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## THEORETICAL FOUNDATIONS OF POLICE SCIENCES

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### ABSTRACT

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Authors propose a categorization model for the science focused on the internal security studies. They prefer a plural model for the discipline - the security science, with police sciences as a part of them. They analyze the genetic, functional, structural aspects of the police sciences model.

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In light of the ongoing debates about the status (or even substantiation) of police sciences it is vital to presage an essay on their theoretical, methodological and social foundations by at least a brief outline of the genesis of their constitution, gradual development and systematic integration in the set of existing fields of science. Efforts to develop a relatively autonomous police (or police-security) science have been exerted in the past in various degrees of intensity but to date there has been no satisfactory outcome. To put it more precisely, despite voluminous and well-grounded scientific efforts this field has yet to achieve the status of a fully-fledged science which would fully satisfy the ever more demanding requirements of the Police.

This is not to say, though, that police-scientific cognition, accumulated and rendered systematic over a considerable period of time, does not meet even the elementary conditions of a scientific field or fulfil its basic requirements on an adequate level.

Debates around the proposed name of this up and coming scientific formation could not be done without the confrontation of various rational models, each of which had its justification (albeit often tendentious) as well as soft spots, and they failed to address the latest findings in the realm of police-scientific cognition. This polemic was ultimately narrowed to the following models that one encounters today:

- a) security science,
- b) security science (singular),
- c) security sciences (plural).

The chief objection against the **first model** is that if the modern Police and their activities are perceived as a “public service” then the term police-security science (or sciences) would unduly narrow its (their) contents to the realm of security activities alone and failed to express other, non-security activities carried out by the Police now and in future. The “public service” aspect has been a feature of policing even in the absence of binding norms (advisory, informative, preventative, etc.). Hence we do not draw a parallel between the policing structures and activities performed by the Police over and above their duties and obligations.

The chief reservation against the **second model** is based upon the objectively heterogeneous structure of the Police<sup>1</sup> as an institution and also on the unprecedented variety of police activities. Attempts to systematically integrate them in a single object (and subject matter) within a single field of science have led to insurmountable problems. After all, the object of study determines the nature of methods applied and thus also its methodology<sup>2</sup>. The latter would have to be trans-disciplinary and unite all the methods and principles of natural, technical, liberal, sociological and other sciences, which would aggravate, rather than alleviate, the solution of problems. For the reasons stated above (and to be stated further) we shall prefer the **third model**, characterized by the plurality of police sciences but systematically integrated within a single scientific form, which we have come to call the “system of police-scientific cognition”.

1 J. Erneker, *Úlohy a charakteristické znaky profesijnej činnosti policajtov*, [in:] *Profesia policajta*, A PZ, Bratislava, p. 12–16.

2 J. Viceník, *Úvod do problematiky metodológie vied (I)*, [in:] „Organon F“, 2000, vol. VII, no. 1, p. 81.

## 1. SYSTEM OF POLICE-SCIENTIFIC COGNITION

The system of police-scientific cognition is a form of science that integrates police-scientific disciplines and their elements, police-scientific research streams, scientific and practical police institutions, police science communities, communication channels and other phenomena of police science. We shall further investigate the nature, content, structure and functions of this system analysing the following issues:

1. Genetic considerations (that underscore mainly the process aspects of the origin and development of police scientific cognition),
2. Structural considerations (which underscore its structural elements and their mutual relationships),
3. Functional considerations (that describe the proactive facets of scientific police cognition and its basic components).

