in the sentence "abstracts . . . are often signed in order to endorse the authority of the abstractor" (p. 130).

E.B. Jackson urged in 1980 that no more books on indexing ought to be published during the next five years or so, there being a surfeit of them already.[1] Would that the publishers had heeded his advice, and that the author had given her undivided attention to her daughter Shula who, according to the acknowledgement, "slept so soundly" while she wrote the book. Both Shula and students of abstracting and indexing would have been better off.

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Notes:

1 Jackson, E.B.: Indexing: a review essay. Journal of Library History 15 (1980) p. 320–325.

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NALIMOV, Vasilii V.: **Faces of Science.** (Translation from the Russion). Ed. by R.G. Colodny. Philadelphia, PA: ISI Press 1981. 297 p., ISBN 0-89495-010-X $ 22.50 (USA), $ 25.50 (outside USA)

The book is gratifying because it embarrasses. This impression must arise from the very nature inherent in the philosophy (or theory?) of Science. Minerva's owl 's most recent sapling seems at the very moment to be of mosaic-like and scarcely coherent structure and far from an integrated body of knowledge. N. points out most of the familiar critical points. Language e.g. as descriptional tool as well as object?/aspect? of science theory is prone to controversial understanding; the approach to make paradigmas transparent is somewhat reversed by the paradigmas it generates if self. Being some sort of a meta-approach, science of science may, paradoxically, contradict per se reality, whatever is looked upon as such. The scenery gets even more clouded if one includes the inevitable, if not abstractable values, goals, ideologies within human behaviour as well as the necessity to account for the biological, ecological, historical and other evolutions of these fuzzy systems. Which consideration leads to the question what modes of questioning, concluding and interpreting are valid for what objects and statements concerning objects, respectively, within what set of constraints and for what range.

But, while granting that these above-mentioned subjects are investigated in a sometimes unusual but refreshing manner: the proof of the pudding is how it fits reality as a tool to achieve concrete results. "That was what I was paid for", remembers N., who worked first in laboratories, with metallurgical institutes and finally, as a professor of statistics at Moscow State University. The mosaic-like attempts, then, are to be comprehended from the common operational basis: does it function? why? and how far? The reviewer, coming himself as he does from the socio-economic segment of systems science and cybernetics, will readily adopt the same position. A pragmatical review seems all the more appropriate since

N. constitutes a much needed remedy against strains of a kind of applied solipsism in science, marked by prevalence of formal versus reality-oriented, object-specific thinking; by analytical, non-analogous approaches versus analogous, systemic ones.

The background against which the "collection of thematically related papers" is to be comprehended covers a wide field. Abstracting freely from N's contributions it may be summarized as follows.

The manifold approaches to the structure of science (Ch. 1.) or to the structure of reality are entwined with values, thus being a function of culture, namely of the prevalent ideologies. Reality is existent in situ because and as far as it has developed in history. It can be understood, tested, predicted and controlled only when understood as the complementary result of that historical process; as the structures, properties etc. embodied in successful learning, called experience. In addition, reality as a subject of science is always unique, ad hoc, and part of the historical context. Simplified: each subject needs its own scientific approach; constrained, too, by the goals and values the answer is to serve.

Considerations of that kind are prevalent when investigating, 'Why Do we Use Probabilistic Concepts to Describe the World' (Ch. 4.), and when dealing with the description of fuzzy sets (Ch. 5.). The very process of describing, relating, classifying reality so as to grasp its relevant properties represents a reduction ad abstractum based on constraints, intensions, assumptions, priorities and values. The resulting descriptive system virtually does contain all these constraints and what the system is meant for. In effect the range within which a result is to be interpreted and valid for causal explanation/forecasting is very limited, even in determined systems. Forecasting in non-determined fuzzy systems is only possible in the negative sense: what is likely *not* to happen. The more investigations go into detail and cope with more complex systems within unstable structures, the more distorted, discontinued patterns are to be expected. Thus, the system of science reflects itself qualities of the ecosphere and biosphere it is designed to understand: N. tries (Ch. 7.) a comparative study going (Ch. 8.) into details of difficulties arising, while constructing theoretical biology. He uses this example to show general properties of the description process, namely the process to reduce complexity, i.e. to compact knowledge. The attempt to account for the influence of values and goals (Ch. 9.) is seen as one of the factors behind the penetration of humanities into other fields of knowledge (see, too, Ch. 1.). Here, N. applies what the reviewer is tempted to call the evolutionary approach: in which way science develops. Which in turn leads to the question of possible goals and further inquiries, e.g. if a scientific approach to eschatological problems is possible (Ch. 10.).

At least at this point it should be remembered that the scientific approach is the very attempt to overcome all those known and admitted problems so as to gain objective knowledge; the term 'objective' indicating such knowledge is free as far as possible from the above-mentioned indoctrinations and other constraints, with the remaining ones being made explicitly transparent.

Necessary as it is to call attention to its problems ever so often, one should avoid the impression that science

could thus be dissolved or shown to be fundamentally fuzzy.

It is, however, not only N's sometimes stunning, often brilliant formulations that outweigh a tendency to woodcut statements. The fact that these very questions are raised and how this is done enhances the learning in process. Science theory is symptom and result of pressing difficulties concerning the foundations of the science system. N. scrutinizes this system, particularly its presumptions, conventions, methods and description systems (one refrains from the term 'languages'). He tries it from the most justified position: that of the user, of the applier. Learning itself is necessarily pragmatical, as is nature.

