INHALTSVERZEICHNIS TABLE OF CONTENTS

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Mihailo MARKOVIĆ: Rationality of Methodological Rules 3

There are two different senses of rationality of methodological rules: one is instrumental rationality, another is rationality of goals. In the first sense methodological rules are mere means of an apparently neutral true description of a given reality. Such a description, no matter how adequate, involves hidden value-assumptions and may be used for irrational purposes. A different notion of ends-means rationality characterizes methodological rules of critical science which analyses limitations of the given reality from an explicitly stated value-standpoint. The ultimate purpose of such critical research is to produce changes in human behaviour and in objective reality. As in the case of medical activity: diagnosis is followed by therapy. Methodological rules of critical inquiry are only a special case of a general methodology of human practice, the rationality of which presupposes a universal emancipatory goal.

Ernan McMULLIN: The Rational and the Social 13

How are rational and social factors to be balanced in writing the history of science? This is a crucial issue for the philosophy of science today because of the new reliance on case-studies. The essay distinguishes between epistemic and non-epistemic factors, and within the former, between standard and non-standard factors. Using these distinctions, a criticism is mounted of the Presumption of Standard Rationality proposed by writers such as Lakatos and Laudan on the one hand, and on the Principle of Unrestricted Sociality defended by the Edinburgh group in sociology of science on the other. An intermediate position is outlined and defended.

Adrienne LEHRER: Observation Statements in the Social Sciences . . . 35

Philosophers have assumed that observational statements in the sciences are unproblematic and that statements like "X is blue" or "Y is salty" have the same meaning for everyone. Four fields

are examined (oncology, phonetics, enology, and psychology) where there is evidence that observational language is not used consensually by practicioners in the field, even though they share the same theory and use the same vocabulary. Enology and psychology are developing sciences, so that agreement on what vocabulary is appropriate is still being developed. The precise use of observational expressions must be carefully taught and supervised. Linguistic consensus and reliability cannot be assumed.

William H. NEWTON-SMITH: On the Rational Explanation of the Scientific Chance 47
On a rational model of science (cf. Lakatos or Laudan), to decide on the appropriate type of explanation of a given scientific change requires a normative assessment made by reference to the model. Showing that a transition fits the model, displays it to be rational and thereby explains it. On the strong programme in the sociology of scientific knowledge (cf. Bloor and Barnes), normative assessment is irrelevant to explanation. All changes require the same type of explanation (the symmetry thesis); namely, a sociological one. The symmetry thesis is false. Scientific change can be explained rationally but without extensive normative assessment using the minimal rationality model (minirat). However, explaining scientific progress as opposed to mere change, requires a maximal rationality model (maxirat) which involves normative assessment.

Kuno LORENZ: About Limits of Growth for Scientific Theories.... 79
If self-determination shall apply as a norm also to scientific research and presentation, there are beside empirical limitations regarding data production, also conceptual limitations to data processing, because nobody can rely on knowledge by first-hand authority only. A transfer-condition (knowledge by n-th hand authority should "in principle" be available by first-hand authority) in order to save scientific rationality is shown to be equivalent with following "open" discourses, i.e. argumentations which combine competition and cooperation through developing the means to overcome their imperfections due to the empirical differences of the arguing persons.

Patrick SUPPES: The Limits of Rationality..... 85
This lecture is concerned with the expected-utility or Bayesian model of rationality, with particular attention both to the strengths and limitations of the model. The alternative market and legal models of rationality are examined and rejected as less satis-

factory than the expected-utility model. The role of intuitive judgement in the context of actual decision making is stressed. The fundamental place of intuitive judgement in science, especially in the performance of experiments and the analysis and presentation of results is analyzed. Errors of measurement naturally arise in application of the expected-utility model, but there is a long history of theory and practice for dealing with such errors. The existence of such errors constitutes a limitation, not a prohibition, on the use of expected-utility theory as a fundamental framework for rational behaviour.