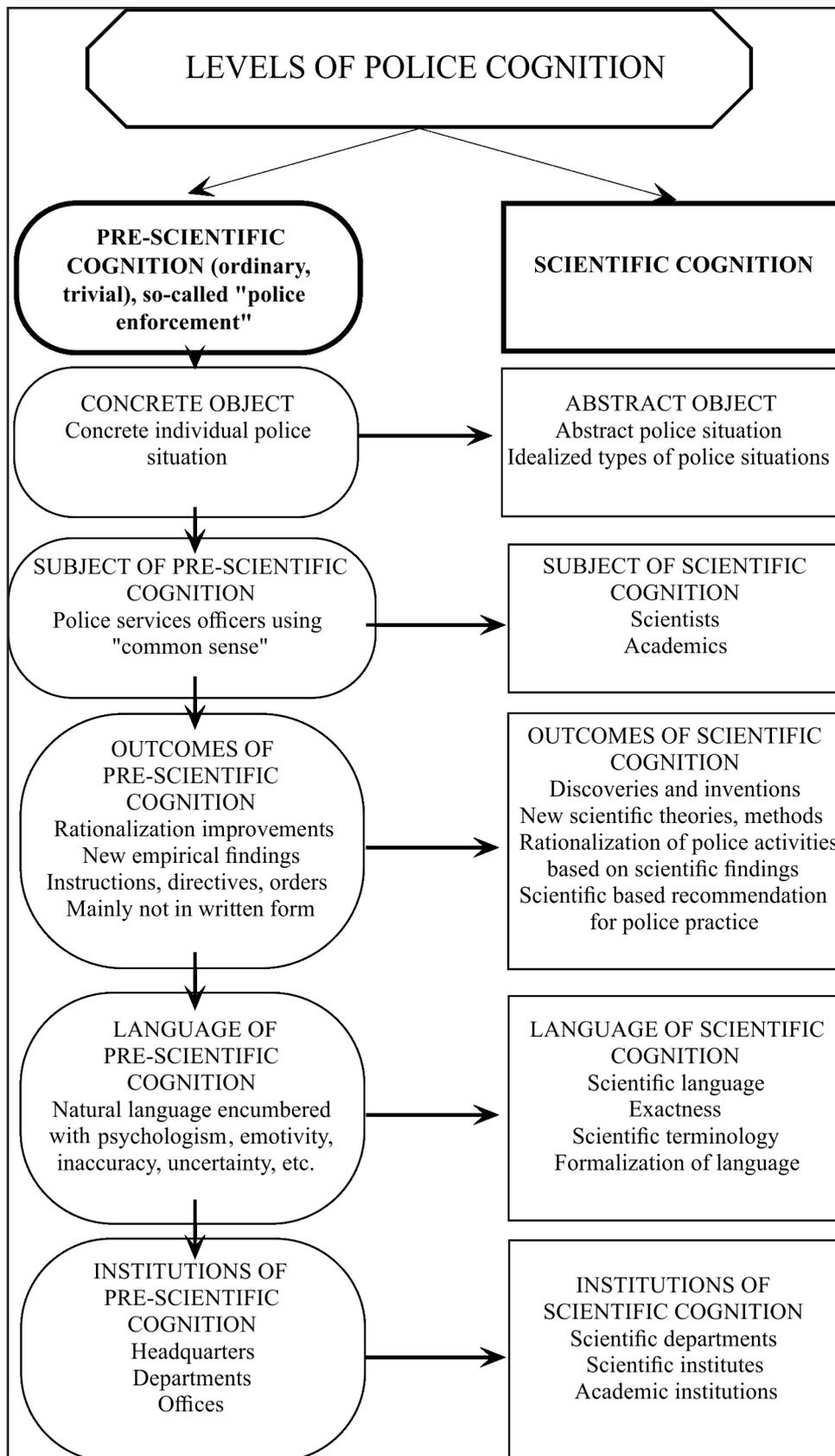
### 1.1 GENETIC CONSIDERATIONS OF SCIENTIFIC POLICE COGNITION

From the genetic viewpoint, scientific police cognition has two levels. They are not merely a timeline but differ above all in the choice of object, subject as well as the character of the outcomes of cognition, operating language, and level of institutionalization (see Fig. 1).

The two levels of police cognition are bound to exist together while there will be the tendency to enhance the scientific-cognition level at the expense of the pre-scientific plane. **The enhancement of the scientific plane of scientific police cognition requires the equal development of:**

1. Scientific problems of police sciences,
2. Scientific community of police sciences policejních věd,
3. Institutionalization of police sciences.

**The scientific problems** of police sciences encompass the systematic arrangement of their object, principles, laws and categories, but also their system of methodology and methods.



In other words this requires the development of the focus and scope of the police sciences through the development of their paradigms. A deeper analysis of this issue will be provided in another context.

**Scientific community** was introduced as a term by Th. Kuhn<sup>3</sup> and denotes a team of scientists united by a certain paradigm. The scientific community of police sciences is the author of a commonly shared paradigm, its carrier, verifier and ultimately also the chief arbiter of its duration in time. This particular element of police sciences takes the following forms:

- a) active communication within the scientific community at international conferences and seminars,
- b) scientific education,
- c) international science and research task teams,
- d) academic training of police personnel,
- e) improving, requalification, innovation and other courses.

**Institutionalization** of police sciences ensures their functioning and development from both the societal and organizational angle. The following institutions are especially instrumental in the functioning and advancement of the police sciences:

- a) educational institutions,
- b) scientific and research institutions,
- c) scientific societies,
- d) publishers and editors of police science books and periodicals,
- e) organizers, administrators, coordinators etc.

