Epistemology in Japan: 2000–2005

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Abstract

In recent years many significant works in epistemology from the standpoint of analytic philosophy have been published in Japan. This paper provides a survey of such research by reviewing relevant books and articles published in Japan from 2000 to 2005. The literature is divided into nine categories: foundationalism and internalism/externalism, skepticism, formal epistemology, a priori knowledge, naturalized epistemology, evolutionary epistemology, socialized epistemology, and so forth.

Introduction: The Outline of This Paper

In this paper, I review writings in the theory of knowledge written within the tradition of analytic philosophy. The scope of the review is restricted to materials published in Japan between the year 2000 and 2005. Although the central methods in such studies are conceptual analysis and thought experiment, it is an obvious fact that disputes between epistemologies of empiricism and apriorism have been closely related to such studies. While it goes without saying that apriorists can use and have really used the method of conceptual analysis in establishing epistemic norms or organizing the first philosophy, I think, the methods of analytic philosophy can also fit in research into epistemology of empiricism as long as they are used inside the framework of science. Consequently, in this paper, I treat both the epistemologies of apriorism and empiricism, the latter being namely, naturalism.

I begin by reviewing two significant books: Kazuhisa Todayama, Philosophy of Knowledge and Tetsuji Iseda, Socialization of Epistemology. Next, I review other literature after classifying their topics into nine categories: II. foundationalism and internalism/externalism, III. skepticism, IV. formal epistemology, V. historical studies from the standpoint of analytic philosophy, VI. a priori knowledge, perception/knowledge of the external world, fallibilism, and others, VII. self-knowledge, VIII. naturalism or naturalized epistemology, IX. evolutionary epistemology, and X. socialized epistemology. Under each topic, I classify the related literature into books, articles, and translations. While I attempted to find some trends under each of the above rubrics, unfortunately, I could not identify any unifying ones. I can merely list a few prominent themes: brains in a vat (in skepticism) and Quine's

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program of naturalized epistemology.

Although studies in the methodology of science, for example, scientific explanation, induction and confirmation, falsification, scientific change, are of course included in epistemology in a broad sense, such topics would be regarded as belonging to the subject area of philosophy of science rather than analytic style epistemology. Therefore, they are excluded in this paper¹. Inasmuch as books edited or written in accordance with such an editorial policy are too numerous to comprehensively list here², I expect that this exclusion will be considered reasonable and proper.

Incidentally, I will assume that readers of this paper are non-native speakers of Japanese as well as native ones. Therefore, I offer bibliographic information of the literature cited in the reviewed writings, whenever I think it is needed.

I. Two Important Books

There are two significant books during the period of 2000-2005.


There were several great advances in epistemology during the 1960s and the 1970s. For instance, the Gettier problem, programs of naturalized epistemology and externalism, and the brains in a vat thought experiment³ were all initially presented during this period. In this book, the author, Todayama, outlines the main arguments that appeared in the analytic tradition of philosophy throughout this period and criticizes them when necessary. Because the book was written as one of University Textbook Series, it does not provide a complete survey. Nonetheless, most of the important and essential writings and arguments from the theory of knowledge in this period are covered and discussed in this book.

In chapters 1 to 4, Todayama reviews internalism, foundationalism, and externalism, and points out the strong and weak points of each doctrine. Chapter 1 starts with the notion of justification, which has been traditionally used in defining knowledge. Thus, “justified true belief” is examined. Next, two central questions of epistemology are taken up: (a) what a criterion of epistemological justification is, and (b) how meta-justification of such a criterion can be given. In chapter 2, it is

¹ But be that as it may, among such works there are several writings which are significant for research into epistemology from the standpoint of analytic philosophy though categorized as philosophy of science. I give several examples of such kind of writings: Todayama, 2002, 2005, Iseda, 2003, Yanagimoto, 2003, Nakayama, 2002.


³ At first, though, the thought experiment of brains in a vat was made in the context of philosophy of language, especially theory of reference, by H. Putnam.
correctly explained that there are problems with foundationalism, both in its strong and moderate versions. Chapter 3 deals with questions whether internalism involves the problem of the myth of the given, and whether reliabilism, which is a kind of externalism, has the merits that it can avoid the regress problem and provide a solution to the Gettier problem. In chapter 4, Todayama examines one of the radical forms of externalism, that is, F. Dretske's theory of knowledge, which analyzes knowledge as "information caused belief" (Dretske, 1981). According to Dretske, justification should be eliminated from the definition of knowledge, and Todayama quite agrees with Dretske and adopts such a position.

Todayama understands that a motive for internalism and foundationalism, which traditional epistemology took as its basic doctrines, was the refutation of skepticism. Accordingly in chapters 5 to 7 he considers skepticism and takes countermeasures against it. In chapter 5, three basic types of skepticisms are explained, Brains in a Vat, the Argument from Error, and Humean Skepticism. In chapter 6, Todayama criticizes the refutation of skepticism in R. Descartes' Meditationes de primaphilosophia. In Chapter 7, the conditional theory of knowledge R. Nozick developed in his book, Philosophical Explanations, the solution of Brains in a Vat he attempted a little coolly in this book, and J. Dancy's objection against Nozick's way of refuting skepticism (Dancy, 1985) are explained.

