THE IDEA OF A METALOGIC
OF REFERENCE

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Historical Note

This paper sought to state in a concise and comparatively informal, unsystematic, and more accessible form the more technical approach the author developed during a research fellowship 1974-75 at the Max-Planck-Institut in Starnberg, Germany. The ideas presented in this paper are more fully developed in a book-length monograph, *Metalogic of Reference: A Study in the Foundations of Possibility*, published in 1975 by the Max-Planck-Gesellschaft but not widely distributed, and as a consequence copies are difficult to obtain. Time and life permitting, the author plans to re-issue the work as an open access publication.

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Introduction

I would like to address the interests of an approach in philosophy which seeks to disclose and to investigate basic commitments involved when questions are raised about the possibility of experience, the possibility of knowledge, or the possibility of theory in general. A concern for the structure of the possible has, since Kant, traditionally gone by the name 'transcendental'. The basic commitments or investments involved in doing transcendental philosophy will be central to what I wish to treat here. In a sense, then, the context for what follows intends to offer a basis for a metacritique of transcendental philosophy.

I have been persuaded that a transcendental approach can gain a helpful measure of clarity and precision by shifting from the traditional Kantian perspective to a point of view that emphasizes the nature of referring. This shift, as I propose to describe it, provides an effective means for confirming transcendental results. A need for ways to demonstrate the validity of transcendental claims will bring me to a discussion of what I term 'self-validating logics'.

To be specific, I will (i) suggest a rationale behind shifting to the perspective of referring, (ii) propose a general *metalogic of reference* that retains the interests of transcendental philosophy, (iii) describe the usefulness of self-validating logics in this context, and (iv) conclude with some remarks about the value of transcendental philosophy, referring, and the idea of self-validating logics for philosophy of science.

The transcendental approach

Transcendental philosophy finds its orientation in a movement away from a reflection on the actual as such, to a study of the preconditions of its *possibility*. The concept of possibility is fundamental to the transcendental approach, although exactly what possibility *is* has remained vague in the literature of the transcendental perspective. There are a number of alternative conceptions of possibility. I will suggest six of these, in an approximate order of concepts of increasing generality. This sequence will serve to determine a highly general, comprehensive sense of possibility, in terms of which a rationale for the shift I propose will be evident. The alternative views are these:

1. What is possible refers to future alternative states of a physical system.
2. The Stoic-Diodorean view: What is possible refers to what is or will be.

   The Aristotelian-Megarian view: What is possible includes what is, will be, or has been.
3. What is possible relates to the status of a description of an event which is *not excluded* by the known laws of nature.
4. What is possible is classically free of contradiction.
5. What is possible includes those real or abstract objects of reference, of which we can predicate what are ordinarily considered to be incompatible propositions.

   (I have in mind such ascriptions of properties as are frequently termed 'complementary' in elementary particle physics).

To these five views of possibility, a sixth is added that offers some promise as a highly inclusive concept of possibility.

6. What is possible can be understood as a function of an analysis of preconditions of *valid referring*. This view will be developed in what follows.

The general idea of a metalogic of reference

It is convenient to talk about referring in the context of an analysis of descriptions. Both in ordinary usage and in the natural and behavioral

sciences descriptions are relied upon to serve a variety of referential functions.

The referential character of descriptions can be analyzed in terms of the commitments descriptions entail. A description presupposes certain commitments to a framework or family of similarly constituted frameworks. These commitments can be made explicit by thinking, for example, of the general, frequently quite vague, rules or conventions which lend some form of organization to admissible descriptions that can be articulated in the context of a given framework of reference. Since the relationship between conditions of reference and any description is logically prior (in the sense intended by transcendental philosophy in the Kantian tradition) to the formulation of any specific description as a necessary presupposition of it, it seems justified to speak of "referential preconditions".

Referential preconditions are restrictions The hierarchy of different concepts of possibility 1. - 6. is actually a list of various *ways of enforcing restrictions* as to what sorts of possibles we are prepared to speak of. So, an interest in preconditions of reference can be understood as an interest in sketching out a certain sort of general map of a domain of objects for which we want to assure the possibility of valid referring.