## 1.2 STRUCTURAL ANGLES OF SCIENTIFIC POLICE COGNITION

From the vantage point of structure, the following scientific-field groups enter into the system of scientific police cognition as shown in Fig. 2:

The first group consists of **special police sciences** with special object and subject matter of research. **These sciences cannot be sourced by any of the established and generally recognized scientific fields and can only marginally draw empirical findings from other fields of human endeavor.**

**our.** H. Steinert amply captures their character by saying that this field cannot be simply constructed by piecing together bits and pieces of existing fields<sup>4</sup>. **The object of research within this group of police sciences involves chiefly the following structural elements: human resources, police technical systems and resources, types and forms of police activities, training of Police officers, Police management etc.**

In context it is possible to single out the following elementary research areas and streams of police science:

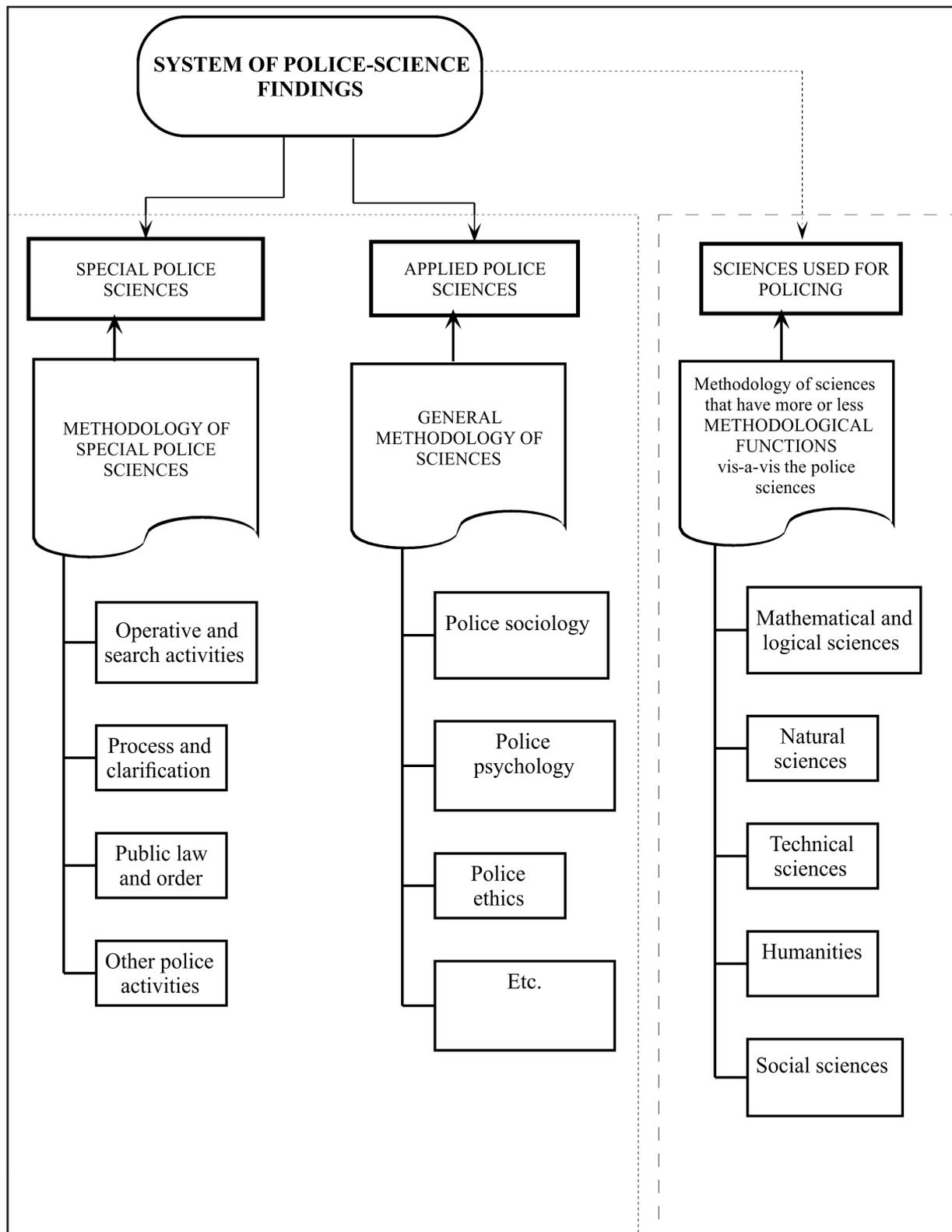
- a) **general theory of police sciences**, the mission of which is to study fundamental, theoretical and special methodological problems facing by the Police and their activities,
- b) **theory of teaching** (and training) Police officers, the mission of which is to outline and justify tasks, principles, forms and methods of staff preparation,
- c) **legal sciences** pertaining to policing,
- d) **special technical systems** and means used by the Police,
- e) **theory of organization and management** of police services and policing,
- f) **history of the Police**, police services and policing.