In chapter 8-12, Todayama goes further in expressing his own ideas and thoughts on many points, whereas chapters 1-7 tended to lay emphasis on surveying and explaining various theories of knowledge. In chapter 8, Todayama explains W. V. O. Quine's project of naturalizing epistemology, comparing it with R. Carnap's rational reconstruction of knowledge of the physical world. In chapter 9, the significance and merits of naturalizing epistemology are considered and the problems it encounters are indicated, namely, how epistemic normativity can be incorporated in naturalized epistemology and whether our knowledge can be regarded as a by-product of natural selection. In chapter 10, S. Stich's criticism of analytic epistemology and his idea of descriptive and normative epistemic pluralism are explained in detail (Stich, 1990). According to Stich, arriving at the truth is not the ultimate purpose of epistemology. In chapter 11, Todayama rejects individualism of knowledge, and then asserts that epistemology should be socialized. In the final chapter, Todayama's positions are succinctly summed up. Todayama requires that a correct new epistemology should be a socialized as well as a naturalized one. Furthermore, he predicts that the central notions of his new epistemology would not be "belief", and might not even include "truth."

In this book, Todayama thoroughly criticizes and rejects traditional and old-fashioned internalism and foundationalism, and then supports some new doctrines. It is in this sense that the book reflects the author's taste for destroying old theories and replacing them with newer ones.

The author of this book, Iseda, understands social epistemology as follows (p. 2). First, the object of research in social epistemology is to explicate how intellectual endeavors can be organized among individuals. More concretely, the discussions in this field are centered on various institutions or systems of science. Secondly, in approaching this subject, researchers of social epistemology make use of the framework of epistemology. In social epistemology, it matters how sociological studies of science are related to the nature and substance of knowledge. Thirdly, in social epistemology, the cognitive limits of human beings and individuals are taken into consideration, or rather, are actually presupposed. The main problem of social epistemology is that of explaining how cognitively limited individuals depend on each other and acquire knowledge.

Iseda classifies research styles of social epistemology roughly into two groups (p. 6). According to him, one is the trend whose research style is strongly inclined to be analytic. This trend has its origin in naturalized epistemology, and consequently, it has inherited various legacies, for example, the central questions, theoretical concepts and principles, from naturalized epistemology. In this analytic research, social systems or social organizations are analyzed from the standpoint of rational choice theory, and then ideal types of them are often investigated. The other is the trend whose research style tends toward sociological methods. This kind of research has been inspired by the recent development of Science Studies. The main method of this sociological research is that of constructing the conceptual framework on the basis of empirical investigations of scientific practices. Writings of A. I. Goldman (e.g. Goldman, 1979, 1986), P. Kitcher (Kitcher, 1993), and F. F. Schmitt (Schmitt, 1994) are classified into the analytic trend. On the other hand, writings of S. Fuller (Fuller, 1988) and H. E. Longino (Longino, 1990) belong to the sociological trend.

The theme of this book is to bridge the gap between the above two trends. According to Iseda, this theme could be divided into two subsidiary subjects, 1) how analytic style epistemology can/should be utilized in sociological research into scientific knowledge or the sociology of scientific knowledge (SSK), and 2) on the contrary, how SSK can/should be utilized in analytic style epistemology. Iseda considers the first problem in chapter 1, and the second problem in chapters 2, 3.

In chapter 1, Iseda considers the relation between the sociology of scientific knowledge and the rationality of science. He divides approaches of SSK into the social causation approach and the social process approach, and then surveys and criticizes writings which adopt these approaches. Iseda thinks that both have their own problems. So he proposes "the even stronger programme," which reinforces "the strong programme" that was developed by D. Bloor (Bloor, 1976), as a research programme to make SSK rational.
In chapter 2, Iseda treats descriptive social epistemology, surveying and criticizing the writings of D. L. Hull (Hull, 1988) and F. Suppe (e.g. Suppe, 1977). Iseda regards the former (Hull's) research as an evolutionary analysis of science, and the latter (Suppe's) research as an analysis of a "credentialing process" and a non-reliabilist externalism.

In chapter 3, normative social epistemology is considered. Iseda examines in detail Goldman's writings going from reliabilism to social epistemics, which Iseda regards as a typical analytic style epistemology.

Social epistemologists often appeal to case studies. In chapter 4, Iseda also provides his own case study in the field of sociology. He describes the process in which theories and methodologies of sociology have become diversified in the USA after World War II.

Chapter 5 deals with the analyses in "sociology of sociology," or "metatheorizing," in which sociologists attempt to self-analyze and self-evaluate themselves. Concretely, the writings of A. W. Gouldner (Gouldner, 1970), R. W. Friedrichs (Friedrichs, 1970) and G. Ritzer (Ritzer, 1975) are surveyed. At the end of this chapter, Iseda analyzes these kinds of case studies from the standpoint of SSK.