Karel LAMBERT: On "The Limits of Rationality"..... 103
This note is a comment on Suppes's essay on the limits of rationality. The substantial point is that if a theory of rationality is conceived as a structure plus scope, then, contra Suppes, intuitive judgement is part of the theory of rationality because it is part of the scope of that theory. The point is supported by analogy with a learning theory. Finally, intuitive judgement and informal knowledge is suggested to be evidence of the irreducible vagueness of theory as opposed to irreducible limits on theory.

Rudolf HALLER: Theories, Fables, and Parables..... 105
In the field of theory formation some of the old metaphysical questions attract the attention of philosophers anew. The idea that observational terms refer to objects only in a theoretical mode leads to a comparison of fables and theories. Meinong's concept of incomplete objects is used for linking these two ways of constructing objects. Lessing's theory of fables is then compared with the new anti-positivist theory of science by pointing out some striking similarities.

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Ryszard WÓJCICKI: Is There Any Need for Non-Classical Logic in Science? 119
The role of classical logic as the base of formalized scientific theories seems to be unshakable. Yet legitimate doubts about its universal applicability in science have resulted in the development of alternative systems, among which constructive and modal logic are discussed in syntactic and semantic terms.

Keith LEHRER: The Evaluation of Method: A Hierarchy of Probabilities Among Probabilities..... 131
A theory of probabilities of probabilities is articulated and defend-

ed. Hume's argument against higher probabilities is critically evaluated. Conflicting probability assignments for a hypothetis or theory may result from the application of different methods or perspectives, for example, those of consensual authority and individual ratiocination. When we have conflicting probabilities we may assign probabilities to the diverse probabilities initially obtained. These second level probabilities may also conflict as a result of applying diverse methods or perspectives, and the same is true of higher order probabilities. However, when higher order probabilities are normalized to obtain weights that are used to average the probabilities of the next lower level, the averaging process will yield convergence towards a single first order probability condensing higher order information. An infinite averaging process can be finitely calculated to obtain a coherent assignment. Hence there is no vicious regress of probabilities. Memory beliefs illustrate the convergence of an infinite hierarchy.

Paul WEINGARTNER: A System of Rational Belief, Knowledge and Assumption..... 143

The first part of the papaer contains desiderata for a realistic epistemic system as opposed to idealistic ones. One of the main characteristics of idealistic epistemic systems is their deductive infallibility or deductive omniscience. The system presented avoids deductive infallibility though having a strong concept of knowledge. The second part contains the theorems of the system. The system is detailed in so far as it distinguishes between two concepts of belief and one of assumption and interrelates them to the concept of knowledge. Though all concepts satisfy certain consistency criteria the strongest ones hold for the concept of knowledge; whereas a belief in or a assumption (assertion) of a proposition which has inconsistent consequences (not known or believed or assumed by the believer or assumer) does not entail the commitment of believing in (or assuming of) an explicit contradiction. Moreover the system contains a lot of distinctions and details concerning propositions with a second person involved like "*a* knows that *b* knows whether *p* is the case" etc. The third part of the paper contains the semantics of the system which consists of many-valued truth-tables. Since the matrices are finite the system is consistent and decidable.

Lorenz KRÜGER: Unity of Science and Cultural Pluralism..... 167

Modern science and technology tend to create one global civilization. To what extent and how can cultural pluralism be preserved

under these conditions? Neither inherent limitations of natural science and technology nor alternative lines of developing them offer a promising road for pluralism. But it is to be expected that the unifying trend will not carry over into the realm of the human and social sciences; these are rather to be construed as "locally dispersed", i.e. uncapable of being developed into a unified theory of human nature, whereas natural science refers to a unified picture of non-human nature. Thus, modest hopes for preserving pluralism seem to be justified.

Myles BRAND: A Particularist Theory of Events. 187
Events are unstructured particulars and their identity conditions are to be stated in terms of necessary spatiotemporal coincidence. In contrast, Davidson says that events are unstructured particulars, with their identity conditions to be given in terms of sameness of causes and effects; and Kim says that events are structured particulars, with their identity conditions to be given in terms of sameness of their constituents. The consequences of my view are then traced for mental events.