Although not all the above-mentioned structural elements of the special group of police sciences yet possess precisely outlined subject matters of research, with clear demarcation lines and lack the status of advanced fields of science, they nonetheless yield scientifically valuable artefacts in their capacity of fully fledged streams of scientific police research. Hence they offer correct foundations for the up-and-coming police scientific fields aspiring to relative autonomy within the realm of scientific police cognition.

A satisfactory definition of the subject matter of research in police sciences is currently the

3 Th. Kuhn, *Štruktúra vedeckých teórií*, Pravda, Bratislava 1982.

4 H. Steinert, *Prednáška na medzinárodnom sympóziu pri príležitosti otvorenia Bezpečnostnej akadémie Spolkového ministerstva vnútra Rakúska*, Viedeň 4.9.1996.



most difficult theoretical and practical problem of the process of their constitution and advancement. Even though specific definition is one of the meritorious criteria for recognizing the status of science, the requirements for its exactness should not hypertrophy. Why, the

subject matter of science can change in the course of history, become narrower or wider, and take into consideration the object circumstances which previously were not the subject matter of research<sup>5</sup>. We rather believe that ex-

<sup>5</sup> J. Vicienik, *Úvod do problematiky...*, p. 8.

cessive efforts to precisely outline the subject matter of science may pay lip service to tradition and may not be that much important<sup>6</sup>. Our views on the subject matter of police sciences therefore do not accentuate its strict definition but are more likely geared towards the most probable future course of police research. This effort could be informed by a correct definition of the object of police sciences, its parts, properties, facet and relationships that will – as their subject matters – be selected and consecutively integrated in relatively autonomous fields of science.

Special subject matters of police sciences will run diagonally across various views on their shared object.

This simplified scheme that describes the relationships between object and subject matter of police sciences is actually a demanding and time-consuming process from both the material and methodological points of view. We shall therefore simplify this (otherwise complex) problem and shall consider the object of police sciences as the Police as an institution and organization together with its activities geared on maintenance of public law and order and protection of security of both the citizens and society as a whole. For the reasons stated above we will not go into the details as to which specific aspects of this object will be investigated by police sciences.

However, the subject matter of police sciences will inevitably include (in a decisive measure) policing (which may be sternly defined, but which at the same time is unusually heterogeneous and demanding in terms of creativity)<sup>7</sup>. However, the policing limits set by the legal order do not rule out (but actually they invite) the creative spirit without which the efficiency of police work would not stand the test of justified expectations of the citizens and society as a whole. It shows that traditional police procedures (based on traditional algorithms which

are often too schematic or little creative) were acquired solely in an empirical manner and are fast losing their effectiveness. Thus, crime is growing ever more intellectual; its perpetrators swiftly react to ever more dynamic changes in the crucial spheres of social life and make use of (actually misuse) the latest achievements of science and technology.

If we want to take police sciences as sciences geared towards the research of specific police activities (or rather the “optimization” of these activities) then we choose a corresponding type of methodology. The object of study determines the character of methods<sup>8</sup> that provide adequate tools for this research.

### 1.3 FUNCTIONAL ASPECTS OF SCIENTIFIC POLICE COGNITION

From the viewpoint of functions (and objectives) of scientific research there exist two groups:

- a) theoretical sciences (pure or fundamental sciences),
- b) practical sciences (also referred as sciences about projection or technologies).

The difference between theoretical and practical sciences is shown in the following table.

It follows from the needs of the Police and policing practice that the police sciences will be constituted and developed as practical sciences, as sciences about projection of police activities and as the technologies of these activities. Analogously, Steinert refers to the prospects and research at the Security Academy of Austrian Federal Ministry of the Interior. He discusses an academic subject that would blend doctrine with research. Such teaching subject should be a doctrine (science) about police activities, a scientific field that would proceed from existing findings about the activity of the Police and systemize, develop and critically verify these findings<sup>9</sup>.

8 J. Vicaník, *Úvod do problematiky...*, p. 8.

9 V. Černík, J. Vicaník, E. Višňovský, *Praktické usudzovanie, konanie a humanitná interpretácia*, IRIS, Bratislava 2000, p. 170.