In chapter 6, Iseda considers whether ideas and arguments of Hull, Suppe and Goldman (which are examined in chapters 2 and 3) can be applied to case studies in sociology (which are given in chapters 4 and 5).

In chapter 7, Iseda attempts to mediate between the normative and the descriptive approaches by designing an approach which combines them both. He suggests that those supporting the normative approach should evaluate the normative standards or frameworks from two points of view, i.e. evaluative principles and action-guiding rules. On the other hand, he suggests that advocates of the descriptive approach should take the position of meta-epistemological externalism and adopt philosophical explication rather than methodological naturalism. Iseda ends by combining both of those approaches, on the basis of moderate foundationalism, by adopting the method of wide reflective equilibrium (WRE), even though it has its origin in philosophical ethics.

Iseda realizes that contemporary analytic style epistemology and sociological research into scientific knowledge are opposed to each other, or that these two parties show no interest in each other. So Iseda with some force tries to mediate between them. First, he surveys in detail the literature of the two parties and examines them thoroughly. Secondly, he provides a case study of sociology, which no one has ever attempted. In the final section, Iseda considers methods of social epistemology from a meta-epistemological point of view. In the opinion of the present surveyor, this book is an excellent pioneering work in Japan, even granting Iseda's caveat that only the skeleton of methodology of social epistemology is given and it still has unclear points (p. 294).
II. Foundationalism and Internalism/Externalism

<Article>

A. Goldman’s reliabilism has undergone much critical examination, and accordingly has been revised several times. In this paper, Iseda traces the process of Goldman’s revisions of reliabilism in detail, and points out problems for the most recent version of Goldman’s reliabilism (Goldman, 1988). Iseda proposes a middle perspective between justification in the individual and justification resorting to the external world, namely, justification by the community which investigates and compares “the most successful set of normal worlds.”


F. Suppe proposed a version of non-reliabilist externalism that used the notion of “decisive indicators,” (Suppe, 1977, 1993) which was a refinement of the notion of “conclusive reasons,” which F. Dretske had proposed (Dretske, 1969). In this paper, Iseda shows “that almost any pair of experiential state and belief can meet the condition of conclusive reasons (or decisive indicators)” by using stronger counterexamples to the “conclusive reasons” analysis of knowledge. According to Iseda, “these notions are nearly trivial, and the version of externalism based on these notions is unattractive” (p. 1).

It should be noted that the Japan Association for Philosophy of Science conferred its Award for The Best Article of the Year, 2005 on this paper.


In this paper, Oono examines the idea that a bearer of knowledge is “a network with close semantic relations to natural and social circumstances,” which H. Osawa proposed (Osawa, 1996). While Oono basically agrees with the view expressed by Osawa, Oono questions it as follows: although it is necessary for an adequate model of knowledge to explain how knowledge change occurs, Osawa’s model cannot explain it.

<Translations>


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III. Skepticism

<Book>

In this book, Irifuji takes serious consideration of relativism and realism. According to him, the relativism to the effect that truth is relative to the framework is “condensed into” the ultimate version of relativism, which he calls “The Ultima Thule” of relativism (in which framework relativism has metamorphosed into the level of the repeating “We” by the thorough applications of the principle of relativism to itself). On the other hand, “the hard realism,” as he calls it, is also “condensed into” the extreme realism in which reality is unconceivable “in a performatively negative manner,” by a thorough analysis of the relation between “We” and reality. At the end of this book when he got to the core of these two theses, he found that the ultimate relativism conformed to the extreme realism.

In chapter 5, Irifuji refers to skepticism in the process of discussing relativism and realism.

<Articles>

The KK thesis is that if S knows that p, then S knows that S knows that p. F. Suppe thinks that this KK thesis is integral to skeptical arguments from R. Descartes to P. Feyerabend (Suppe, 1989). Suppe rejects the KK thesis because the KK thesis is too strong to apply to the analysis of scientific knowledge, and then he eliminates the problem of skepticism from the analysis of scientific knowledge. While Iseda agrees with Suppe on the point that the KK thesis is too strong to apply to the analysis of scientific knowledge, Iseda disagrees with him on the point that the KK thesis is essential or indispensable to Cartesian skeptical arguments. In this paper, Iseda demonstrates how one can reconstruct skeptical arguments without the KK thesis. He proposes a weaker version of the KK thesis (which he calls the PEHKK thesis), and shows that skeptical arguments can be reconstructed on the basis of the PEHKK thesis, without the KK thesis.

M. Williams diagnoses the presuppositions of skepticism theoretically, focusing on Cartesian doubt about the external world and the Agrippa problem. Williams indicates that these types of skepticism derive from epistemological realism, and so he adopts contextualism as the third solution to skepticism, which is quite different from foundationalism and coherence theory (e.g. Williams, 1996). In this paper, Matsuda fully surveys Williams’ diagnosis (for the first time ever in Japan), referring to C. Wright’s papers in which Wright examines arguments of Williams (Wright, 1985, 1991).


