) Crime rates of a macro-space (administrative division) or of a micro-space (police station area) will be collected from the official records of police bureau of the State or from the District Bureau of Crime
Records by the investigator for a period of 3-5 years, as would be made accessible to the investigator by the authority concerned.

(iv) 'Perception of Space' will be collected by the investigator by a specially devised structured Inventory (appended) with selected enquiry-areas fitted with a Likert-type 5-point scale - to collect measures, used by Ghosh (1988) with a 'test-retest' reliability = .88.

Here the sample size will be 5% of randomly selected local people (adult male and female) who are employed in a recognised job or profession and are parents of school-going children. They would be permanent resident of an area within the district and whose family would remain free of any record of criminal case.

(i) **Statistical Treatment of the Data** will be done following Tables to present both descriptive and inferential statistics of the ecological data and crime rates. Data will be further treated by correlation method and Regression analysis to ascertain causal relationships between the independent and dependent variables for hypotheses verifications at the macro- and micro-space levels. Data will be represented also by Graphs and Maps to reveal the influence of ecology over risk-areas, where necessary.