6 Ibidem.

7 J. Erneker, *Úlohy a charakteristické...*, p. 12–22.

SCIENCES		FINAL GOAL	CRITERION	VALUE	ANSWER TO
THEORETICAL	-or pure sciences - fundamental sciences	Explaining facts	Empirically verifiability	Truth Untruth	What is it? Why is it?
PRACTICAL	-or sciences on projection - technologies of action	Projecting efficient action	Achieving "the best state"	Right Wrong	What should be and how to effectively

The basic goal of theoretical sciences is **explanation** while the objective of practical sciences is **projection**. One sometimes hears about projection sciences in this context. This is one of the characteristic features of singling out practical sciences within the framework of science classification.

The very term: projection is the subject of various approaches. The explication of this term receives special attention in the methodology of projection and/or various methodological concepts related to practical sciences as presented by T. Kotarbiński (in the realm of his praxeology or general theory of effective action), M. Bunge, H. A. Simon, R. L. Ackoff, R. Mattesich, A. Podgórecki, W. Gasparski and other authors. One meaning of projection is in its function of meta-action aimed at the preparation of any activities<sup>10</sup>.

To avoid misunderstanding it is necessary to answer the question whether practical sciences formulate theories. We act on the assumption that the dichotomy of discerning between theoretical and practical sciences sometimes makes one believe that practical sciences do not formulate any theories. But as shown by methodological analyses, all sciences are theoretical in the end and their postulates are burdened by theory. It goes without saying that practical sciences have a specific character and a specific structure of their postulates. This sets apart practical-science theories from those formulat-

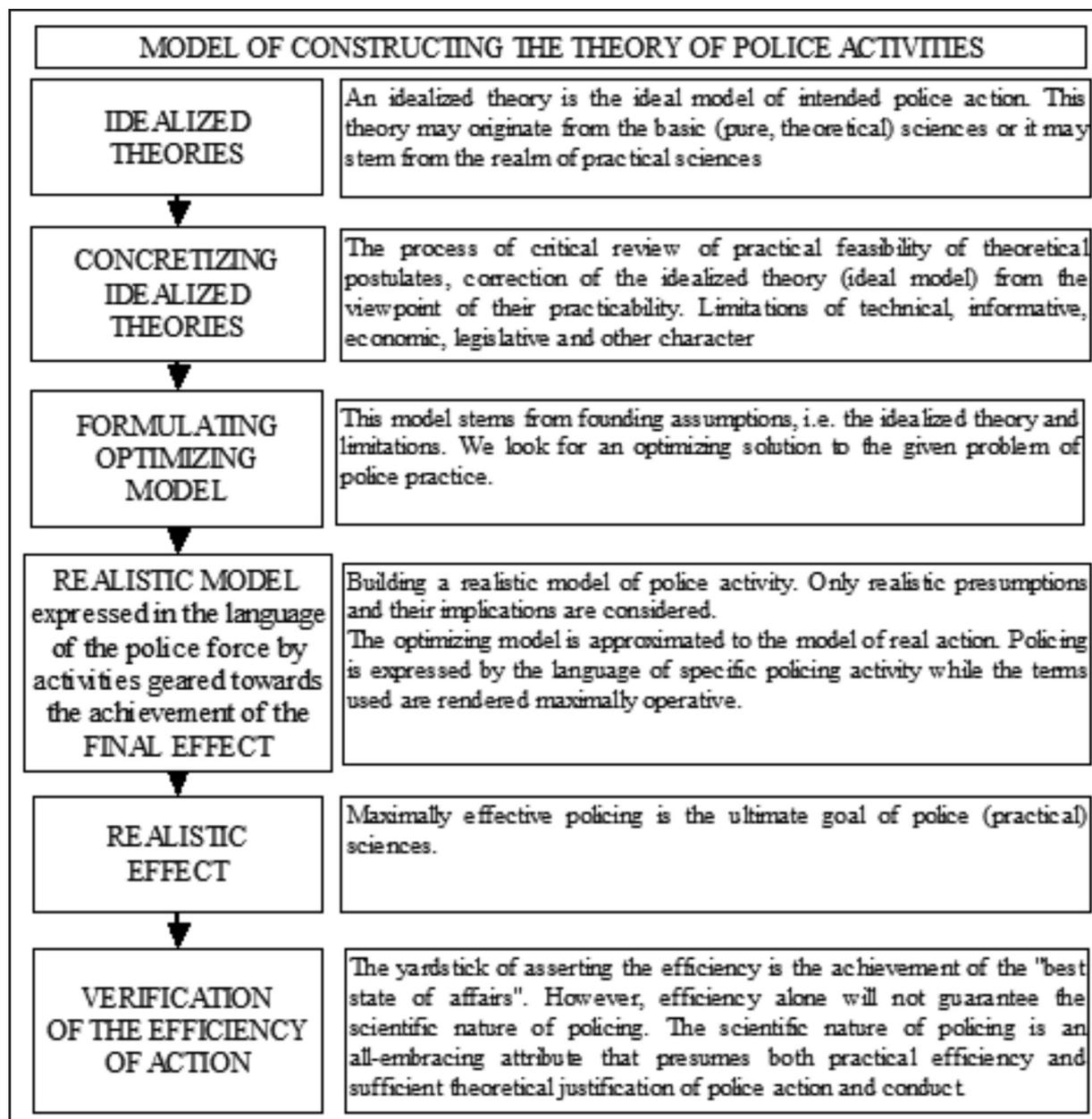
ed in theoretical (pure, fundamental) sciences. For the sake of illustration, let us point out in this context one of the possible solutions of the problem of practical-science idiosyncrasies in view of the theories they formulate, as presented by L. Nowak. The role of practical disciplines in society is to set the optimal ways of asserting the values of the given society<sup>11</sup>.