In this paper, Mizumoto briefly surveys D. Chalmers’ metaphysical arguments against skepticism of the-brain-in-a-vat type—“a disembodied brain is floating in a vat, inside a scientist’s laboratory”—in Chalmers’ paper, “The Matrix as Metaphysics,” and criticizes them in the following four points: 1) Chalmers’ Mind–Body Hypothesis presupposes the mind–brain identity theory, 2) it is undecided whether the phrase “physical processes” can refer to anything outside the Matrix world, 3) the question whether the word “causal” is semantically neutral or not cannot be separated from the metaphysical question, 4) when the Matrix world turned out to be personal, rather than shared with others, then the Matrix Hypothesis was indeed a skeptical hypothesis after all. In general, beliefs are nonmonotonic, whereas logic is usually taken to be monotonic. Mizumoto proposes to analyze knowledge as beliefs that are monotonic against other true beliefs (that would not be abandoned even if any other true beliefs were acquired), and gives a formalization of the idea by using the belief revision operator. Thus he concludes, partially agreeing with Chalmers, that if people had the beliefs which they would not withdraw even when they found themselves to be in the Matrix-World, then the Matrix-World where they lived would be real.


Brains in a vat skepticism depends on the epistemic closure principle: if person S knows p, and if S knows that p entails q, then S knows q. F. Dretske (Dretske, 1970) and R. Nozick (Nozick, 1981) resisted this type of skepticism by criticizing the epistemic closure principle. Kamiyama sympathizes with their strategy to refute

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skepticism: not to deny the skeptic's conclusion directly, but to attack their presuppositions. In this paper, Kamiyama tries to demonstrate that the evasion strategy is appropriate even if the epistemic closure principle is true.


In this paper, Shimada considers Putnam's argument to the effect that we could not be brains in a vat (Putnam, 1981), by examining the remarks of his critics. Her considerations are concentrated on: 1) Putnam's assumptions about reference, i.e., refutation of a magical theory of reference and acceptance of a causal theory of reference, and 2) Putnam's argument that “self-refuting” suppositions are “necessarily false.” Shimada concludes that Putnam's two assumptions about reference are acceptable, but skeptics would not be convinced by Putnam's argument because his notion of “necessarily false” is obscure.


In this paper, Yokoyama also examines Putnam's thought experiment, Brains in a Vat, reviewing C. Wright's criticism (Wright, 1994) and Putnam's reply (Putnam, 1994). According to Putnam, internal skepticism should be distinguished from infinitely regressive skepticism, and the internalist point of view should be distinguished from the externalist point of view. Yokoyama classifies philosophical stances on skepticism into three types: acceptance of infinitely regressive skepticism from the externalist point of view, acceptance of the finite nature of human knowledge from the internalist point of view, and the rejection of internal skepticism from the internalist point of view.


In this paper, Kudō argues that we cannot stand outside of ourselves, by relying on Putnam's Brains in a Vat argument.

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IV. Formal Epistemology


In this paper, Mizumoto proposes a naturalistic theory of belief change. He examines G. Harman’s theory of belief revision (Harman, 1984), and then introduces a new notion, namely, information, in order to advance the project of naturalizing epistemology. According to him, “the theory of belief change will be re-conceptualized as the theory to answer the question: How, out of all the information that I have, can a consistent world-picture emerge?” (p. 31). He draws a comparison between the idea of J. J. Gibson (Gibson, 1979) and that of F. Dretske (Dretske, 1981), and then sets up “the conditions that any plausible theory of information processing which aims to model the belief revision should satisfy” (p. 36). He ends by proposing a formal model of such information processing.


In this paper, Mizumoto tries to formalize the theory of belief change he gave in the above paper as a nonmonotonic logic. He thinks that “reasoning, logic, and belief change are all independent of each other, although they also overlap each other” (p. 30). According to Mizumoto, belief change is closely related to nonmonotonic reasoning. He understands “nonmonotonic logic as the logic whose conclusion can be retracted later, when new premises are added” (p. 32). After formalizing the theory of belief change, he examines and demonstrates whether the system is really convincing as a model of our belief formation and belief change.

It should be noted that the Japan Association for Philosophy of Science conferred its Award for The Best Article of the Year, 2003 on this paper.


“Merely saying that someone believes that p does not imply anything about whether the belief is held consciously and/or held with certainty.” (p. 1) It seems difficult to capture such phenomena in formal analysis of knowledge. In this paper, Mizumoto tries to formulate three different types of beliefs, namely, 1) a belief which is held consciously, 2) a belief which is held with certainty, 3) a belief which is held both consciously and with certainty, with only two familiar epistemic
operators—the belief operator B and the knowledge operator K—without adding any new operators. According to him, by “BKp” can be expressed “a belief p which is held with certainty, without entailing that it is consciously held,” while by “BKBp” can be expressed “a consciously held belief that p, . . . without entailing that it is held with certainty.” And by “BKKp” can be expressed “a belief p which is held both consciously and with certainty.” (p. 9) This way of representation thus reveals the hidden interconnection between certainty and consciousness which merely stipulating certainty/consciousness operator or predicate could not capture.