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Gerald DWORKIN: The Concept of Autonomy. 203
In both theoretical and applied contexts the concept of autonomy has assumed increasing importance in recent normative philosophical discussion. Given various problems to be clarified or resolved the author characterizes the concept by first setting out conditions of adequacy. The author then links the notion of autonomy to the identification and critical reflection of an agent upon his first-order motivations. It is only when a person identifies with the influences that motivate him, assimilates them to himself, that he is autonomous. In addition this process of identification must itself meet certain procedural constraints.

Lars BERGSTRÖM: Outline for an Argument for Moral Realism. 215
Moral realism is defined here as the ontological view that there are moral facts. This is compared with traditional views in moral philosophy, such as naturalism, nonnaturalism, and noncognitivism. It is argued that we have no good reasons to avoid inconsistencies among our moral views unless (we believe that) moral realism is true. Various counter-arguments to this claim are criticized. Moreover, it is argued that, since we do not want to give up the practice of moral reasoning, we have a good reason to believe that moral realism is true.

Harald OFSTAD: How Can We – Irrational Persons Operating in Irrational Societies – Decide Rationally?..... 227
Utilitarian deliberation has a number of weak or open points where the agent's judgements tend to be influenced by psychological and sociological factors, e.g., by his prejudices, anxieties, insecurities or group-identifications. The most vulnerable points are: the formulation of the problem, the selection of alternatives, the calculation of consequences, the weighing of evidence, the selection of ultimate values and the comparison of different values towards each other.– The utilitarian vocabulary provides the chooser with misleading expressions such as "The action A_1 produces more value on the whole than A_2" backing up his conviction of acting rationally. – In order to improve the situation, we must become aware of the delusiveness of such expressions and of society's and our own irrationality and try to develop more rational feelings and attitudes.

Ivan SUPEK: Foundation of Justice..... 251
From its start philosophy sought principles or values by which any action could be considered good or evil. The situation in a civil court is much simpler. The judge has before him an already worked-out criminal code, and since an evil action has already been settled, it is easy to determine the appropriate punishment. But we are here not interested in the punishment nor can we assume in advance the existence of some sort of book of laws. We are rather concerned with discovering the principles by which we can judge others and establish appropriate laws. In all this, moreover, there are subtle and gross differences between men, but for moral behaviour it is essential that human freedom and universality remain preserved in every good purpose whether that be security, reform, improvement, or the enrichment of life.

Franz von KUTSCHERA: Criteria for Justice..... 267
Two criteria, one for distributive and one for commutative justice are formulated, the latter applying to cases of free cooperation. Both criteria follow Aristotle's idea of proportional equality which in the first case is equality in the fulfillment of legitimate claims, in the second case equality of the gains derived from cooperation. The theory of social welfare functions is employed in the definition of the two criteria, but such functions are applied only to morally or legally justified interests. A theory of justice only has to say how to satisfy conflicting legitimate claims, it is argued, but not what interests are justified in some given context.

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Michael DUMMETT: Ought Research to be Unrestricted?..... 281

Freedom of scientific enquiry must be distinguished from freedom to communicate scientific results. The former demands freedom for scientists to communicate among one another, without which progress is hampered, but not, in itself, freedom to communicate conclusions to the public. The latter freedom may be taken as resting on a general principle of free speech, or, more specifically, on the right of all members of society to knowledge gained by that society, especially by means of public expenditure: it is not to be viewed as resting on the superior rationality of scientists as individuals. More important than knowledge are the social and practical consequences of scientific research, of which the most striking example is that of nuclear weapons; we may assume that the net practical effects of research will be, perhaps increasingly, disastrous. The social consequence, and the liability of scientists to prejudice, may both be illustrated by work on IQ and its genetic determination. Adequate safeguards are impossible; but some discouragement of what seems likely to be socially or practically malign lines of research may be exercised by relatively autonomous bodies in control of State funding.