Perspectives of the Computational Approach as a Method for Criminological Research

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1. STATISTICS AS A CONSOLIDATED TOOL OF CRIMINOLOGICAL RESEARCH

In criminological research methodology, the use of quantitative methods plays a very important role contributing to the very spirit of the subject matter. Studies with a sociological matrix on crime, already existing from the 1800s, try to explain the essence of it through the analysis of the “ultimate cause” of its manifestations, and the use of systematised data for its description becomes a significant moment in the research. In fact, “the image of criminology as a synthetic science is justified if it is understood in terms of empirical science, characterised by the inductive method and founded on observation, that is, if criminology is considered the result of a systematisation of assertions that describe observations and if we believe that criminological knowledge must be built on the basis of principles of observatism”¹.

The studies carried out by Quetelet (from Belgium) and Guerry (from France) are recognized as the first important statistical studies², and these became of utmost importance in the criminological domain for qualitative and quantitative knowledge of delinquency, for both verifying the interpretations of this phenomenon offered on a theoretical level and for offering measures aimed at preventing and containing its spread.

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² Adolphe Quetelet and Andrè-Michel Guerry are recognised as the founders of moral statistics, embryo and founding element of criminal sociology, and promoters of the Cartographic or Geographic School who interpret the delinquency phenomenon with a statistic geographic representation of its distribution analysing the relationship existing between socio-demographic factors and fluctuations in crime indexes (amplius, A.J. QUETELET, Physique sociale ou Essai sur le développement des facultés de l’homme, Bruxelles, Hayez, 1835; A.-M. GUERRY, Essai sur la statistique morale de la France, Paris, Grochard, 1833).
The main source, and also the one more easily accessible, from which to obtain these data is represented by the official measurements furnished by formal and social control agencies and ordered by bodies in charge of the study of the spread of the behaviour and attitudes of the collectivity throughout the national territory. However, the most important limit that weighs on research conducted by using official statistical data derives from the fact that they are only representative of those kinds of behaviour that are known to the social control agencies. The reality, instead, is also made up of a whole series of crimes which, eluding the spotlights of the institutional system of the control of the crime, remain within the cone of shade of the unknowable and, therefore, hidden. Hidden crime, therefore, constitutes the deficit of official knowledge, and can be defined as a set of those crimes that have effectively been committed but not recorded. To overcome the limits to research deriving from this so-called “dark number” of criminality, and to better quantify the spread of the delinquency phenomenon in time or space – considering that the data officially coming from the selective

3 In Italy, for example, the *Istituto Nazionale di Statistica* (National Institute for Statistics) which collects and processes data in the legal domain, by gathering up-to-date information on the fundamental data and flows of the demand for justice in Italy and on the capacity of the system to respond. As far as specifically criminal matters are concerned, they include: statistics of criminal activities, crime statistics, statistics of accused persons who have been convicted, statistics of criminal proceedings and statistics of criminal military proceedings.

4 The index of dark crime, that is, the relationship between crimes effectively committed and officially recorded, varies over time and according to the type of crime and concern, above all, those which, due to their nature, can only be brought to attention through criminal charges, which if encouraged by individual factors or favourable situations (hope of recovering the stolen goods, compensation from insurance, aiding the criminal's capture, the victim's civic conscience, faith in the authorities, etc.), are often not presented for a series of reasons, for instance, fear of reprisals, of a public scandal, the code of silence, or even compassion for the criminal, justification of his/her action for ideological or religious reasons, or political solidarity towards the criminals. But not only. The size of the number of hidden crimes may also depend both on the manner in which a certain behaviour is defined as criminally significant and the ways in which this definition is applied in practice by the institutional apparatus responsible for social control. On the amount of the “dark number” and, in particular, on the variables that motivate it and condition its entity, cfr., among others, S. Ambroset, G.V. Pisapia, *Numero oscuro della devianza e questione criminale*, Verona, Bertani, 1980, pp. 38-39; L. Radzinowicz, J. King, *La spirale del crimine. L'esperienza internazionale*, Milano, Giuffrè, 1981, pp. 46 ff.; G. Forti, *Tra criminologia e diritto penale. Brevi note su “cifre nere” e funzione generalpreventiva della pena*, in Marinucci G., Dolcini E. (a cura di), "Diritto penale in trasformazione", Milano, Giuffrè, 1985, p. 67 ff.; N. Weiner, M.E. Wolfgang, *Le fonti dei dati in criminologia*, in Ferracuti F. (a cura di), "Trattato di criminologia, medicina criminologica e psichiatria forense", Milano, Giuffrè, 1987, 1 (Le