V. Historical Studies from the Standpoint of Analytic Philosophy

<Books>

   Philosophers have interpreted D. Hume’s skepticism in various ways. According to Kume, there are three major interpretations of Hume’s skepticism in twentieth-century: the foundationalist interpretation by K. Popper (Popper, 1979), the naturalist interpretation by P. F. Strawson (Strawson, 1985), and the contextualist interpretation by M. Williams (Williams, 1996). In this book, Kume elucidates insufficiencies and difficulties with those interpretations, and then tries to give an adequate understanding of Hume’s skepticism and epistemology. He proceeds to show how Hume’s thoughts developed from “total scepticism” to “mitigated scepticism.”


   In this book, Tomida tells the story of the relationship between Sho and Shiori, and simultaneously develops an original argument that J. Locke’s epistemology can be regarded as naturalistic like that of Quine, in a manner that novices can understand.

<Articles>

   Normal textbooks on the history of philosophy inform us that the major target of Hume’s skeptical arguments is certain parts of our knowledge. Ito, however, thinks that it is not the case, and in this paper he demonstrates that Hume’s skepticism applies to the whole of our knowledge. Ito does this by examining Book I of *A Treatise of Human Nature*. Furthermore, Ito regards Hume’s epistemology
as the precursor of naturalistic epistemology, and he thinks that naturalism and skepticism coexist in Hume's epistemology. This contrasts with contemporary naturalistic epistemology in which skepticism can be avoided as a problem within science.


In order to place classical epistemology in the context of contemporary epistemology, Ueeda thinks, we should extract the theory of epistemic justification from the classical epistemology in question and then try to give a reconstructed theory of justification. In the former paper, he extracts a theory of epistemic justification from Thomas Aquinas' theory of truth, and then examines it from the viewpoint of the causal theory of knowledge, reliabilism, and externalism. In the latter paper, Ueeda points out the contemporary significance found in Aquinas' theory of *scientia*, that is, the idea that it is not each belief detached from agency that is epistemically justified, but rather the whole of the belief system agency holds.


L. Wittgenstein regarded “hinge propositions” as undoubted and fixed in language games. This idea of hinge propositions has been criticized because it took a propositional view in language games or it led to making some propositions substantial, which the later Wittgenstein was supposed to object to. In the former paper, Yamada examines these criticisms and then tries to counter them by interpreting the certainty expressed by the idea of hinge propositions as a matter of practical attitudes in each language game.

In the latter paper, Yamada examines Wittgenstein's consideration of the logical impossibility of error. He concludes that Wittgenstein repudiated skepti-
cism from the standpoint of a "plural contextualist," not from the standpoint in which the hinges common to all language games were sought.


In this paper, Kawazoe considers Thomas Aquinas' theory of knowledge from the viewpoints of contemporary foundationalism and internalism/externalism. Aquinas classified the human act of knowing the external world into two levels: simple apprehension (simplex apprehensio) and judgment (indicium). According to Kawazoe, Aquinas' argument about simple apprehension has a tendency toward reliabilism. On the other hand, his argument about judgment has internalistic features.

VI. A Priori Knowledge, Perception/Knowledge of the External World, Fallibilism, and Others

<Books>

Although the contents of this book might not be classified as analytic style epistemology in a strict sense, I introduce it here because it is an original and unique contribution. The subject of consideration in this book is neither knowledge itself nor a system of knowledge, but rather intellectual activities. In this book, Ito classifies the intellectual activities in which human beings engage into two main types: knowledge for performance and knowledge for explanation. Moreover, for Ito, knowledge for performance is classified as 1) knowledge of life and 2) related skills, and knowledge for explanation is further classified as 3) science and 4) metaphysics/philosophy. He clarifies the distinctive features of each of these four intellectual activities in terms of differences in activities of "explanation."


This book will serve as a good textbook for undergraduate students. In chapter 4: On Knowledge, Nishiwaki gives brief but clear explanations of foundationalism, the Gettier problem, internalism/externalism, skepticism, and Bayesianism.

<Articles>

This paper does not treat the definition of knowledge or justification, and so
differs from most of the writings that I refer to. It is concerned with how a priori knowledge, necessary truth, and analytic statement can be acquired or constituted. First Nobuhara examines “implicit conception,” which C. Peacocke tried to explain (Peacocke, 1998). Next Nobuhara explains the characteristics of a priori knowledge, necessary truth, and analytic statement by his idea of “combination of concepts” without resort to an intellectual intuition by which they can be grasped mysteriously. His explanation should find an appreciative audience since he provides an empirical account of a priori knowledge, necessary truth, and analytic statement.