Reconsidered: This book is worth critical reading. Some chapters need only be glanced over: e.g. ch. 11 on geographical distributions. Others are suitable for checking one's own paradigmas: the epistemological chapters 1–3, among others. Chapter 4,5 are for the reader to scrutinize topics of probability and his own judgment as well; to be thoroughly embarrassed, forced to reconsider from a maybe unfamiliar approach the chapters 7–10 dealing with values, history, biology. One must become very critical (positively) when N. tries to understand science (see also Ch. 1,2.) and a scientific approach (non-theological) in relation to the eschatological problem. To understand these chapters it is to be kept in focus that science is to ask, too, (p. 2) questions non-permitted by prevalent ideology using modes outside existing paradigmas. N's often both bold and brilliant attacks on seemingly trivial problems give excellent impetus to gain fresh aspects. However, it is up to the thoughtful reader to make the most of N's incitations.

Due to the mosaic-like character of the book, author and publisher may be asked for the convenience of a more systemized detailed preface to be re-read as summary to compare with one's own conclusions.

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KÜHN, Peter: **Der Grundwortschatz. Bestimmung und Systematisierung.** (The Basic Vocabulary of the German Language. Determination and Systematization.) (In German) Tübingen: Niemeyer 1979. DM 44.— = Reihe Germanistische Linguistik 17.

Mit der Arbeit „Der Grundwortschatz" von Peter Kühn legt der Verlag Niemeyer in seiner Reihe Germanistische Linguistik eine beachtenswerte Untersuchung zur Grundwortschatzbestimmung vor. Der Verfasser führt den Leser von den Funktionalitäten des lexikalischen Potentials im kommunikativen Verhalten des Sprachbenutzers über die Methodik einer lexikalischen Semantik zur Lexikologie, um aus den Erörterungen von Grundsatzfragen in einem Anhang ein paradigmatisches Modell eines Grundwortschatzwörterbuches vorzulegen.

„Ziel und Zweck des Grundwortschatzwörterbuches ist es, dem deutschsprachigen Ausländer dasjenige lexika-lische Basisinventar bereitzustellen, das ... an den kommunikativen Bedürfnissen der Benutzer orientiert ist" (S. 131). Dieses kommunikative Bedürfnis ist nicht statistisch ermittelt, es bedient sich vielmehr eines „Begriffsnetzes" von Wortbedeutungen, ihren Bezeichnungen und ihren Korrelationen. Der Verfasser ist bemüht, diese Ebenen der Sprache systematisch zu „kombinieren" (S. 131).

Damit ist zugleich ein sprachliches semantisches Zusammenhangsystem gemeint, das nicht außersprachliche, sach- oder wissenschaftsbezogene Ordnungssysteme benutzt, sondern auf den einer speziellen Sprache, hier speziell der deutschen, eigenen innersprachlich vorhandenen Ordnung der Dinge und Begriffe beruht. Dabei werden den Wortbedeutungen über- oder untergeordnete und bedeutungstypische Merkmale, wie Art und Funktion kennzeichnend oder unterordnend beigegeben, wodurch Wortbedeutungskomplexe entstehen. Diese sind orientiert an Nomen aller Gattungen, wie Nomen actionis, — acti, Konkreta, Abstrakta usw., ohne daß diese in dem entstandenen Begriffsnetz geordnet sind. Solche und andere Wortklassen sind aber entscheidend für die Beschreibung der semantischen Syntax von Inhaltkomplexen, in die sie nicht beliebig eingeordnet werden können. Es werden die Verben nicht berücksichtigt. Daher konnten die semantischen Rollen und deren Beziehungen, die den Wortbedeutungen durch die semantische Syntax, die sich auf der morphologischen Syntax aufbauen ließe, zugesprochen werden, nicht in das Begriffsnetz einbezogen werden. Das Begriffsnetz ist insofern nicht funktional im Sinne des Kommunikationsprozesses, der wesentlich gerade auf der Beziehungsherstellung von Wortbedeutungen zueinander beruht und diese als Information vermittelt. Im semantisch-funktionalen Sinne jedoch wird eine Grundlage für eine semantische Referentialität von Wortbedeutungen gelegt, welche Antonymie, Unter- und Oberbegriffe, Synonymie, Homonymie, Monosemie, Polysemie, in insgesamt 13 solchen Beziehungstypen unterscheidet. Damit ist ein Begriffsnetz der lexematischen Inhalte der erfaßten Wortarten (Substantive, Adjektive) entworfen, das in einem vielseitigen funktionalen Beziehungssystem im oben gekennzeichneten Rahmen der ausgewählten Lexeme besteht, das als Begriffsnetz den Grundwortschatz der deutschen Sprache darstellt und mit entsprechenden Codes versehen ist, mittels derer der Zugriff vom Lexikon aus ermöglicht wird. Dazu sind „die theoretischen und methodischen Prämissen einer lexikalischen Semantik" „theoretisch definiert und praktisch exemplifiziert" worden, wie es in der Einleitung heißt. Die Arbeit, die sich umfassend mit dem Stand dieser Problematik in der wissenschaftlichen Landschaft auseinandersetzt, hat ihren Platz in dieser Erörterung eingenommen.

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