Idealized theory per se is a system of the following claims: (1) idealizing claims  $Z^n$ , (2) concretization of these claims  $Z^i$  and (3) the approximation of the claims obtained through concretization  $Z^n$ ,  $Z^i$ , by gradually eliminating idealizing assumptions and studying the impact of these factors on the quantity under examination  $V$ . Concretization of an idealized theory creates the prerequisite of the construction of optimizing theories.

Simply said, practical minds use certain idealized theories. They gradually render them more concrete in order to glean empirically verifiable theories. Concretized theories yield optimizing theories that enable the practical minds to construct a certain realistic model, i.e. there arises the necessity of using language of given activity to define action that needs be taken in order to achieve the final effect. This means that action should lead to an effect that is perceived as a recognized and desirable value in the given society. The realistic model will subsequently be subjected to verification to find out whether it represents –

10 W. W. Gasparski, *Projektowanie, nauka i filozofia: perspektywa prakseologiczna*, [in:] *Dziedzictwo logicznego empiryzmu*, Wydawnictwo IFIS PAN, Warsaw 1995, p. 93.

11 L. Nowak, *Wstęp do idealizacyjnej teorii nauki*, PWN, Warsaw 1977, p. 15.



with enough approximation – the optimally (or indeed efficiently) effective solutions, that is whether it meets the efficiency criterion that need not be fully met in certain conditions<sup>12</sup>.

In our opinion, police sciences whose action is geared towards achieving efficient results (effective action in order to achieve pertinent goals, e.g. to detect criminal activities, secure the protection of property, etc.), should apply the following cycle of cognition: idealizing theories – rendering them concrete – formulation of optimizing theories – building a realistic model – verification of the realistic model. This is

the cycle of **intended activity** (an activity that should be effective) and of activities realized according to the given model.

The philosophical sources of sciences of action (practical sciences, sciences about projecting human action and its technologies) are ever increasingly becoming the focus of a relatively broadly based research. Attention is focused primarily on the analysis of action, its preparation, and both the methods of implementation and the outcomes of such action<sup>13</sup>. Due attention is paid also to the various streams

<sup>12</sup> Ibidem, p. 16.

<sup>13</sup> V. Černík, J. Viceník, E. Višňovský, *Praktické usudzovanie...*, p. 170–188.

and approaches to miscellaneous concepts of the methodology of practical sciences<sup>14</sup>. A representative status is rightfully enjoyed by the methodological concepts of practical sciences evolved by H. A. Simon (sciences of the artificial), M. Bunge (philosophy of technology), L. Nowak (methodology of practical sciences) and W. Gasparski (programme of the methodology of projection).

The concept of practical-science specifics based upon idealized laws as a prerequisite of the construction of optimizing theories certainly is not the only concept that exists. Anyway, it may not be universally recognized, either, as the concept of idealized laws, is the subject of lively and sometimes even harsh polemic in the methodological literature. Other cognitive cycles could be utilized that have been analysed and described in the various concepts of practical-science methodology. Which of them will be used for the further advance of police sciences depends largely on a number of aspects applied during the process of selection. No doubt this will lead to special analytical efforts in the near future.