Furthermore, Nobuhara considers the relation between seemingly non-conceptual perception and conceptual thought, e.g. how perception justifies thought, in his other paper, “Slippery Clearness: The Non-Conceptual Content of Perceptual Experience.”


On the problem of the justification of belief by perception, J. McDowell thinks that (a) if perceptions are non-conceptual states, perceptions will not be able to restrict conceptual beliefs by reasons, and (b) if it were not for perception, restriction which the world places on beliefs would be lost (McDowell, 1996). In order to solve these difficulties, he proposes that perception is conceptual and thus it is already in the space of reason. In this paper, Kadowaki examines the following two important criticisms against McDowell: 1) it is not conceptual content, but non-conceptual content that belongs to perceptual experience, and 2) McDowell’s notion of “perceptual experience” does not have explanatory force in the context of epistemological justification and is redundant. Through these considerations, Kadowaki gives an outline of the normativity of perceptual experience, which enables beliefs to be justified.


In discussions concerning the justification of our beliefs of the external world, perceptual illusion has often been placed in the same category as hallucination: they have both been treated as something by which our beliefs cannot be justified. Yet it has already been demonstrated by various kinds of psychological experiments that, unlike hallucination, perceptual illusion is common or universal experience for human beings. In this paper, Mukasa asserts that perceptual illusion is also a form of appropriate perceptual experience. He concludes that both normal perception

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* This paper is in Shiso: Thought (Tokyo: Iwanami-Shoten), No. 949, 2003, 142–160.
and perceptual illusion can be appropriate origins of our beliefs of the external world, and that they are “complementary in a sense analogous to Bohr’s principle of complementarity.”


In this paper, Kasaki points out that the idea W. Sellars proposed in his paper, “Presupposing,” set a precedent for pragmatic analysis, that is, “pragmatic presuppositions” of R. Stalnacker (Stalnaker, 1974). Kasaki then considers how Sellars applied his method of pragmatic analysis to the analysis of the epistemological notion of justification.


In this paper, Kudaka examines the paradox of fallibilism, which W. W. Bartley III set up (Bartley, 1987). Kudaka makes the paradox clearer than Bartley did, and then rejects Bartley’s solution to the paradox. Kudaka concludes that a solution of the paradox of fallibilism has not been found yet.


In this paper, Kudaka examines the criticisms of fallibilism which W. Kuhlmann (e.g. Kuhlmann, 1981) and Bartley III (Bartley, 1987) made. Kudaka rejects Kuhlmann’s criticism against fallibilism, by proposing the reason that stops the infinite regress which arises in applying the principle of fallibilism to itself. On the other hand, Kudaka shows a way of avoiding the paradox of fallibilism, which Bartley devised, by discriminating between the claim for truth and the claim for certainty.


In this paper, Irie defines mutual knowledge in terms of the notions of real knowledge and shared knowledge, and then analyzes how mutual knowledge is established.

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7 This paper is in The Philosophical Review, Vol. 63, 1954, 197-215.
<Translations>

VII. Self-Knowledge

In Japan for the last six years, the problem of self-knowledge has been examined mainly in the context of the compatibility between externalism and first-person authority. When the problem of self-knowledge is dealt with in such a context, it is not so much a problem of epistemology as one of philosophy of mind. For this reason, I will concentrate on and review only one article, and merely list others.

   Osawa examines the notion of self-knowledge considered by T. Burge (Burge, 1996). While Burge supports externalism about mental content, he also asserts that entitlement to self-knowledge which does not depend on natural or social circumstances, on the surface, seems to be incompatible with externalism. Although Burge attempts to reconcile them, some criticize Burge’s settlement. Osawa thinks that Burge’s position is analogous to D. Davidson’s about the relation between first-person authority and externalism (Davidson, 1984). Osawa proceeds to extend both of their views. He regards entitlement to self-knowledge as a requisite for intentional acts.

4. Masako Yoshihara, “Externalism and Authoritative Self-Knowledge,” Ochano-
VIII. Naturalism or Naturalized Epistemology


The author of this paper, Todayama, is currently the foremost authority on naturalism in Japan. And this paper is no less important than Todayama's book, *Philosophy of Knowledge*. In this paper, Todayama expresses his position, that is, a position to advocate "epistemology of realistic and normative naturalism," more clearly than in that book. He rejects apriorist epistemology, that is, analytic style epistemology in which it is thought that epistemological problems or projects can be settled or accomplished by conceptual analysis. He regards the core thesis of naturalistic epistemology as the rejection of first philosophy and requires that methods of empirical science should be applied to epistemological inquiries. Be that as it may, he takes into consideration the normative as part of naturalistic epistemology. He supports the program of normative naturalism in which epistemological norms are regarded as empirically testable, not a priori. Last of all, Todayama explains the relation of normative naturalism to the dispute between scientific realism and anti-realism.