These preconditions of reference can be approached in either of two different ways: On the one hand, a study may be undertaken of a specific framework of identification: e.g., the framework presupposed in developing a general phenomenology of human visual perception, or the framework presupposed by quantum mechanical descriptions, involving the use of special kinds of measuring devices as well as an explicit or implicit theory of measurement which permits the significant use of apparatus and interpretation of observations. On the other hand, a study may be undertaken of the very general principles which seem to underlie an entire group of special identification frameworks: e.g., from the standpoint of a phenomenological account of objectivity, the group of identification frameworks - visual, auditory, tactile, etc. - that together provide a basis for the constitution of objectivity, or alternatively, the family of conceptual frameworks with which we are acquainted in the natural sciences, which together determine what is to be understood by 'nature'.

It is in this second sense - the sense in which a study is possible of the general principles of reference that underlie a group of identification

frameworks - that it is appropriate to speak of a general *metalogic of reference*. At this point, then, a metalogic of reference appears to furnish a context for a reflection on the nature of theories in general, where specific cases may be a theory of experience, a theory of knowledge, or any of the various natural or behavioral scientific theories.

Initially, then, my interest is a purely abstract one - without regard for any special theoretical identification framework; without attending, at least in the beginning, to framework-specific rules and conventions - in short, to study pervasive constraints that condition valid referring.

One approach to these highly general and abstract metalogical preconditions of referring is suggested if we think in terms of the kinds of second-order constraints which first-order constraints of a special identification framework must obey to avoid *self-referential inconsistency*.

What I mean by 'self-referential inconsistency' would involve a more technical discussion than I can undertake here, but the basic idea is simple. It is this: Paul Lorenzen, in a different context, refers to what he calls "elementary ways of speaking". He says:

> the decision to accept elementary ways of speaking is not a matter of argument. It does not make sense to ask for an 'explanation', or to ask for a 'reason'. For to ask for such things demands a much more complicated use of language than the use of elementary sentences itself. If you ask such questions, in other words, you have already accepted at least the use of elementary sentences.*

A self-referentially inconsistent use of elementary sentences in Lorenzen's context would involve the decision to employ elementary sentences in doubting the justification of using them.

The main difference between Lorenzen's view and the idea of a metalogic of reference lies in this fact: In a metalogic of reference we are concerned not with elementary usages of the language we, in fact, employ, but with "elementary" means of referring of such a kind that they immediately are involved if we consider referring as a pure possibility. In other words, the very *possibility* of calling such means of referring

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* Paul Lorenzen: *Normative Logic and Ethics* (Mannheim/Zürich: Bibliographisches Institut 1969), p. 14. Cf. also P. Lorenzen: *Einführung in die operative Logik und Mathematik* (Berlin: Springer 1969).

into question presupposes them as elementary.

It is here that the idea of a metalogic of reference can be developed by resorting to what I call *self-validating logics*. I am motivated to talk about *logics* in order to furnish a context-relative means to test the same kinds of claims which a Kantian transcendental deduction seeks to justify. A self-validating logic, unlike a transcendental deduction, is fairly simple.

To make clear what I have in mind, let us suppose we wish to study what we believe to be a basic premiss of referring:

If we assume we want to think or talk about a collection of objects of various sorts, we are compelled to allow some means for this thinking or talking about them to proceed - we must be permitted somehow to refer to what we want to think or talk about. This is trivially true, and therefore I take it as basic.

Consider a candidate for a postulate in a metalogic of reference: If a metalogic of reference is to constitute a self-validating logic (or family of logics), then its axioms and postulates will themselves be self-validating, in this sense:

A postulate is self-validating if its denial will result in self-referential inconsistency.

Let us consider the following as a potential elementary postulate for referring, which it seems apt to describe as a "rule of referential counter-exemplification":

The assertion of the impossibility of referring to an individual something metalogically implies that reference is made to that thing.

This postulate *self-validates* as follows: Reference must be made to that individual something if it is to be possible to say that reference to it is impossible. The self-validation consists in the fact that a denial of the possibility of referring to an individual something is self-referentially inconsistent.