Police sciences labelled as practical sciences are in fact sciences about the scientific rules of policing. The central problem of police sciences as practical sciences lies in the optimization of police activities of which scientific rules are an important component. When using the term "scientific" one usually means:

- a) its **theoretical** justification, i.e. the rule holds true only within the realm from which it was empirically derived. The contents of a rule are a generalization applicable to a wider context of that same activity. Its functionality alone will not do and it is necessary to sufficiently justify the inevitability of its being functional,
- b) its **derivation from a scientific law** or principle, i.e. a scientific rule is scientific only if

and when its contents correspond to a scientific law or principle,

- c) its **practical efficiency**, i.e. its use in police practice yields the best results,
- d) its coherency with the other rules of one and the same activity, i.e. the rules are not in mutual contradiction and the contents of one rule must not devalue or weaken the effect of another rule. What was said becomes a topical issue provided that there are systematic rules governing various policing activities and corresponding fields of science).

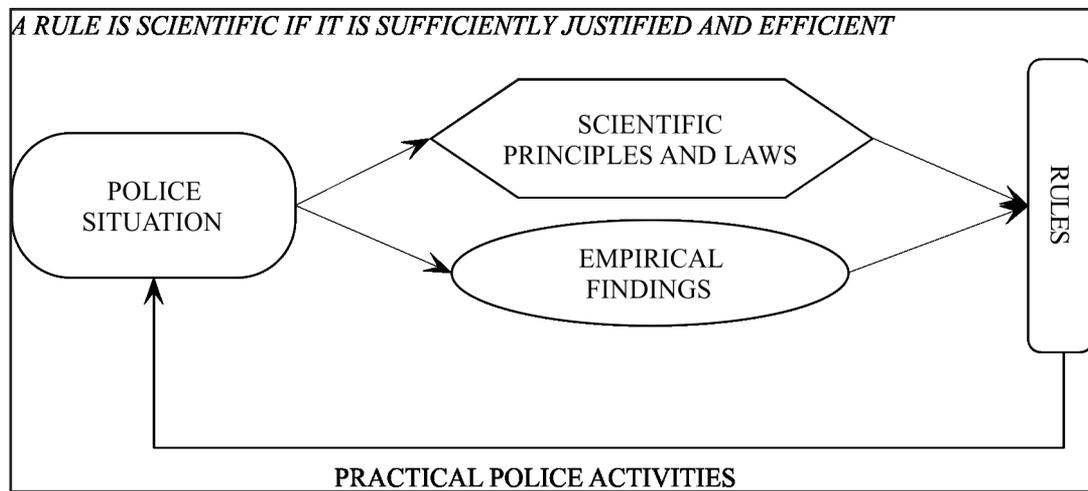
A rule as such is approached as a prospective algorithm of performing a finite number of steps towards achieving a goal. The insistence that a rule be sufficiently justified theoretically and practically effective at the same time, ought to serve to eliminate two potential extremes: a rule is sufficiently justified theoretically but for various reason is practically unusable and unfeasible at the moment; a rule is practically effective but only on an ad hoc basis, at random, and cannot be generally applied to the sphere of endeavour (see Fig. 3).

Systematically ordered scientific rules are the fundamental structural elements of police methods (methods of special police services). The structure and architecture of the methods of police action closely resembles scientific rules. However, it forms a higher plane of scientific police cognition.

Police methods are informed by type-oriented tasks (detection, clarification, public law and order, etc.) and their aim is the optimal fulfillment of a type-oriented task while using scientific rules.

Another group of sciences entering the system of police scientific cognition consists of the **police applications** of theoretical (pure, fundamental) sciences that keep growing in scope and strength. It is actually fair to say that one would have a hard time searching for the science that in principle could not have a police im-

<sup>14</sup> Ibidem, p. 170.



plication. However, applied sciences rank with-in the theoretical (pure, fundamental) sciences.

From the nature of the applied sciences en-sues also the character of their methodology. Each and every applied science has its own “non-police” subject matter of study which, however, acquires certain specifics through the solution of police tasks. The applied po-lice sciences comprise: police management, police sociology, police psychology, police eth-ics, theory of instruction in special police disci-plines, police technical system and means, le-gal sciences in police activities, etc.