Todayama thinks that it remains unsettled which program, naturalism or anti-naturalism, is acceptable or correct, in this paper. However, there is no doubt in his mind that the controversy over this question is settled by the degree of success/failure of each research program. In this paper, Todayama first discriminates between ontological naturalism and epistemological naturalism. The theoretical core of ontological naturalism, which is shielded from falsification attempts behind a protective belt of auxiliary hypotheses, is physicalism. On the other hand, it is difficult to specify the theoretical hard core of epistemological naturalism. Todayama presents its five candidates and then tries to narrow them down to one view, namely, the rejection of first philosophy. In the latter half of this paper, he answers three typical criticisms against epistemological naturalism.


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In this paper, Ichinose takes up two points proper to Quine’s naturalistic epistemology as follows: 1) epistemology is a part of natural science, 2) knowledge is a natural phenomenon. He then criticizes the naturalistic epistemology characterized in this way along three lines: First it cannot explain institutional knowledge, that is, knowledge of the social system, secondly it cannot explain the institution of the possession of knowledge, that is, knowledge which a person possesses, and thirdly it cannot resolve the Sorites Paradox. Ichinose regards the Sorites paradox as an acute problem and as one which is not limited to naturalistic epistemology but challenges the whole gamut of epistemological approaches. He ends by suggesting a solution to that paradox, dubbed “the causal theory of Sorites.”


Kobayashi regards Quine’s naturalized epistemology as a consequence of his holism. In this paper, he offers refutations of both Quine’s holism and naturalized epistemology. According to Kobayashi, the main task of philosophy is to clarify 1) the characteristics of sciences and human activities and 2) the differences between them, and philosophy has the status of a meta-science or of meta-knowledge (p. 60). Kobayashi thinks that the epistemology of science (philosophy of science), in which purposes, norms, conditions and presuppositions of sciences8 should be pursued, is located outside of the framework of science. Therefore, he denies the continuity of science and philosophy, and in addition to that, the continuity of ordinary knowledge and scientific knowledge.


The most common criticism made against Quine’s naturalized epistemology is that there are no norms in it. However, Quine admitted in his later works that the normative, i.e. the instrumental norm could be incorporated in his program of naturalized epistemology. Can this negate the above criticism against Quine’s program? In this paper, Hamano places great value on W. Sellars’ thoughts of distinguishing between “the manifest image” and “the scientific image” of the man-in-the-world and focusing on an autonomous cognitive agent who has intentions, which are completely ignored in Quine’s epistemology. Hamano criticizes Quine’s austere stance when using the normative concepts in epistemology and insists on the

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8 Kobayashi calls them even “the transcendental.”
importance of Sellars' stance to attempt to grasp the details of a cognitive agent by making full use of the normative concepts.


Quine proposed the thesis of indeterminacy of translation and treated intentional vocabulary like a second-class citizen. This view of Quine did not convince R. Rorty (Rorty, 1999) and Hamano. In this paper, Hamano insists on the distinctiveness of intentional vocabulary, depending on considerations of B. Ramberg (e.g. Ramberg, 2000). Hamano concludes that this consideration leads to a broad and rich naturalism in which the normative can be fully accepted.


According to the author, philosophical naturalism is composed of two basic claims, ontological naturalism (that is, physicalism) and epistemological naturalism. However, he thinks that it is difficult to support both of these claims in an integrated and consistent manner against all expectations. In this paper, Todayama proposes the possible redemption from this predicament for the philosophical naturalist, “(1) to adopt a Hackingean operationist criterion concerning what exists and what not, (2) to reinterpret scientific theories not as sets of theoretical sentences but as semantic models” (p. 5).


The author of this paper, Usui, examines Quine’s claim in his “Five Milestones of Empiricism” that his naturalism has two sources, holism and unregenerate realism. Usui thinks that these two sources are characterized by two epistemological ideas implied by the metaphor of Neurath’s boat, i.e. “the mutual dependence of knowledge” and “the inevitable historicity of knowledge.” In this paper, Usui tries to combine both of them consistently by drawing a clear distinction between understanding language and knowing the world. At the end of the paper, he suggests that the principle of charity Quine adopted might be incompatible with methodological monism that is the central principle of Quine’s naturalism.

In this paper of mine, I argued that confirmation holism which Quine proposed in his paper, “Two Dogmas of Empiricism,” could not be the origin from which his naturalized epistemology was derived. And I pointed out that there were two serious problems in the program of naturalized epistemology. One is the limits of the behaviorist approach in psychology, and the other is that an explanation based on the idea of natural selection is at best quasi-scientific and only tentative. At the end of the paper, I suggested directions to solve these two problems, especially how to avoid the methodological dualism between the method of physics and that of folk psychology. The latter is the method which the later Quine seems to have completely accepted, after being persuaded by Davidson’s anomalous monism.


B. Stroud’s criticism of Quine’s naturalized epistemology is that it leads to skepticism because, according to Quine, both “my own stimulations” and “my own beliefs of the world” are also regarded as things projected from meager sensory data (Stroud, 1984, Chap. IV). In this paper, attempting to counter Stroud’s argument that Quine’s project of naturalized epistemology lacks epistemic contact with the world, Sasaki interprets Quine’s notion of “conceptual scheme” in two ways: interpretations from the first person perspective and from the third person perspective. According to Sasaki, Quine develops the project of naturalized epistemology from the third person perspective from top to bottom, and in Quine’s project, Sasaki concludes, “my own knowledge” namely, self-knowledge, cannot be discussed in a manner that is appropriate to its problem.