Now, if for the purposes of my informal treatment here it can be allowed that it may be possible to determine a significant number of self-validating axioms and postulates, and then to relate them in a unified and well-ordered formal system, then we would arrive at the idea of a

self-validating logic. It would differ from an ordinary formal system in that its elementary propositions are not merely postulated with some element of arbitrariness, but present themselves as compelling our assent to them if we are to be *able* to refer at all, somewhat in the manner of Lorenzen's elementary ways of speaking.

Were this to be accomplished, we would gain a significant measure of metalogical understanding of the most fundamental commitments involved in referring, an understanding that can be justified by appeal to self-validating demonstrations.

We are then not very far from being able to apply these results so as to better our understanding of, for example, the fundamental structure of a natural scientific theory. For a theory, there will be some domain(s) of objects in which its interests lie, and there will of necessity be an assortment of ways at the disposal of the scientist to refer to the objects he studies. The scientist is particularly desirous, one might add, of supplying a basis for the kind of referring his formal theory, schema of interpretation, and domain of objects oblige him to have. For, as a scientist, he chooses to respond to a need to bring the referring descriptions for which his conceptual framework provides a basis as close to the ideal of unambiguous identification as possible. And this objective is satisfiable only if fundamental commitments involved in the scientist's use of referring descriptions are made explicit and can be seen not to conflict with the theoretic claims he wishes to make.

Transcendental philosophy of science taken in this sense has several functions: to elucidate the referential preconditions basic to specific theories and shared by groups of theories, to detect self-referentially inconsistent patterns of referring, and finally to suggest valid ways of referring to replace unsound ones. To these descriptive, critical, and prescriptive functions may be added a fourth - a preventative task: to furnish guidelines in the form of a usable metalogic which can serve the interests of self-conscious and consistent theory construction.

The association with the medical model is obvious. The descriptive, critical-diagnostic, prescriptive, and preventative functions in a transcendental philosophical context are intended to contribute to the needs of theoretical soundness; the physician accepts identical functions in attending to the needs of human physical and emotional health. The

analogy between sickness and theoretical inconsistency, between medicine and philosophical therapy may to some comprise a repugnant model, but, at the same time, to deny description criticism, or criticism positive prescription, or positive prescription preventative recommendation, will to many seem arbitrary and irresponsible.

An interesting and useful philosophical reflection on the foundational structure of scientific theories I believe is offered by a metalogic of reference: Critical and close attention would be paid to the interconnection between the ways of referring essential to a theory and the objects to which the possibility of access is thereby assured, and between these ways of referring to a domain of objects, and the interpretation placed upon findings from that perspective. The understanding acquired could not wish to take the place of the natural scientist's own comprehension of his field, but it would be a qualitatively different kind of understanding, perhaps more analytically self-conscious, and ought, one would think, serve to enhance, to complement, and to render more precise the outlook of both unphilosophical scientists and non-scientifically oriented philosophers.

Summary

The author shifts the perspective of transcendental philosophy from its traditional Kantian orientation to the point of view afforded by an analysis of preconditions of referring. This shift in perspective is proposed in order to gain clarity and precision, and to provide a means for demonstrating certain of the results of transcendental philosophy.

An attempt is made to achieve systematic clarity for a concept central to the transcendental approach, the concept of possibility. The idea of a general *metalogic of reference* is proposed as supplying a highly inclusive framework from the standpoint of which preconditions of possible reference can be investigated.

The usefulness of *self-validating logics* for transcendental philosophy is suggested as furnishing a metalogical resource for transcendental demonstration.

The author concludes with a discussion of the value of a transcendental metalogic of reference for philosophy of science.

Dr Steven Bartlett was educated at the University of Santa Clara, Raymond College of the University of the Pacific, University of California, Santa Barbara, and the Université de Paris, where he received his doctorate for work under the direction of Paul Ricoeur. Dr. Bartlett was a research fellow in philosophy and mathematics at the Center for the Study of Democratic Institutions, 1969-70, has taught at the University of Florida, the University of Hartford, and is presently Associate Professor of Philosophy at Saint Louis University. He was a visiting research fellow at the Max-Planck-Institut zur Erforschung der Lebensbedingungen der wissenschaftlich-technischen Welt, Starnberg, West Germany, 1974-75. Dr. Bartlett has published a book, *VALIDITY: A Learning Game Approach to Mathematical Logic* (Lebon Press 1973), and has contributed articles and reviews to a number of journals, among them *Dialectica, etc.: a Review of General Semantics,* and *Roczniki Filozoficzne.* Dr. Bartlett is special consultant to the Rand-N.S.F. project in Regional Analysis and Management of Environmental Systems.