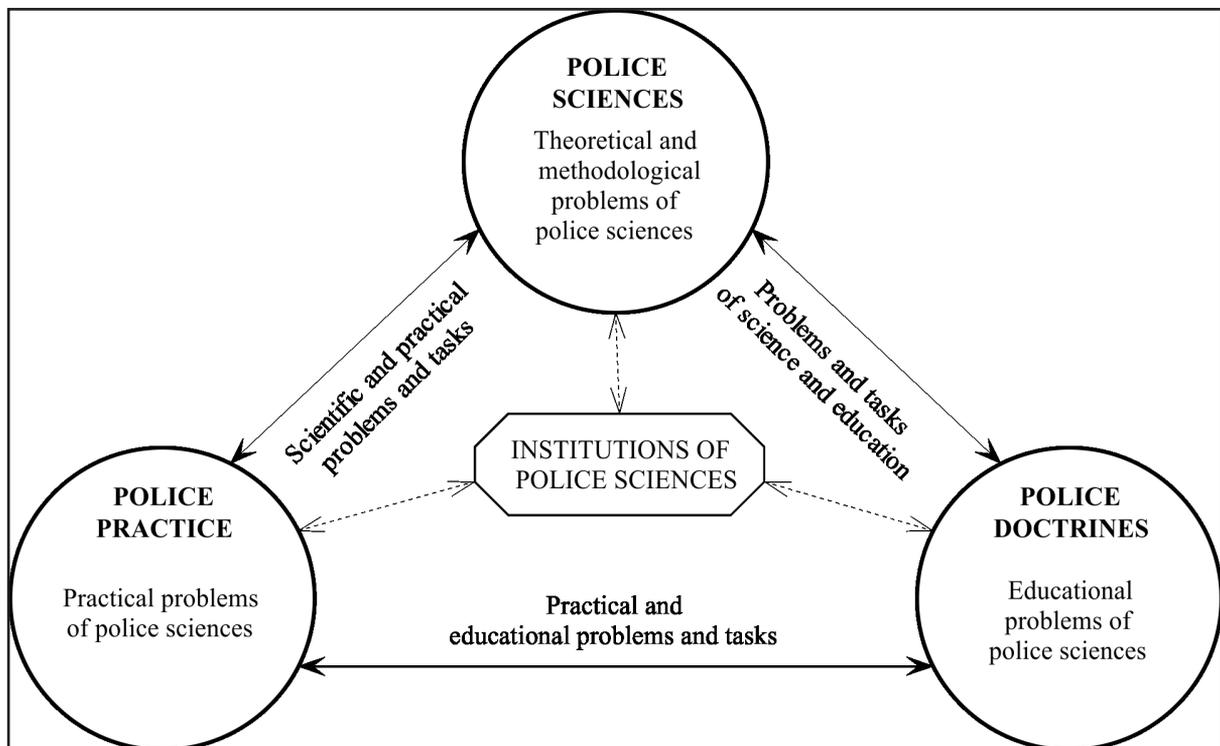
Finally, the third group of scientific disciplines that participate (albeit indirectly) in the system of scientific police cognition comprises funda-mental sciences in the fields of mathematics and logic; natural science, technologies, liberal arts, social sciences, as well as their numer-ous combinations. This is the breeding ground for applied police sciences. The scientific fields that fall in the third group of course are nei-ther police sciences nor a general and special methodology thereof but they fulfil smaller or more pronounced methodological functions in relation to them.

The extent and intensity of use of these sci-entific fields in the work of the Police are vast-ly different and prone to variations. Closest to the applied police sciences are: criminal sci-ence, criminology, legal sciences, legal medi-

cine and also ballistics and economic as well as other sciences.

Hence the system of scientific police cognition is relatively comprehensive yet it is at the same time an open, up-and-coming branch of science whose further advancement will require:

- a) more intensive work on creative applications of the methodology of practical sciences as sciences that deal with optimizing police activities,
- b) extending the range of applied police scienc-es and enhancing their closer interaction with the police practice,
- c) utilization of modern sciences (their theories and methodologies) as the general scienc-ific background in developing the scientific problems of the system of scientific police cognition,
- d) cultivation of the scientific community of po-lice sciences through the university prepara-tion and scientific education of police officers,
- e) optimizing communication links within the transnational scientific community of police sciences through international seminars, conferences and other theoretical and prac-tical encounters,
- f) setting up international scientific-research teams to integrate above all the intellectual potentials of the participating countries,
- g) gradual development of national and then also transnational police scientific institu-



tions (with the outlook of constituting European scientific and educational institutions),  
 h) compiling a multilingual encyclopaedia of police sciences which would systematically coordinate the sources of their advancement and at the same time keep track of the research outcomes of the scientific community,  
 i) etc.

The list of urgent tasks facing the scientific community of police sciences will never be complete. Let us therefore quote the types of problems and the ensuing objectives that need or will need to be resolved (see Fig. 4).

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