Igashira understands that the physicalism Quine supports is neither an ontological nor a linguistic doctrine, but a kind of methodological assumption for theory-construction that the norm of maximization of simplicity should be valued more than anything else. In this paper, Igashira concludes that Quine’s physicalism cannot be asserted positively within the framework of naturalized epistemology.


In this paper, Yoshida mainly examines the naturalistic epistemology P. Kitcher presented (Kitcher, 1992). Yoshida first criticizes the doctrine of rejecting a priori epistemic principles, which he regards as the central doctrine of naturalistic
According to him, a priori epistemic principles are transcendental ones, and therefore we could not reject them even though they were fallibilistic. Secondly, he does not endorse the role of psychology which naturalists adopt as a method of epistemology. His reason is that transcendental characteristics of a priori epistemic principles cannot be revealed by empirical psychology.


In this paper, Aso considers the third dogma of empiricism, that is, the dualism of scheme and content, which D. Davidson pointed out. Even after Quine discussed this dogma with Davidson, Aso thinks, Quine still supports empiricism because the dualism of theory and empirical content can be maintained as a theory of evidence by distinguishing between stimulus/stimulation and fact/world. According to Aso, it is from the naturalistic stance which Quine adopts that Quine still endorses an empiricism which entails the dualism of theory and empirical content.

14. Takashi Naruse, “Two Types of Epistemological Norm: Based on Quine’s Arguments,” Aichi: ƒÓƒÇƒÉƒÍ“qƒÍƒÓ_??_ƒ¿ (Association of Philosophy, Faculty of Letters, Kobe University), No. 17, 2005, 44-52.

In this paper, Naruse tries to bring out some differences between norms of traditional epistemology and those of naturalized epistemology which Quine endorses. According to Naruse, the former are regulative and norms serving as criteria of truth, and the latter are constitutive and engineering norms.

IX. Evolutionary Epistemology

What we term “evolutionary epistemology” is classified into at least two major groups: 1) the first group has the fundamental idea of extending the biological theory of evolution to human cognitive activities. According to this theory, our sense organs and cognitive mechanisms are what have been acquired through natural selection, and from this it follows that our cognition fits the world. 2) the second group’s basic program consists of explaining the evolution of scientific theories by analogy with evolutionary biology. According to this doctrine, the growth of scientific knowledge is construed as selection processes. Whereas the former attempt can be regarded as a kind of naturalistic epistemology, it seems that the latter program heretofore has been only a metaphor. Moreover, the latter program is categorized as the task of philosophy of science. For these reasons I here review only the former type of writings, and simply list the titles of the latter writings.

In chapter 2 of this book, Irie gives an overview of the history of evolutionary epistemology from theories of innate knowledge as a prehistory to evolutionary theories of knowledge in twentieth-century, and he points out six themes in evolutionary epistemology.


In this paper, Teranaka examines I. Kant’s notion of “a priori” from the standpoint of evolutionary epistemology, by depending on K. Lorenz’ understanding of Kant (Lorenz, 1941).


In this paper, Tomizuka presents an outline of the first group of evolutionary epistemology, by reviewing mainly the book of C. Buskes (Buskes, 1998).


X. Socialized Epistemology

〈Books〉
   In chapter 8 of this book, Nakayama develops a theory of the epistemic base that is empirical and revisable by revising Quine's holism. While Nakayama highly esteems Quine's empirical holism, he is unhappy with the lack of collectivity and historicity in it. He emphasizes the importance of these factors of collectivity and historicity for questions concerning knowledge. Nakayama asserts that knowledge, especially scientific knowledge, is constructed by cooperative specialization and/or the division of intellectual labor and he argues for the authority of experts in each field.

   This book contains the collected papers of its author. In the first paper: Beyond the Notion of Scientific Knowledge, Sato states that the main characteristic of scientific knowledge is that it is social. According to him, requests to scientific knowledge for progress and objectivity are achieved by the division of intellectual labor in social systems which have established rules for research methods and how to evaluate the results of research. Sato insists that philosophy is ultimately the mental activities of each individual, as opposed to science as a collective system of knowledge, by relying on Wittgenstein. In the third paper: Knowing a Proposition, Sato considers the question what it is for an individual to know a proposition. Assuming holism of knowledge for the individual, Sato considers this question, and then points out that a paradox arises from the vague notion of “knowing.”

Appendix: Sociology of Science and Science Studies

   The Sociology of science, especially the subject areas called social constructivism or the sociology of scientific knowledge, is of course a field of epistemology. Whereas the sociology of science is closely related to social epistemology, it is true that it is also a part of sociology. As such I merely list the titles of such writings.
<Books>

<Article>

<Translations>


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