Horst Herold, "Organizational Principles for Electronic Data Processing in Law Enforcement" (1968)

Abstract

In 1968, Nuremberg police president Horst Herold, who went on to head the Federal Criminal Police Office from 1971 to 1981, discussed the future significance of electronic data processing for law enforcement work. At the beginning of the article, he lays out basic questions: which types of data should be recorded, how should the data be processed, and where it should be stored? Herold presents, among other ideas, his thoughts on the possible range of applications of electronic data processing in everyday police work. Potential use cases for electronic data processing include: the search for persons, the recording of criminal offences, and the administration of basic factual information.

Source

Organizational Principles for Electronic Data Processing in Law Enforcement – An Attempt at a Model for the Future

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I.

Law enforcement practice and literature have been trying for some time to lay the groundwork for the integration of certain sub-areas of policing into data processing; unfortunately, this has often been limited to the transfer of singular bits of information [into electronic form]. All of these [past] efforts have been characterized by the desire to adapt electronic data processing to current organizational forms and workflows in law enforcement. Conversely, the present paper recognizes that data processing is unique precisely because its operational mode is electronic; therefore, it cannot be tailored to the status quo in law enforcement. Rather, the opposite must occur: organizational and working methods in law enforcement must adapt to the computer. This necessary reversal in approach to the problems that have arisen leads to different kinds of insights, to a departure from previous working techniques and conventional modes of thinking; it necessitates a new organizational starting point in broad areas of policing.

Assuming that "the essence of the computer shapes the law enforcement consciousness," the task at hand is to develop—in advance of any attempt to solve problems based on the status quo—an ideal model of electronic data processing for policing as a *unified organizational whole*. Because traditional models are lacking, this work cannot rely upon on existing precedents, and must therefore reach forward into the unknown. Once the unified whole has been sketched out, the subsequent conceptual phases begin: the overall whole must be divided into horizontally stacked levels of police data processing responsibilities and then into vertically columns of sub-areas of responsibility; the division of tasks should ultimately extend down to every single police station and every administrator. Without overall planning, there is the danger that non-homogenous sub-areas and isolated work islands will form, and that these will resist eventual integration into the overall organism or even disrupt it.

This overall planning concept will thus be largely determined by the answers to the following questions (in other

words: by the *what*? *how*? and *where*? of data processing):

1. Which data should be recorded and processed? This question concerns the application of data processing, the extent of its use.

2. In what way and form should this data be processed?
This question concerns the optimization of workflows and their most expedient organization.

3. On which level [of the organizational hierarchy] should the recorded, i.e., stored data be processed?
Questions relating to the centralization (or decentralization) of data processing and to the design of a hierarchical structure of organizational responsibilities will have to be decided within this framework.

II.

The following models attempt to find solutions.

1:
Law enforcement literature discusses four main areas of application for electronic data processing:
a) The search for persons, property, vehicles, missing persons, identity papers, etc.
b) The registration of criminal acts (for statistical purposes), investigations, traffic volume (with the implementation of corresponding traffic control initiatives), traffic accidents, changes in residence, changes in criminal records, etc.
c) The management of people, motor vehicles, uniforms, equipment, payrolls, etc.
d) The solving of crimes through the abbreviation of protracted manual searches and of registration in the criminal police index cards (criminal police alert service, file collections, fingerprint comparisons, etc.)

However important and significant the aforementioned goals may be, they by no means exhaust the areas of application for electronic data processing.

Electronic data processing is capable of connecting enormous quantities of data according to any criteria, and of formulating quantitative statements about these relationships in the shortest possible time and in accordance with the latest state of the art. According to the law of scale, the greater the amount of data entered, the greater the accuracy of these statements. Up to this point, criminology—like medicine—has often failed for having extracted generalized, and therefore mostly inadequate, conclusions from individual causes. In fact, criminology already had at its disposal an enormous store of traditional forms of data: investigative files, personal files, card indexes, and notes. Nonetheless, it was only possible, when at all, to get through this mountain of data analytically and prognostically by preparing it for counting and tabulation through time- and staff-intensive procedures. This is where electronic data processing will bring about radical change. For the first time, the criminal police will be in a position to formulate, both on a mass scale and with greater precision, rational insights into the causes and motivating factors of crime. Additionally, it will be possible to more or less predict the trajectory and extent of future crime by means of extrapolation, taking previous trends into account. This will allow the police to focus more emphatically on crime prevention (which is currently the most neglected yet also most important approach to fighting crime), to plan future tactical countermeasures more carefully and thus more effectively, and, based on an overview of the broader context, to identify the most economical way to deploy resources in a focused and forward-looking manner.

In order to exhaust the possibilities that have been briefly outlined above, it is necessary to have *a comprehensive collection of all data relating to criminals and their respective crimes in a systematic, machine-readable form. These*

"crime and perpetrator records" would include information ranging from personal, family, housing, legal, and property data, as well as information on social relationships, to forensic-biological and criminal-sociological data. Thus, these electronic records would incorporate all of the data already collected in the conventional way for the existing files and card indexes.

The creation of such "crime and perpetrator records" will require a series of investigative steps, similar to those carried out during the medical examination of a patient; the project will necessitate the deployment of both expert staff and examination equipment (therefore requiring considerable personnel and material resources) and above all a significant financial outlay. Nevertheless, this whole process appears to be thoroughly realizable, because the necessary data collection will take place in a "communal or regional information center" (to be discussed later), through the participation of a multitude of offices and authorities with an equal interest in information. At the same time, these can be linked to other social surveys (e.g., mass medical screenings, surveys on driving license eligibility, intelligence and reaction tests, national economic investigations, etc.). Furthermore, these "records" do not have to be created all at once. They may in fact be generated over the course of lifetimes, from birth certificates, to school vaccinations, report cards and education, up to marriage, delinquency, or other life stages, just as they already are being generated and archived as individual fragments within singular offices within an immense and diverse array of authorities, offices, institutions, schools, and businesses.

In this way, the integrative function of data processing becomes clear; it is obviously to be understood as a process that takes years and decades, and not as a single revolutionary act. In any case, the discussion of aforementioned questions about the development of data processing already makes clear the inadequacy of disconnected or even self-contained models of law enforcement data processing.

Data for "crime or perpetrator records" can only be obtained locally (municipally or regionally). This does not mean that this data will also be processed locally. Rather, the law of scale requires processing on a mass basis, which (as will be explained later), in the Federal Republic of Germany, requires the involvement of the researchers from the Federal Criminal Police. This means that the local police district will be in a position to advance the integration of data collection, which is also necessary for other reasons, but that the Federal Criminal Police will be responsible for the further distribution of the data required for research and statistics.

[…]

Source: Horst Herold, "Organisatorische Grundzüge der elektronischen Datenverarbeitung im Bereich der Polizei – Versuch eines Zukunftsmodells," in *Taschenbuch für Kriminalisten* 18. Hilden: Verlag Deutsche Polizeiliteratur, 1968, pp. 240–44. Reproduced and translated with permission by Verlag Deutsche Polizeiliteratur.

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