Other Publications by the Author Related to the Topic of Metalogic of Reference

Books

1. *Metalogic of Reference: A Study in the Foundations of Possibility*, Max-Planck-Gesellschaft, 1975. A research monograph that formulates the author's approach to epistemology through the use of self-referential argumentation and self-validating proofs.

2. *Conceptual Therapy: An Introduction to Framework-relative Epistemology*, Studies in Theory and Behavior, Saint Louis, 1983. An introductory text that gives students applied exercises in thinking using the author's approach to epistemology in terms of self-referential argumentation and self-validating proofs.

3. *Self-Reference: Reflections on Reflexivity*, edited with Peter Suber, Martinus Nijhoff, 1987; now published by Springer Science. The first of two collections (see #4 below), consisting of invited papers by leading contemporary authors, to be published in the new area of research, the general theory of reflexivity, pioneered by the author.

4. *Reflexivity: A Source Book in Self-Reference*, Elsevier Science Publishers, 1992. The second collection, consisting of classical papers by leading contributors of the twentieth century, published in the new area of research, the general theory of reflexivity.

5. *The Pathology of Man: A Study of Human Evil,* published in 2005 by behavioral science publisher Charles C. Thomas, is the first comprehensive scholarly study of the psychology and epistemology of human aggression and destructiveness. The study includes original research by the author, such as a detailed description of the phenomenology of hatred and the psychology of human stupidity, and an extension and elaboration of the author's earlier published work dealing with the epistemology of human thought disorders (Part III).

6. *Normality Does Not Equal Mental Health: The Need to Look Elsewhere for Standards of Good Psychological Health,* Praeger, 2011. The first book-length scholarly critique of the widespread and unexamined presumption that psychological normality should be employed as a standard for good mental health. The book extends the claim by Abraham Maslow that acceptable standards that define good mental health are to be found among exceptional people, and not among the average and psychological normal,

who so often — as world history has amply proved, and as Milgram's and Zimbardo's studies, e.g., offer experimental confirmation — will, when circumstances are right, subject others to abuse, cruelty, and death in state- or group-endorsed wars, genocides, and terrorism (see publication #5 above).

ARTICLES

7. "Self-Reference, Phenomenology, and Philosophy of Science," *Methodology and Science*, Vol. 13, No. 3, 1980, 143-167.

8. "Referential Consistency as a Criterion of Meaning," *Synthèse*, Vol. 52, 1982, 267-282.

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11. "Roots of Human Resistance to Animal Rights: Psychological and Conceptual Blocks," *Animal Law* (law review of the Northwestern School of Law, Lewis and Clark College), Vol. 8, 2002, pp. 143-76. The first comprehensive legal study of the psychological and epistemological foundations of human resistance to the compassionate treatment of animals. Contains an application of the author's self-referential argumentation to human conceptual blocks that stand in the way of the recognition of animal rights.

12. "Roots of Human Resistance to Animal Rights: Psychological and Conceptual Blocks," electronically re-published October, 2002, by the Michigan State University's Detroit College of Law, Animal Law Web Center, and maintained on an ongoing basis.

    http://www.animallaw.info/articles/arussbartlett2002.htm

13. Also available in German: "Wurzeln menschlichen Widerstands gegen Tierrechte: Psychologische und konceptuelle Blockaden," German translation of the preceding paper. Available at:

    http://www.simorgh.de/animallaw/bartlett_33-67.pdf

    Also available in Portuguese: "Raízes da resistência humana aos direitos dos animais: Bloqueios psicológicos e conceituais," published in *Brazilian Animal*

14. *Rights Review* (*Revista Brasileira de Direito Animal*), Vol. 2(3), July/December, 2007 [actually appeared in 2008], pp. 17-66. Available at: http://www.animallaw.info/journals/jo_pdf/brazilvol3.pdf